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Excel® 2016

The Fast and Easy Way to Learn

Paul McFedries

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Excel® 2016

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About the Author

Paul McFedries is a full-time technical writer. He has been authoring computer books since 1991 and has more than 85 books to his credit. Paul's books have sold more than four million copies worldwide. These books include the Wiley titles *Teach Yourself VISUALLY Windows 10*, *Windows 10 Simplified*, *The Facebook Guide for People Over 50*, *iPhone 6 Portable Genius*, and *iPad Portable Genius*. Paul is also the proprietor of Word Spy (www.wordspy.com), a website that tracks new words and phrases as they enter the language. Paul invites you to drop by his personal website at www.mcfedries.com or follow him on Twitter @wordspy.

Author's Acknowledgments

It goes without saying that writers focus on text, and I certainly enjoyed focusing on the text that you will read in this book. However, this book is more than just the usual collection of words and phrases designed to educate and stimulate the mind. A quick thumb through the pages will show you that this book is also chock-full of treats for the eye, including copious screenshots, beautiful colors, and sharp fonts. Those sure make for a beautiful book, and that beauty comes from a lot of hard work by the production team at SPi Global. Of course, what you read in this book must also be accurate, logically presented, and free of errors. Ensuring all of this was an excellent group of editors that I got to work with directly, including project and copy editor Lynn Northrup and technical editor Donna Baker. Thanks to both of you for your exceptional competence and hard work. Thanks, as well, to Aaron Black for asking me to write this book.

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How to Use This Book

Who This Book Is For

This book is for the reader who has never used this particular technology or software application. It is also for readers who want to expand their knowledge.

The Conventions in This Book

1 Steps

This book uses a step-by-step format to guide you easily through each task. Numbered steps are actions you must do; bulleted steps clarify a point, step, or optional feature; and indented steps give you the result.

2 Notes

Notes give additional information — special conditions that may occur during an operation, a situation that you want to avoid, or a cross reference to a related area of the book.

3 Icons and Buttons

Icons and buttons show you exactly what you need to click to perform a step.

4 Tips

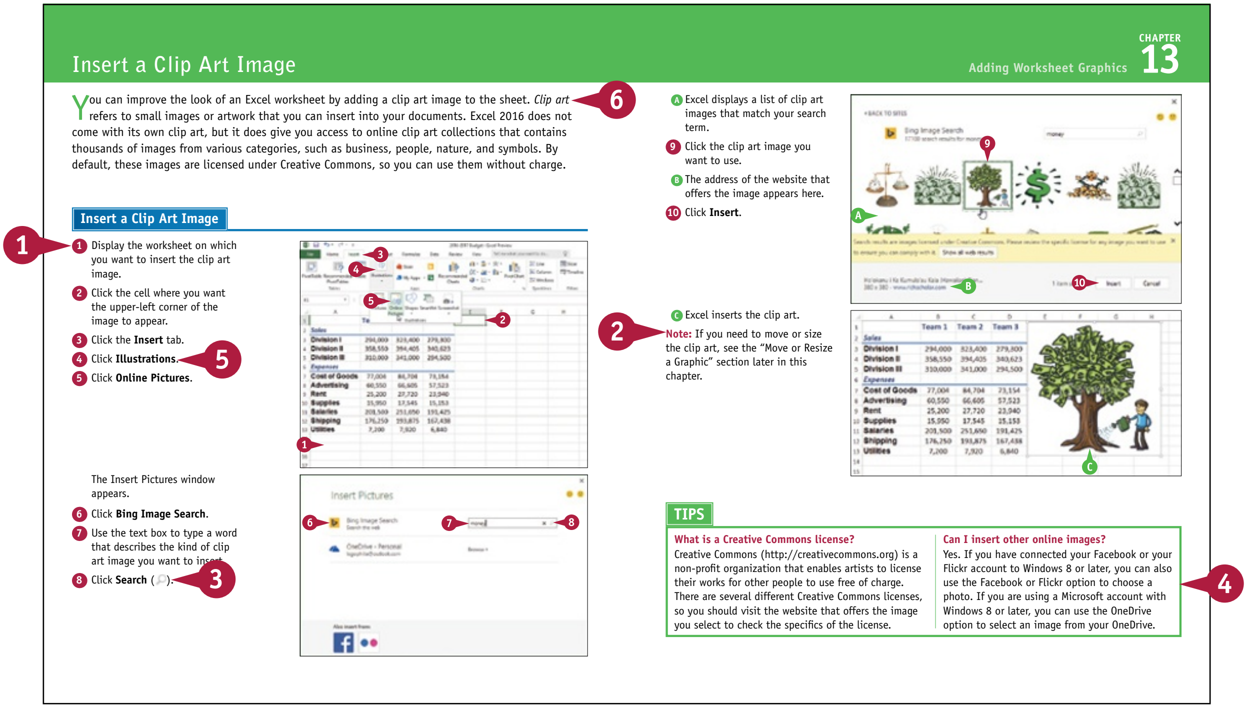
Tips offer additional information, including warnings and shortcuts.

5 Bold

Bold type shows command names, options, and text or numbers you must type.

6 Italics

Italic type introduces and defines a new term.



Insert a Clip Art Image

CHAPTER 13

Adding Worksheet Graphics

You can improve the look of an Excel worksheet by adding a clip art image to the sheet. *Clip art* refers to small images or artwork that you can insert into your documents. Excel 2016 does not come with its own clip art, but it does give you access to online clip art collections that contains thousands of images from various categories, such as business, people, nature, and symbols. By default, these images are licensed under Creative Commons, so you can use them without charge.

Insert a Clip Art Image

1. Display the worksheet on which you want to insert the clip art image.
2. Click the cell where you want the upper-left corner of the image to appear.
3. Click the **Insert** tab.
4. Click **Illustrations**.
5. Click **Online Pictures**.

The Insert Pictures window appears.

6. Click **Bing Image Search**.
7. Use the text box to type a word that describes the kind of clip art image you want to insert.
8. Click **Search** (🔍).

A. Excel displays a list of clip art images that match your search term.

9. Click the clip art image you want to use.

B. The address of the website that offers the image appears here.

10. Click **Insert**.

C. Excel inserts the clip art.

Note: If you need to move or size the clip art, see the “Move or Resize a Graphic” section later in this chapter.

TIPS

What is a Creative Commons license?
Creative Commons (http://creativecommons.org) is a non-profit organization that enables artists to license their works for other people to use free of charge. There are several different Creative Commons licenses, so you should visit the website that offers the image you select to check the specifics of the license.

Can I insert other online images?
Yes. If you have connected your Facebook or your Flickr account to Windows 8 or later, you can also use the Facebook or Flickr option to choose a photo. If you are using a Microsoft account with Windows 8 or later, you can use the OneDrive option to select an image from your OneDrive.

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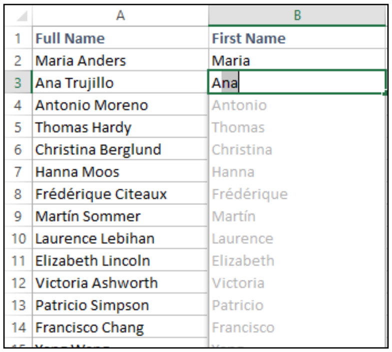

	A	B
1	Full Name	First Name
2	Maria Anders	Maria
3	Ana Trujillo	Ana
4	Antonio Moreno	Antonio
5	Thomas Hardy	Thomas
6	Christina Berglund	Christina
7	Hanna Moos	Hanna
8	Frédérique Citeaux	Frédérique
9	Martín Sommer	Martín
10	Laurence Lebihan	Laurence
11	Elizabeth Lincoln	Elizabeth
12	Victoria Ashworth	Victoria
13	Patricio Simpson	Patricio
14	Francisco Chang	Francisco

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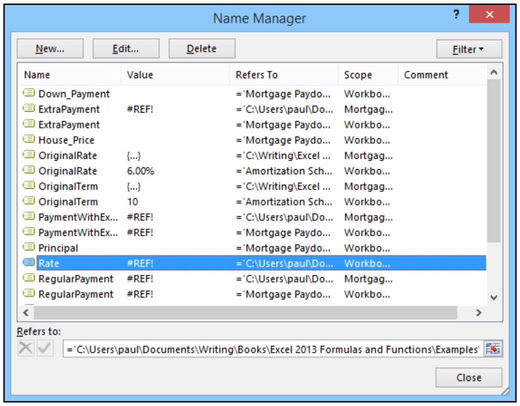

Name	Value	Refers To	Scope	Comment
Down_Payment		='Mortgage Paydo...	Workbo...	
ExtraPayment	#REF!	='C:\Users\paul\Do...	Mortgag...	
ExtraPayment		='Mortgage Paydo...	Workbo...	
House_Price		='Mortgage Paydo...	Workbo...	
OriginalRate	{...}	='C:\Writing\Excel ...	Mortgag...	
OriginalRate	6.00%	='Amortization Sch...	Workbo...	
OriginalTerm	{...}	='C:\Writing\Excel ...	Mortgag...	
OriginalTerm	10	='Amortization Sch...	Workbo...	
PaymentWithEx...	#REF!	='C:\Users\paul\Do...	Mortgag...	
PaymentWithEx...	#REF!	='Mortgage Paydo...	Workbo...	
Principal		='Mortgage Paydo...	Workbo...	
Rate	#REF!	='C:\Users\paul\Do...	Workbo...	
RegularPayment	#REF!	='C:\Users\paul\Do...	Mortgag...	
RegularPayment	#REF!	='Mortgage Paydo...	Workbo...	

Refers to:

='C:\Users\paul\Documents\Writing\Books\Excel 2013 Formulas and Functions\Examples'

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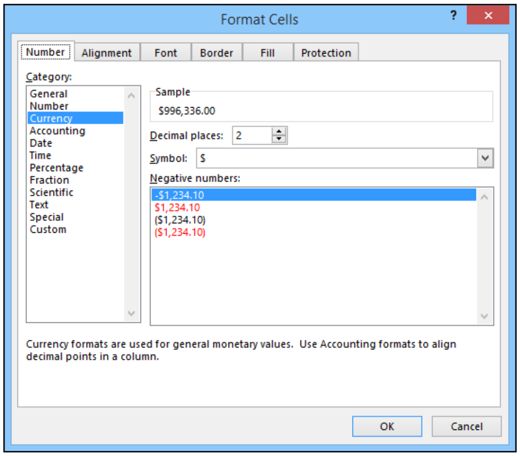

Format Cells
?
Number
Alignment
Font
Border
Fill
Protection
Category:
General
Number
Currency
Accounting
Date
Time
Percentage
Fraction
Scientific
Text
Special
Custom
OK
Cancel

Sample
$996,336.00

Decimal places: 2

Symbol: $

Negative numbers:
-$1,234.10
$1,234.10
($1,234.10)
($1,234.10)

Currency formats are used for general monetary values. Use Accounting formats to align decimal points in a column.

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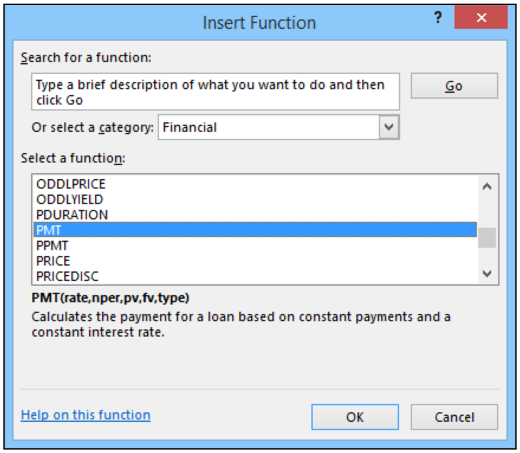

Search for a function:

Type a brief description of what you want to do and then click Go

Or select a category: Financial

Select a function:

- ODDLPRICE
- ODDLYIELD
- PDURATION
- PMT
- PPMT
- PRICE
- PRICEDISC

PMT(rate,nper,pv,fv,type)

Calculates the payment for a loan based on constant payments and a constant interest rate.

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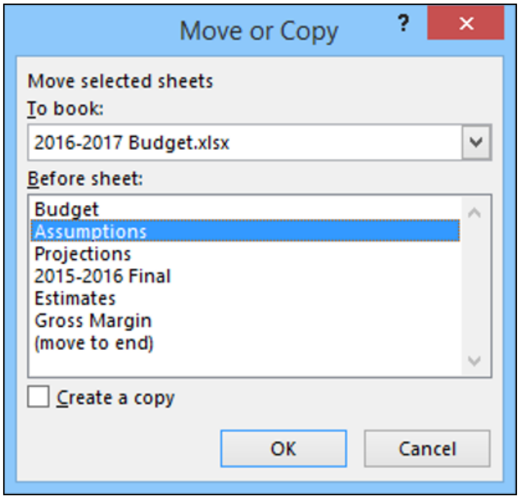

Move selected sheets

To book:

2016-2017 Budget.xlsx

Before sheet:

- Budget
- Assumptions
- Projections
- 2015-2016 Final
- Estimates
- Gross Margin
- (move to end)

☐ Create a copy

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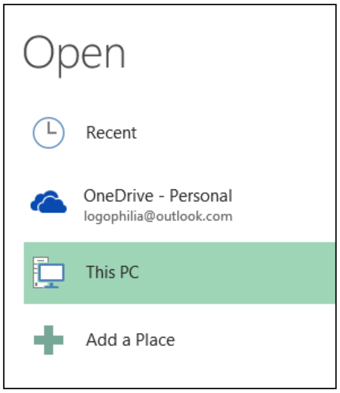
Open
Recent
OneDrive - Personal
logophilia@outlook.com
This PC
Add a Place

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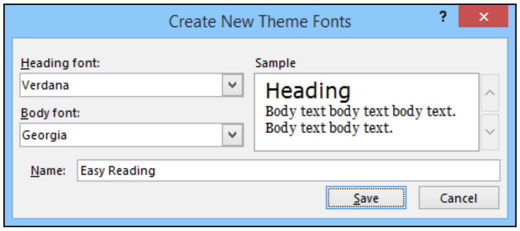
Create New Theme Fonts
?
✕
Sample
Save
Cancel

Heading font: Verdana
Body font: Georgia

Heading
Body text body text body text. Body text body text.

Name: Easy Reading

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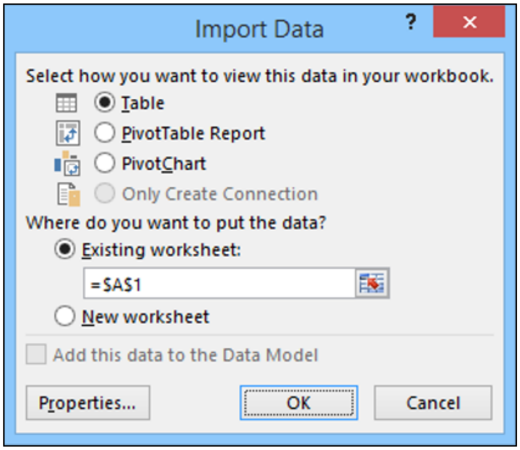
Import Data
?
✕
Properties...
OK
Cancel

Select how you want to view this data in your workbook.
● Table
○ PivotTable Report
○ PivotChart
○ Only Create Connection

Where do you want to put the data?
● Existing worksheet:
=$A$1
○ New worksheet

☐ Add this data to the Data Model

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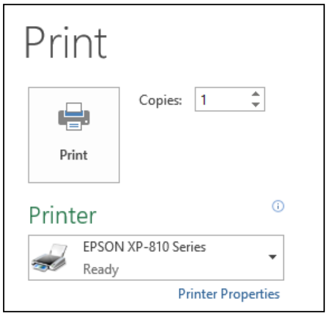
Print
Print
Printer
EPSON XP-810 Series
Ready
Printer Properties

Copies: 1

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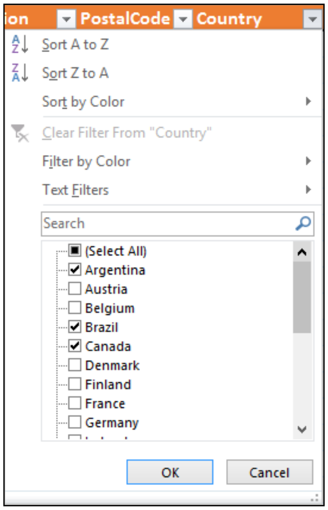
ion
PostalCode
Country
Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Country"
Filter by Color
Text Filters
Search
■ (Select All)
☑ Argentina
☐ Austria
☐ Belgium
☑ Brazil
☑ Canada
☐ Denmark
☐ Finland
☐ France
☐ Germany
OK
Cancel

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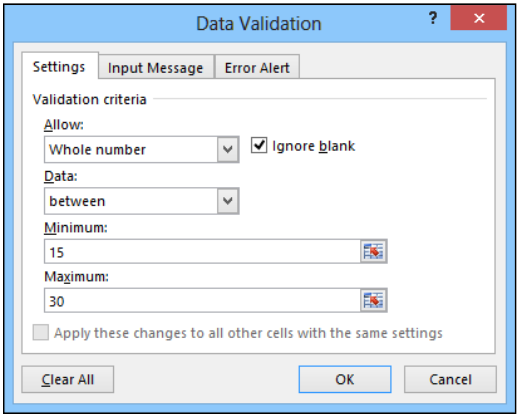

Validation criteria

Allow: Whole number

☑ Ignore blank

Data: between

Minimum: 15

Maximum: 30

☐ Apply these changes to all other cells with the same settings

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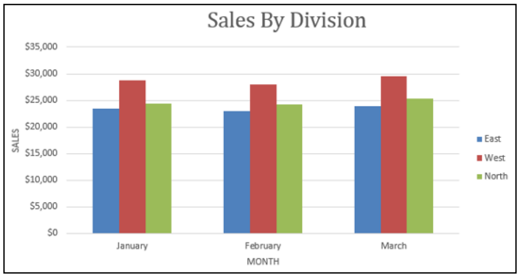

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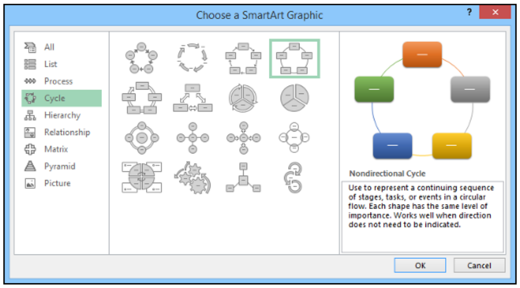

Choose a SmartArt Graphic
?
×
All
List
Process
Cycle
Hierarchy
Relationship
Matrix
Pyramid
Picture
Nondirectional Cycle
OK
Cancel

Use to represent a continuing sequence of stages, tasks, or events in a circular flow. Each shape has the same level of importance. Works well when direction does not need to be indicated.

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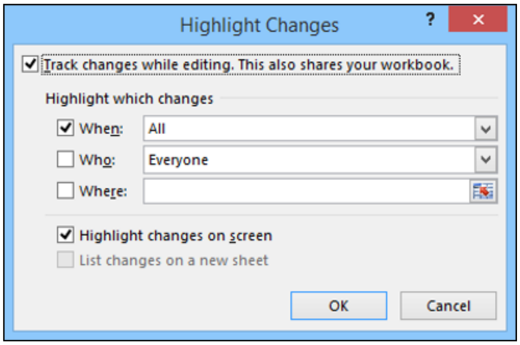


☑ Track changes while editing. This also shares your workbook.

Highlight which changes

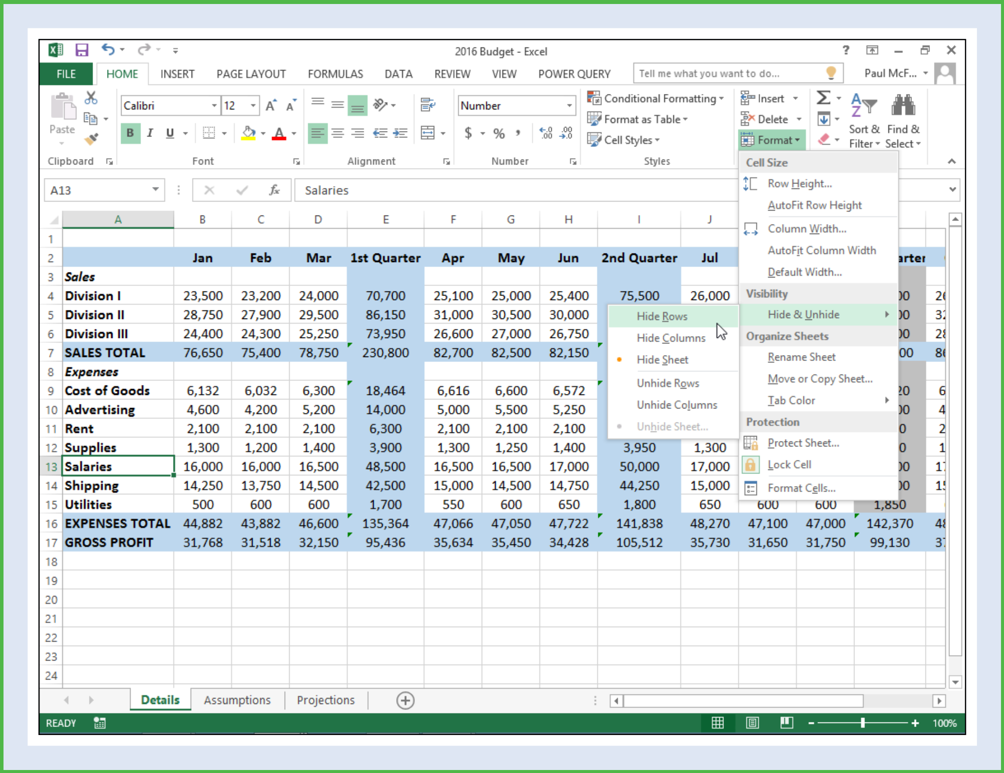
☑ When: All
☐ Who: Everyone
☐ Where:

☑ Highlight changes on screen
☐ List changes on a new sheet

CHAPTER 1

Working with Ranges

In Excel, a *range* is a collection of two or more cells that you work with as a group rather than separately. This enables you to fill the range with values, move or copy the range, sort the range data, and insert and delete ranges. You learn these and other range techniques in this chapter.


2016 Budget - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF...
Paste
Clipboard
Calibri
12
Font
Alignment
Number
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Hide Rows
Hide Columns
Hide Sheet
Unhide Rows
Unhide Columns
Unhide Sheet...
Details
Assumptions
Projections
READY
100%

A13 Salaries

	A	B	C	D	E	F	G	H	I	J			
1													
2		Jan	Feb	Mar	1st Quarter	Apr	May	Jun	2nd Quarter	Jul			
3	*Sales*												
4	Division I	23,500	23,200	24,000	70,700	25,100	25,000	25,400	75,500	26,000			
5	Division II	28,750	27,900	29,500	86,150	31,000	30,500	30,000					
6	Division III	24,400	24,300	25,250	73,950	26,600	27,000	26,750					
7	SALES TOTAL	76,650	75,400	78,750	230,800	82,700	82,500	82,150					
8	*Expenses*												
9	Cost of Goods	6,132	6,032	6,300	18,464	6,616	6,600	6,572					
10	Advertising	4,600	4,200	5,200	14,000	5,000	5,500	5,250					
11	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100					
12	Supplies	1,300	1,200	1,400	3,900	1,300	1,250	1,400	3,950	1,300			
13	Salaries	16,000	16,000	16,500	48,500	16,500	16,500	17,000	50,000	17,000			
14	Shipping	14,250	13,750	14,500	42,500	15,000	14,500	14,750	44,250	15,000			
15	Utilities	500	600	600	1,700	550	600	650	1,800	650	600	600	1,850
16	EXPENSES TOTAL	44,882	43,882	46,600	135,364	47,066	47,050	47,722	141,838	48,270	47,100	47,000	142,370
17	GROSS PROFIT	31,768	31,518	32,150	95,436	35,634	35,450	34,428	105,512	35,730	31,650	31,750	99,130

Select a Range 4
Fill a Range with the Same Data 6
Fill a Range with a Series of Values 8
Flash Fill a Range 10
Move or Copy a Range 12
Insert a Row or Column. 14
Insert a Cell or Range 16
Delete Data from a Range. 18
Delete a Range. 20
Hide a Row or Column 22
Freeze Rows or Columns 24
Merge Two or More Cells 26
Transpose Rows and Columns 28
Select and Enter Data Using Touch Gestures 30

Select a Range

To work with a range in Excel, you must first select the cells that you want to include in the range. After you select the range, you can fill it with data, move it to another part of the worksheet, format the cells, and perform the other range-related tasks that you learn about in this chapter.

You can select a range as a rectangular group of cells, as a collection of individual cells, or as an entire row or column.

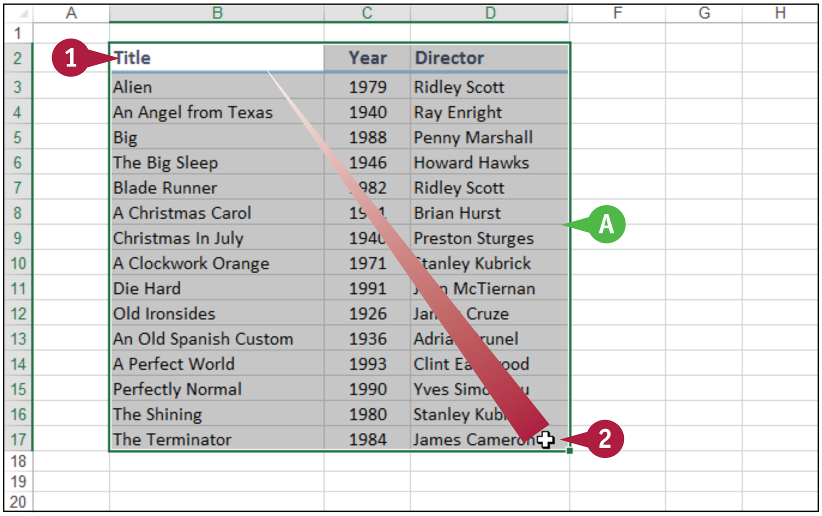
Select a Range

Select a Rectangular Range

1. Position the mouse (✚) over the first cell you want to include in the range.
2. Click and drag the ✚ over the cells that you want to include in the range.

A. Excel selects the cells.

3. Release the mouse button.



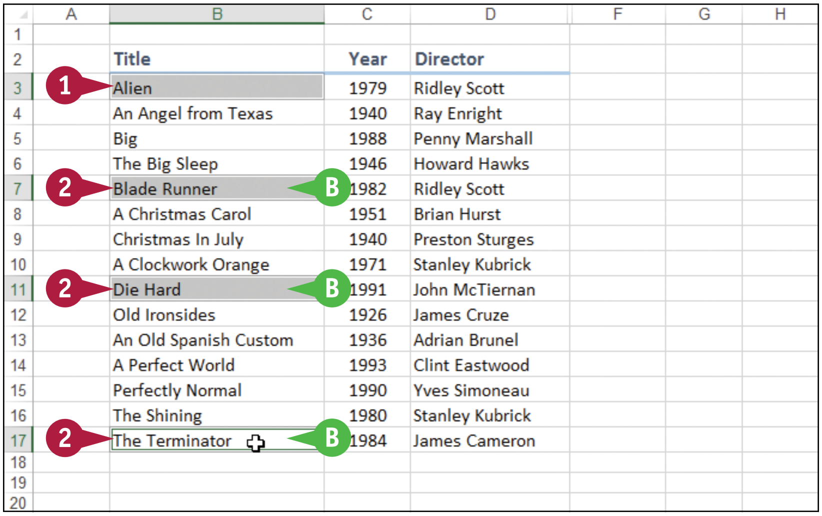
Title	Year	Director
Alien	1979	Ridley Scott
An Angel from Texas	1940	Ray Enright
Big	1988	Penny Marshall
The Big Sleep	1946	Howard Hawks
Blade Runner	982	Ridley Scott
A Christmas Carol	19 1	Brian Hurst
Christmas In July	1940	Preston Sturges
A Clockwork Orange	1971	tanley Kubrick
Die Hard	1991	J n McTiernan
Old Ironsides	1926	Jan Cruze
An Old Spanish Custom	1936	Adria runel
A Perfect World	1993	Clint Ea ood
Perfectly Normal	1990	Yves Simo u
The Shining	1980	Stanley Kub
The Terminator	1984	James Cameron

Select a Range of Individual Cells

1. Click in the first cell that you want to include in the range.
2. Hold down Ctrl and click in each of the other cells that you want to include in the range.

B. Each time you click in a cell, Excel adds it to the range.

3. Release Ctrl.



Title	Year	Director
Alien	1979	Ridley Scott
An Angel from Texas	1940	Ray Enright
Big	1988	Penny Marshall
The Big Sleep	1946	Howard Hawks
Blade Runner	1982	Ridley Scott
A Christmas Carol	1951	Brian Hurst
Christmas In July	1940	Preston Sturges
A Clockwork Orange	1971	Stanley Kubrick
Die Hard	1991	John McTiernan
Old Ironsides	1926	James Cruze
An Old Spanish Custom	1936	Adrian Brunel
A Perfect World	1993	Clint Eastwood
Perfectly Normal	1990	Yves Simoneau
The Shining	1980	Stanley Kubrick
The Terminator	1984	James Cameron

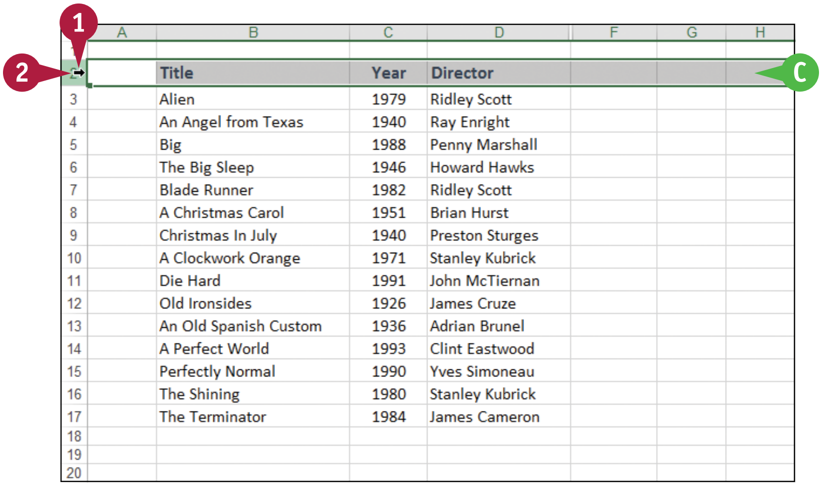
Select an Entire Row

① Position the mouse (✚) over the header of the row you want to select (✚ changes to ➡).

② Click the row header.

Ⓒ Excel selects the entire row.

To select multiple rows, click and drag across the row headers or hold down Ctrl and click each row header.



	Title	Year	Director
3	Alien	1979	Ridley Scott
4	An Angel from Texas	1940	Ray Enright
5	Big	1988	Penny Marshall
6	The Big Sleep	1946	Howard Hawks
7	Blade Runner	1982	Ridley Scott
8	A Christmas Carol	1951	Brian Hurst
9	Christmas In July	1940	Preston Sturges
10	A Clockwork Orange	1971	Stanley Kubrick
11	Die Hard	1991	John McTiernan
12	Old Ironsides	1926	James Cruze
13	An Old Spanish Custom	1936	Adrian Brunel
14	A Perfect World	1993	Clint Eastwood
15	Perfectly Normal	1990	Yves Simoneau
16	The Shining	1980	Stanley Kubrick
17	The Terminator	1984	James Cameron
18			
19			
20			

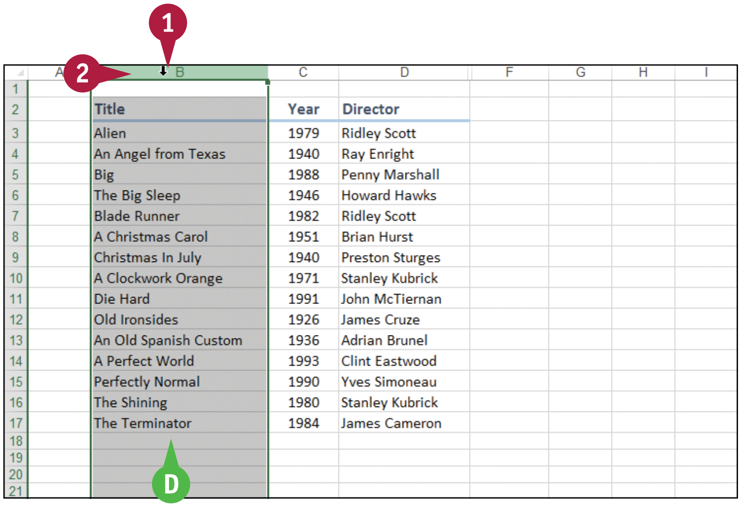
Select an Entire Column

① Position the mouse (✚) over the header of the column you want to select (✚ changes to ⬇).

② Click the column header.

Ⓓ Excel selects the entire column.

To select multiple columns, click and drag across the column headers, or hold down Ctrl and click each column header.



	Title	Year	Director
3	Alien	1979	Ridley Scott
4	An Angel from Texas	1940	Ray Enright
5	Big	1988	Penny Marshall
6	The Big Sleep	1946	Howard Hawks
7	Blade Runner	1982	Ridley Scott
8	A Christmas Carol	1951	Brian Hurst
9	Christmas In July	1940	Preston Sturges
10	A Clockwork Orange	1971	Stanley Kubrick
11	Die Hard	1991	John McTiernan
12	Old Ironsides	1926	James Cruze
13	An Old Spanish Custom	1936	Adrian Brunel
14	A Perfect World	1993	Clint Eastwood
15	Perfectly Normal	1990	Yves Simoneau
16	The Shining	1980	Stanley Kubrick
17	The Terminator	1984	James Cameron
18			
19			
20			
21			

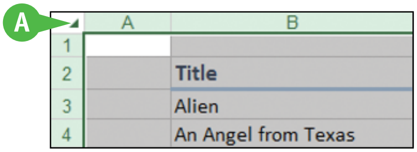
TIPS

Are there keyboard techniques I can use to select a range?

Yes. To select a rectangular range, navigate to the first cell that you want to include in the range, hold down Shift, and then press ← or ↓ to extend the selection. To select an entire row, navigate to any cell in the row and press Shift + Spacebar. To select an entire column, navigate to any cell in the column and then press Ctrl + Spacebar.

Is there an easy way to select every cell in the worksheet?

Yes. There are two methods you can use. Either press Ctrl + A, or click the **Select All** button (◢) in the upper-left corner of the worksheet (Ⓐ).



	A	B
1		
2		Title
3		Alien
4		An Angel from Texas

Fill a Range with the Same Data

If you need to fill a range with the same data, you can save time by getting Excel to fill the range for you. The AutoFill feature makes it easy to fill a vertical or horizontal range with the same value, but you can also fill any selected range. This method is much faster than manually entering the same data in each cell.

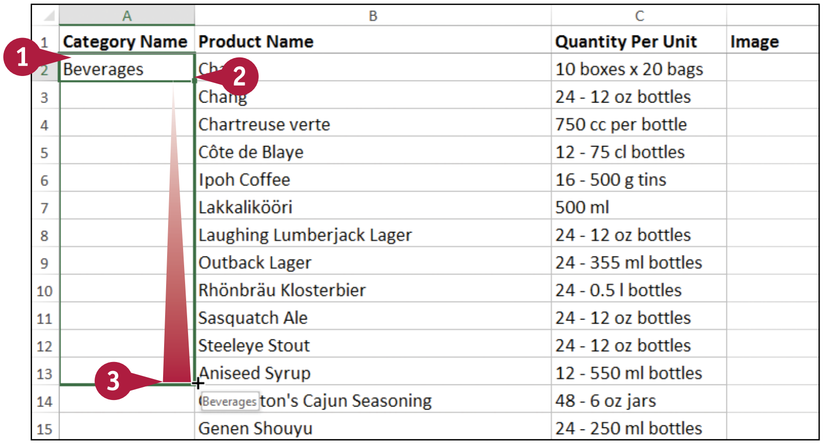
See the previous section, “Select a Range,” to learn how to select a range of cells.

Fill a Range with the Same Data

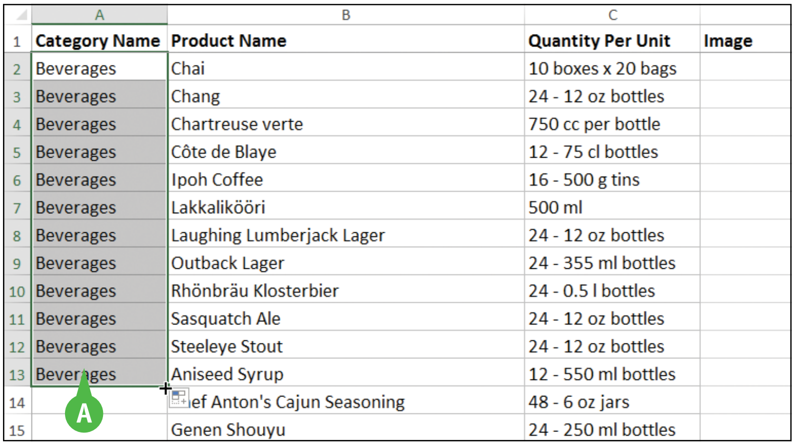
Fill a Vertical or Horizontal Range

1. In the first cell of the range you want to work with, enter the data you want to fill.
2. Position the mouse (✚) over the bottom-right corner of the cell (✚ changes to +).
3. Click and drag + down to fill a vertical range or across to fill a horizontal range.
4. Release the mouse button.

Ⓐ Excel fills the range with the initial cell value.



	A	B	C	
1	**Category Name**	**Product Name**	**Quantity Per Unit**	**Image**
2	Beverages	Ch	10 boxes x 20 bags	
3		Chang	24 - 12 oz bottles	
4		Chartreuse verte	750 cc per bottle	
5		Côte de Blaye	12 - 75 cl bottles	
6		Ipoh Coffee	16 - 500 g tins	
7		Lakkalikööri	500 ml	
8		Laughing Lumberjack Lager	24 - 12 oz bottles	
9		Outback Lager	24 - 355 ml bottles	
10		Rhönbräu Klosterbier	24 - 0.5 l bottles	
11		Sasquatch Ale	24 - 12 oz bottles	
12		Steeleye Stout	24 - 12 oz bottles	
13		Aniseed Syrup	12 - 550 ml bottles	
14		ton's Cajun Seasoning	48 - 6 oz jars	
15		Genen Shouyu	24 - 250 ml bottles	



	A	B	C	
1	**Category Name**	**Product Name**	**Quantity Per Unit**	**Image**
2	Beverages	Chai	10 boxes x 20 bags	
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl bottles	
6	Beverages	Ipoh Coffee	16 - 500 g tins	
7	Beverages	Lakkalikööri	500 ml	
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles	
9	Beverages	Outback Lager	24 - 355 ml bottles	
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles	
11	Beverages	Sasquatch Ale	24 - 12 oz bottles	
12	Beverages	Steeleye Stout	24 - 12 oz bottles	
13	Beverages	Aniseed Syrup	12 - 550 ml bottles	
14		ef Anton's Cajun Seasoning	48 - 6 oz jars	
15		Genen Shouyu	24 - 250 ml bottles	

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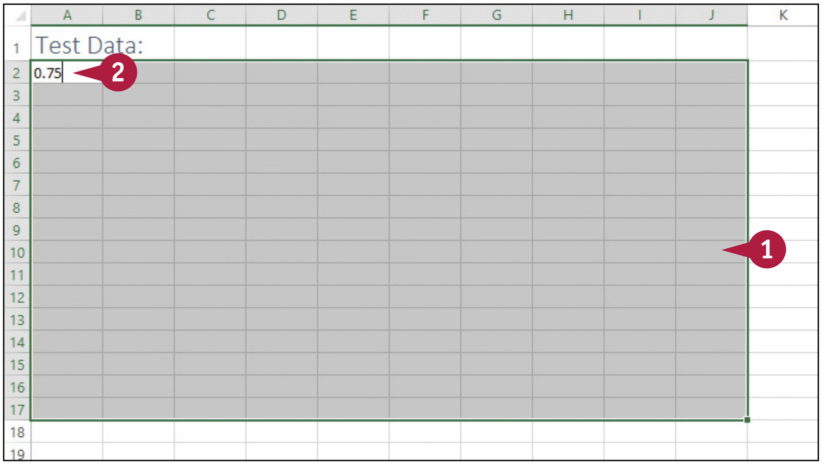
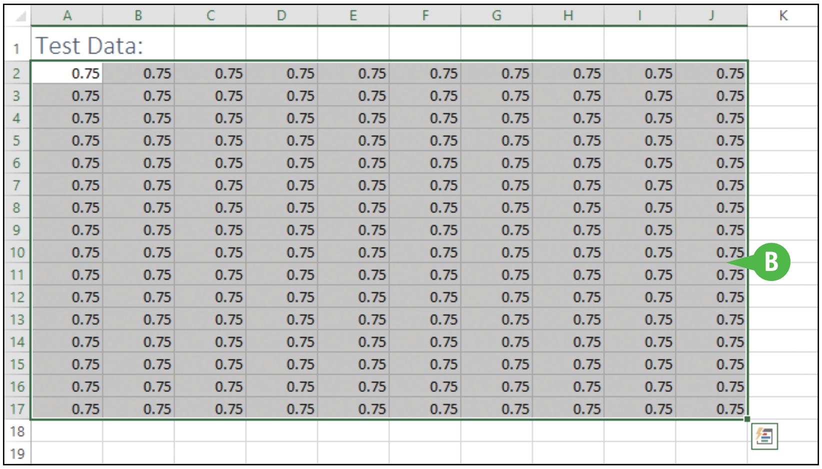
Fill a Selected Range

1. Select the range you want to fill.
2. Type the text, number, or other data.
3. Press Ctrl + Enter.


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
2
1

	A	B	C	D	E	F	G	H	I	J	K
1	Test Data:										
2	0.75										

B Excel fills the range with the value you typed.



	A	B	C	D	E	F	G	H	I	J	K
1	Test Data:										
2	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
3	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
4	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
5	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
6	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
7	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
8	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
9	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
10	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
11	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
12	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
13	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
14	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
15	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
16	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
17	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	
18											
19											

TIP

How do I fill a vertical or horizontal range without also copying the formatting of the original cell?

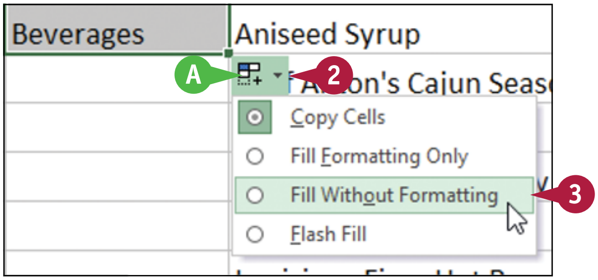
Follow these steps:

1. Perform steps **1** to **4** to fill the data.

A Excel displays the AutoFill Options smart tag (⊞).

2. Click the **AutoFill Options** ▼.
3. Click **Fill Without Formatting**.

Excel removes the original cell's formatting from the copied cells.


Beverages
Aniseed Syrup
A
2
...on's Cajun Seas...
○ Copy Cells
○ Fill Formatting Only
○ Fill Without Formatting
○ Flash Fill
3

Fill a Range with a Series of Values

If you need to fill a range with a series of values, you can save time by using the AutoFill feature to create the series for you. AutoFill can fill a series of numeric values such as 5, 10, 15, 20, and so on; a series of date values such as January 1, 2016, January 2, 2016, and so on; or a series of alphanumeric values such as Chapter 1, Chapter 2, Chapter 3, and so on.

You can also create your own series with a custom step value, which determines the numeric difference between each item in the series.

Fill a Range with a Series of Values

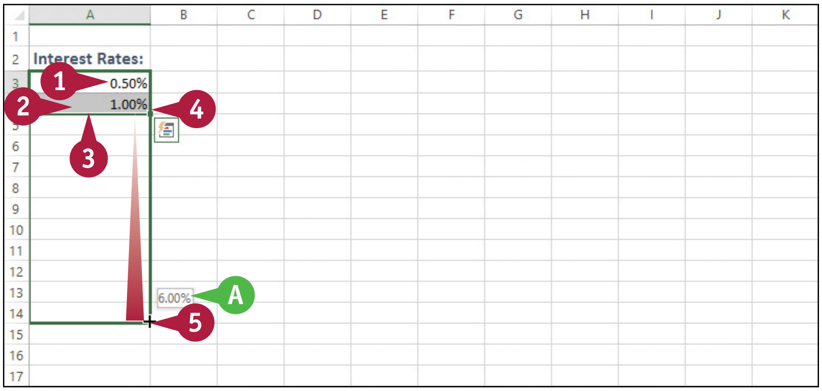
AutoFill a Series of Numeric, Date, or Alphanumeric Values

1. Click in the first cell and type the first value in the series.
2. Click in an adjacent cell and type the second value in the series.
3. Select the two cells.
4. Position the mouse (✚) over the bottom-right corner of the second cell (✚ changes to +).
5. Click and drag + down to fill a vertical range or across to fill a horizontal range.

   A. As you drag through each cell, Excel displays the series value that it will add to the cell.

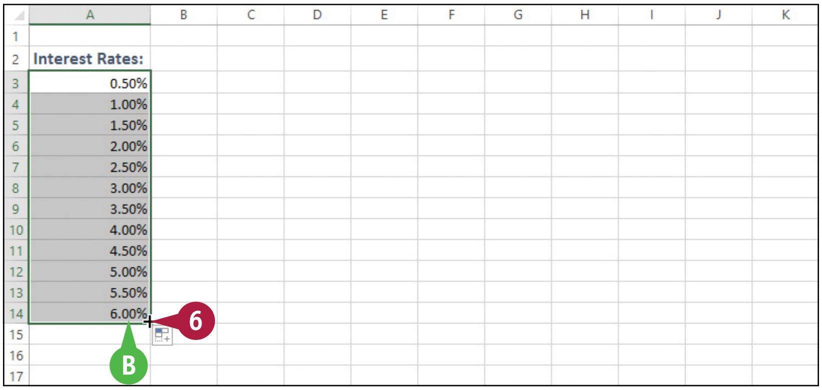
6. Release the mouse button.

   B. Excel fills the range with a series that continues the pattern of the initial two cell values.



	A
2	Interest Rates:
3	0.50%
4	1.00%

6.00%



	A
2	Interest Rates:
3	0.50%
4	1.00%
5	1.50%
6	2.00%
7	2.50%
8	3.00%
9	3.50%
10	4.00%
11	4.50%
12	5.00%
13	5.50%
14	6.00%

Fill a Custom Series of Values

1. Click in the first cell and type the first value in the series.

2. Select the range you want to fill, including the initial value.

3. Click the **Home** tab.

4. Click **Fill** (⬇).

5. Click **Series**.

   The Series dialog box appears.

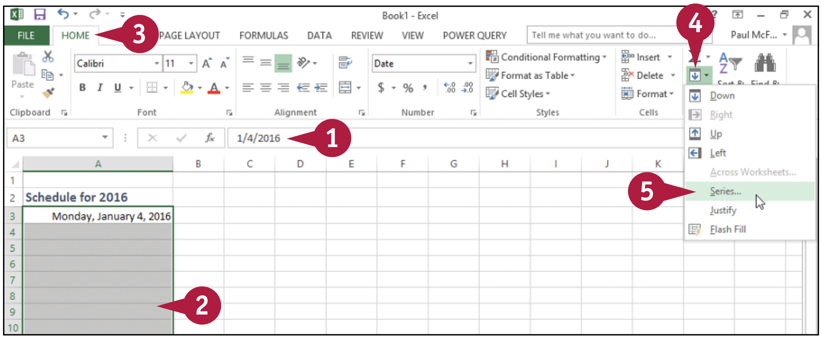
6. In the Type group, select the type of series you want to fill (○ changes to ●).

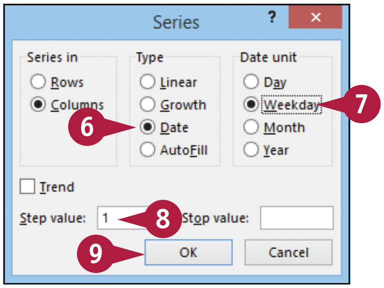
7. If you selected Date in step 6, select an option in the Date unit group (○ changes to ●).

8. In the Step value text box, type the value you want to use.

9. Click **OK**.

C Excel fills the range with the series you created.


Book1 - Excel
FILE
HOME
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF...
Calibri
11
Date
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
A3
1/4/2016
Schedule for 2016
Monday, January 4, 2016
Down
Right
Up
Left
Across Worksheets...
Series...
Justify
Flash Fill
1
2
3
4
5



Series

Series in
○ Rows
● Columns

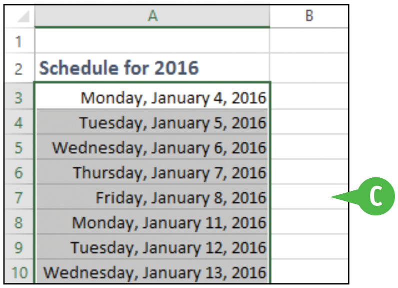
Type
○ Linear
○ Growth
● Date
○ AutoFill

Date unit
○ Day
● Weekday
○ Month
○ Year

☐ Trend

Step value: 1 Stop value:

OK Cancel



	A	B
1		
2	Schedule for 2016	
3	Monday, January 4, 2016	
4	Tuesday, January 5, 2016	
5	Wednesday, January 6, 2016	
6	Thursday, January 7, 2016	
7	Friday, January 8, 2016	
8	Monday, January 11, 2016	
9	Tuesday, January 12, 2016	
10	Wednesday, January 13, 2016	

TIP

Can I create my own AutoFill series?

Yes. You can create a *custom list*, which is a series of text values. When you add the first value in your custom list, you can then use AutoFill to fill a range with the rest of the series. Follow these steps:

1. Click the **File** tab.

2. Click **Options**.

   The Excel Options dialog box appears.

3. Click **Advanced**.

4. Scroll down to the General section and then click **Edit Custom Lists**.

   The Custom Lists dialog box appears.

5. Click **NEW LIST**.

6. In the List entries box, type each item in your list, and press Enter after each item.

7. Click **Add**.

8. Click **OK** to return to the Excel Options dialog box.

9. Click **OK**.

Flash Fill a Range

You can save time and effort by using the Flash Fill feature in Excel to automatically fill a range of data based on a sample pattern that you provide.

Although there are many ways to use Flash Fill, the two most common are flash filling a range with extracted data and flash filling a range with formatted data. For example, if you have a column of full names, you might want to create a new column that includes just the first names extracted from the original column. Similarly, if you have a column of phone numbers in the form 1234567890, you might want a new column that formats the numbers as (123) 456-7890.

Flash Fill a Range

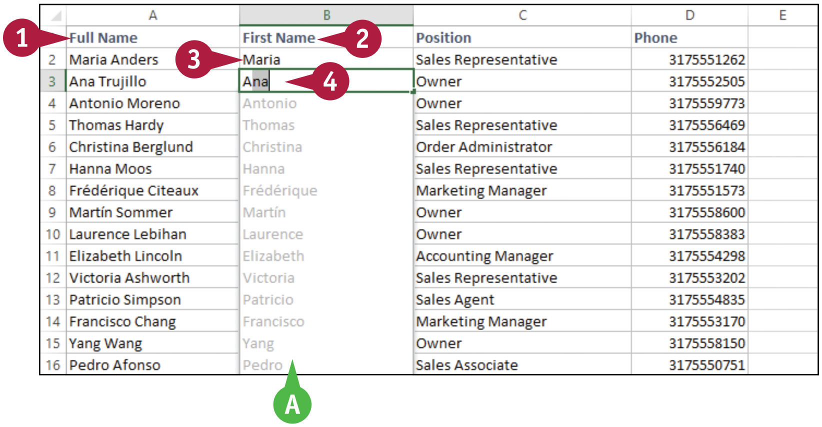
Flash Fill a Range with Extracted Data

1. Make sure the column of original data has a heading.
2. Type a heading for the column of extracted data.
3. Type the first value you want in the new column.
4. Begin typing the second value.

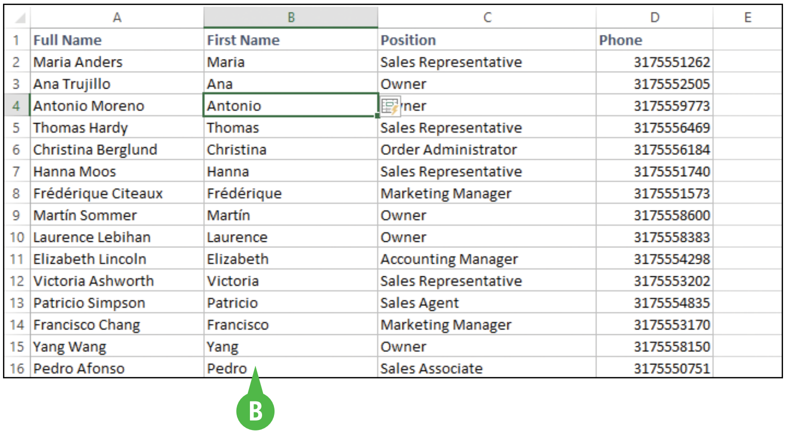
- A Excel recognizes the pattern and displays suggestions for the rest of the column.

5. Press Enter.

- B Excel flash fills the column with the extracted data.



	A	B	C	D	E
	Full Name	First Name	Position	Phone	
2	Maria Anders	Maria	Sales Representative	3175551262	
3	Ana Trujillo	Ana	Owner	3175552505	
4	Antonio Moreno	Antonio	Owner	3175559773	
5	Thomas Hardy	Thomas	Sales Representative	3175556469	
6	Christina Berglund	Christina	Order Administrator	3175556184	
7	Hanna Moos	Hanna	Sales Representative	3175551740	
8	Frédérique Citeaux	Frédérique	Marketing Manager	3175551573	
9	Martín Sommer	Martín	Owner	3175558600	
10	Laurence Lebihan	Laurence	Owner	3175558383	
11	Elizabeth Lincoln	Elizabeth	Accounting Manager	3175554298	
12	Victoria Ashworth	Victoria	Sales Representative	3175553202	
13	Patricio Simpson	Patricio	Sales Agent	3175554835	
14	Francisco Chang	Francisco	Marketing Manager	3175553170	
15	Yang Wang	Yang	Owner	3175558150	
16	Pedro Afonso	Pedro	Sales Associate	3175550751	



	A	B	C	D	E
1	Full Name	First Name	Position	Phone	
2	Maria Anders	Maria	Sales Representative	3175551262	
3	Ana Trujillo	Ana	Owner	3175552505	
4	Antonio Moreno	Antonio	ner	3175559773	
5	Thomas Hardy	Thomas	Sales Representative	3175556469	
6	Christina Berglund	Christina	Order Administrator	3175556184	
7	Hanna Moos	Hanna	Sales Representative	3175551740	
8	Frédérique Citeaux	Frédérique	Marketing Manager	3175551573	
9	Martín Sommer	Martín	Owner	3175558600	
10	Laurence Lebihan	Laurence	Owner	3175558383	
11	Elizabeth Lincoln	Elizabeth	Accounting Manager	3175554298	
12	Victoria Ashworth	Victoria	Sales Representative	3175553202	
13	Patricio Simpson	Patricio	Sales Agent	3175554835	
14	Francisco Chang	Francisco	Marketing Manager	3175553170	
15	Yang Wang	Yang	Owner	3175558150	
16	Pedro Afonso	Pedro	Sales Associate	3175550751	

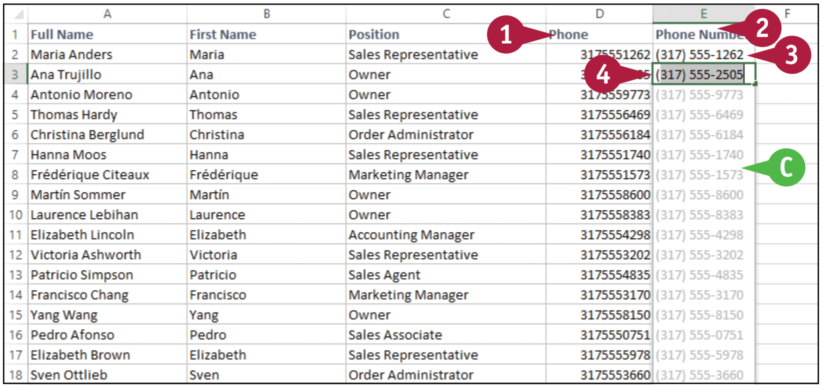
Flash Fill a Range with Formatted Data

1. Make sure the column of original data has a heading.
2. Type a heading for the new column of formatted data.
3. Type the first value you want in the new column.
4. Begin typing the second value.

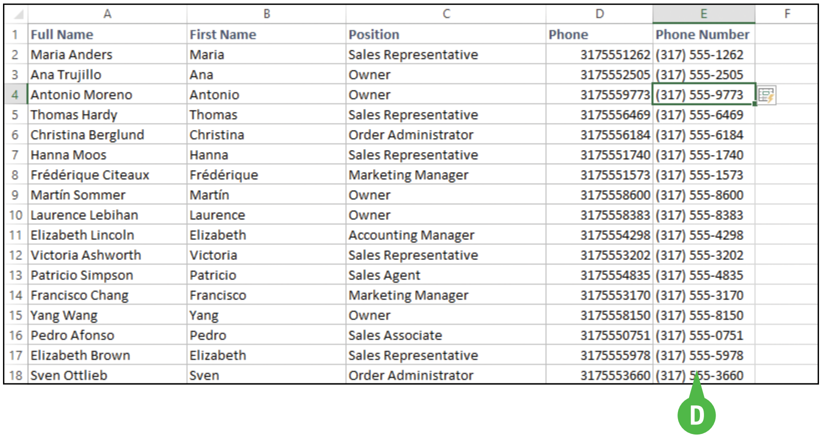
C Excel recognizes the pattern and displays suggestions for the rest of the column.

5. Press **Enter**.

D Excel flash fills the column with the formatted data.



	A	B	C	D	E	F
1	**Full Name**	**First Name**	**Position**	**Phone**	**Phone Numbe**	
2	Maria Anders	Maria	Sales Representative	3175551262	(317) 555-1262	
3	Ana Trujillo	Ana	Owner	[illegible]	(317) 555-2505	
4	Antonio Moreno	Antonio	Owner	3175559773	(317) 555-9773	
5	Thomas Hardy	Thomas	Sales Representative	3175556469	(317) 555-6469	
6	Christina Berglund	Christina	Order Administrator	3175556184	(317) 555-6184	
7	Hanna Moos	Hanna	Sales Representative	3175551740	(317) 555-1740	
8	Frédérique Citeaux	Frédérique	Marketing Manager	3175551573	(317) 555-1573	
9	Martín Sommer	Martín	Owner	3175558600	(317) 555-8600	
10	Laurence Lebihan	Laurence	Owner	3175558383	(317) 555-8383	
11	Elizabeth Lincoln	Elizabeth	Accounting Manager	3175554298	(317) 555-4298	
12	Victoria Ashworth	Victoria	Sales Representative	3175553202	(317) 555-3202	
13	Patricio Simpson	Patricio	Sales Agent	3175554835	(317) 555-4835	
14	Francisco Chang	Francisco	Marketing Manager	3175553170	(317) 555-3170	
15	Yang Wang	Yang	Owner	3175558150	(317) 555-8150	
16	Pedro Afonso	Pedro	Sales Associate	3175550751	(317) 555-0751	
17	Elizabeth Brown	Elizabeth	Sales Representative	3175555978	(317) 555-5978	
18	Sven Ottlieb	Sven	Order Administrator	3175553660	(317) 555-3660	



	A	B	C	D	E	F
1	**Full Name**	**First Name**	**Position**	**Phone**	**Phone Number**	
2	Maria Anders	Maria	Sales Representative	3175551262	(317) 555-1262	
3	Ana Trujillo	Ana	Owner	3175552505	(317) 555-2505	
4	Antonio Moreno	Antonio	Owner	3175559773	(317) 555-9773	
5	Thomas Hardy	Thomas	Sales Representative	3175556469	(317) 555-6469	
6	Christina Berglund	Christina	Order Administrator	3175556184	(317) 555-6184	
7	Hanna Moos	Hanna	Sales Representative	3175551740	(317) 555-1740	
8	Frédérique Citeaux	Frédérique	Marketing Manager	3175551573	(317) 555-1573	
9	Martín Sommer	Martín	Owner	3175558600	(317) 555-8600	
10	Laurence Lebihan	Laurence	Owner	3175558383	(317) 555-8383	
11	Elizabeth Lincoln	Elizabeth	Accounting Manager	3175554298	(317) 555-4298	
12	Victoria Ashworth	Victoria	Sales Representative	3175553202	(317) 555-3202	
13	Patricio Simpson	Patricio	Sales Agent	3175554835	(317) 555-4835	
14	Francisco Chang	Francisco	Marketing Manager	3175553170	(317) 555-3170	
15	Yang Wang	Yang	Owner	3175558150	(317) 555-8150	
16	Pedro Afonso	Pedro	Sales Associate	3175550751	(317) 555-0751	
17	Elizabeth Brown	Elizabeth	Sales Representative	3175555978	(317) 555-5978	
18	Sven Ottlieb	Sven	Order Administrator	3175553660	(317) 555-3660	

TIPS

Why do I not see the automatic Flash Fill suggestions when I type the sample data?

For Flash Fill’s automatic suggestions to appear, you must have headings at the top of both the column of original data and the column you are using for the filled data. Also, the flash fill column must be adjacent to the original column and the sample entries you make in the fill column must occur one after the other. Finally, note that Flash Fill’s automatic suggestions usually only work with text data, not numeric data.

Can I still use Flash Fill even though I do not see the automatic suggestions?

Yes, you can still invoke Flash Fill on any range by running the Ribbon command. In the fill range, type the first value, then select that value and the rest of the fill range. Click the **Data** tab and then click **Flash Fill** (⚡). Excel flash fills the selected range.

Move or Copy a Range

If your worksheet is not set up the way you want, you can restructure or reorganize the worksheet by moving an existing range to a different part of the sheet.

You can also make a copy of a range, which is a useful technique if you require a duplicate of the range elsewhere, or if you require a range that is similar to an existing range. In the latter case, after you copy the range, you can then edit the copied version of the data as needed.

Move or Copy a Range

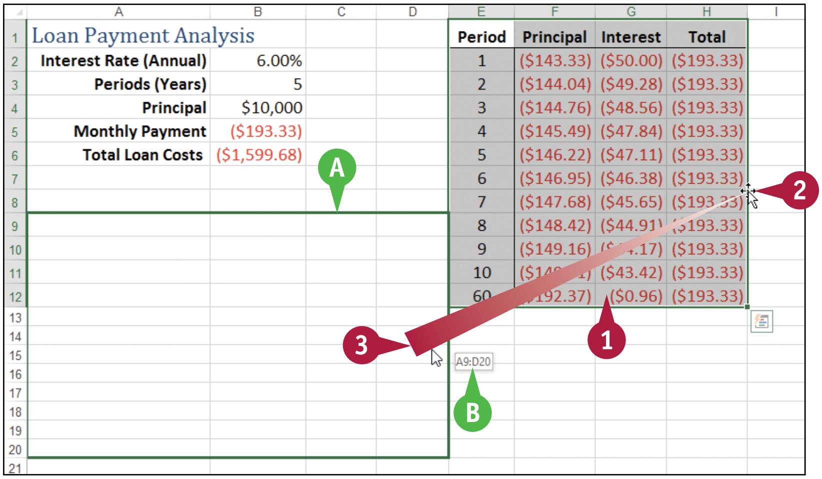
Move a Range

1. Select the range you want to move.
2. Position the mouse (✚) over any outside border of the range (✚ changes to ✥).
3. Click and drag the range to the new location (✥ changes to ↖).

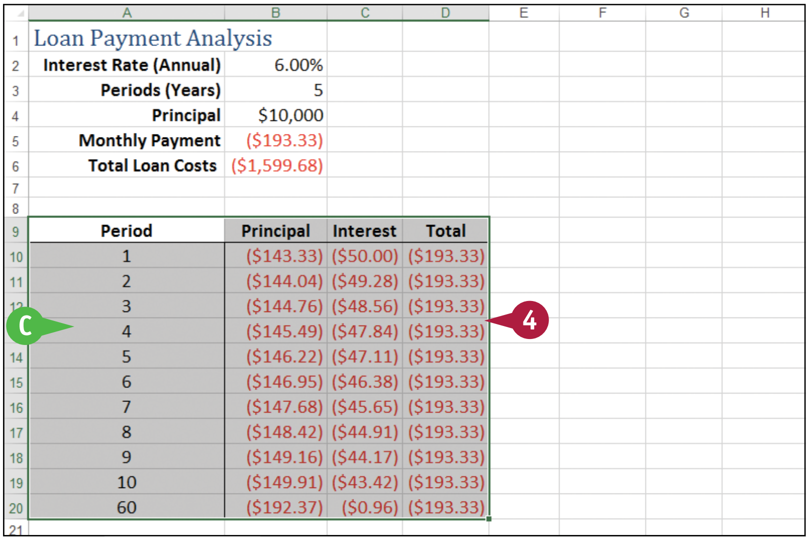
- A Excel displays an outline of the range.
- B Excel displays the address of the new location.

4. Release the mouse button.

- C Excel moves the range to the new location.



	A	B	C	D	E	F	G	H
1	Loan Payment Analysis				Period	Principal	Interest	Total
2	Interest Rate (Annual)	6.00%			1	($143.33)	($50.00)	($193.33)
3	Periods (Years)	5			2	($144.04)	($49.28)	($193.33)
4	Principal	$10,000			3	($144.76)	($48.56)	($193.33)
5	Monthly Payment	($193.33)			4	($145.49)	($47.84)	($193.33)
6	Total Loan Costs	($1,599.68)			5	($146.22)	($47.11)	($193.33)
7					6	($146.95)	($46.38)	($193.33)
8					7	($147.68)	($45.65)	($193.33)
9					8	($148.42)	($44.91)	($193.33)
10					9	($149.16)	([illegible].17)	($193.33)
11					10	($14[illegible]1)	($43.42)	($193.33)
12					60	([illegible]192.37)	($0.96)	($193.33)



	A	B	C	D
1	Loan Payment Analysis			
2	Interest Rate (Annual)	6.00%		
3	Periods (Years)	5		
4	Principal	$10,000		
5	Monthly Payment	($193.33)		
6	Total Loan Costs	($1,599.68)		
7				
8				
9	Period	Principal	Interest	Total
10	1	($143.33)	($50.00)	($193.33)
11	2	($144.04)	($49.28)	($193.33)
12	3	($144.76)	($48.56)	($193.33)
13	4	($145.49)	($47.84)	($193.33)
14	5	($146.22)	($47.11)	($193.33)
15	6	($146.95)	($46.38)	($193.33)
16	7	($147.68)	($45.65)	($193.33)
17	8	($148.42)	($44.91)	($193.33)
18	9	($149.16)	($44.17)	($193.33)
19	10	($149.91)	($43.42)	($193.33)
20	60	($192.37)	($0.96)	($193.33)

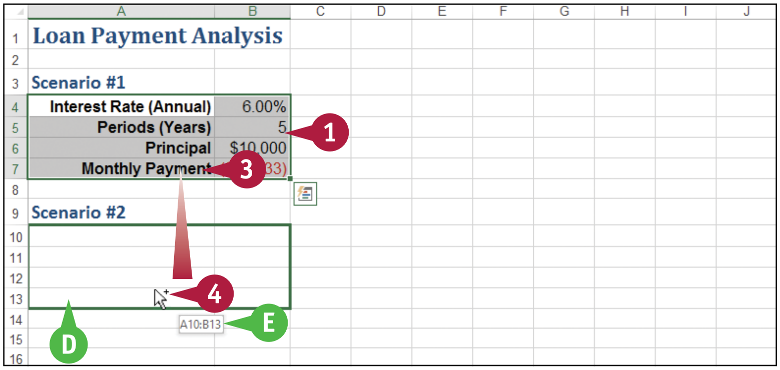
Copy a Range

1. Select the range you want to copy.
2. Press and hold Ctrl.
3. Position the mouse (✥) over any outside border of the range (✥ changes to ↖).
4. Click and drag the range to the location where you want the copy to appear.

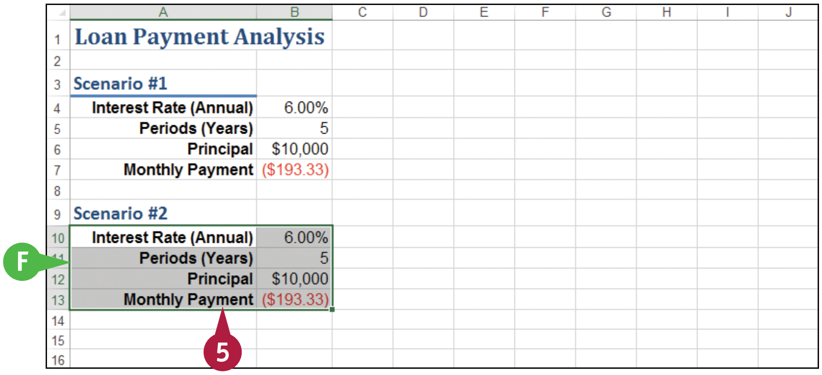
- D Excel displays an outline of the range.
- E Excel displays the address of the new location.

5. Release the mouse button.
6. Release Ctrl.

- F Excel creates a copy of the range in the new location.



	A	B
1	Loan Payment Analysis	
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Monthly Payment	33)
8		
9	Scenario #2	



	A	B
1	Loan Payment Analysis	
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Monthly Payment	($193.33)
8		
9	Scenario #2	
10	Interest Rate (Annual)	6.00%
11	Periods (Years)	5
12	Principal	$10,000
13	Monthly Payment	($193.33)

TIPS

Can I move or copy a range to another worksheet?

Yes. Click and drag the range as described in this section. Remember to hold down Ctrl if you are copying the range. Press and hold Alt and then drag the mouse pointer over the tab of the sheet you want to use as the destination. Excel displays the worksheet. Release Alt and then drop the range on the worksheet.

Can I move or copy a range to another workbook?

Yes. If you can see the other workbook on-screen, click and drag the range as described in this section, and then drop it on the other workbook. Remember to hold down Ctrl if you are copying the range. Otherwise, select the range, click the **Home** tab, click **Cut** (✂) to move the range or **Copy** (⎘) to copy it, switch to the other workbook, select the cell where you want the range to appear, click **Home**, and then click **Paste** (📋).

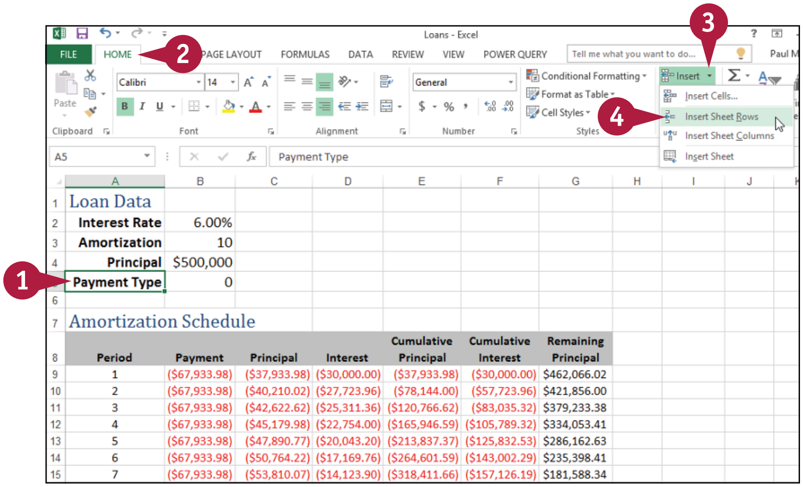
Insert a Row or Column

You can insert a row or column into your existing worksheet data to accommodate more information. The easiest way to add more information to a worksheet is to add it to the right or at the bottom of your existing data. However, you will often find that the new information you need to add fits naturally within the existing data. In such cases, you first need to insert a new row or column in your worksheet at the place where you want the new data to appear, and then add the new information in the blank row or column.

Insert a Row or Column

Insert a Row

1. Click any cell in the row below where you want to insert the new row.
2. Click the **Home** tab.
3. Click the **Insert** ▼.
4. Click **Insert Sheet Rows**.



Loans - Excel
FILE
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POWER QUERY
Tell me what you want to do...
Paul M
Paste
Clipboard
Calibri
14
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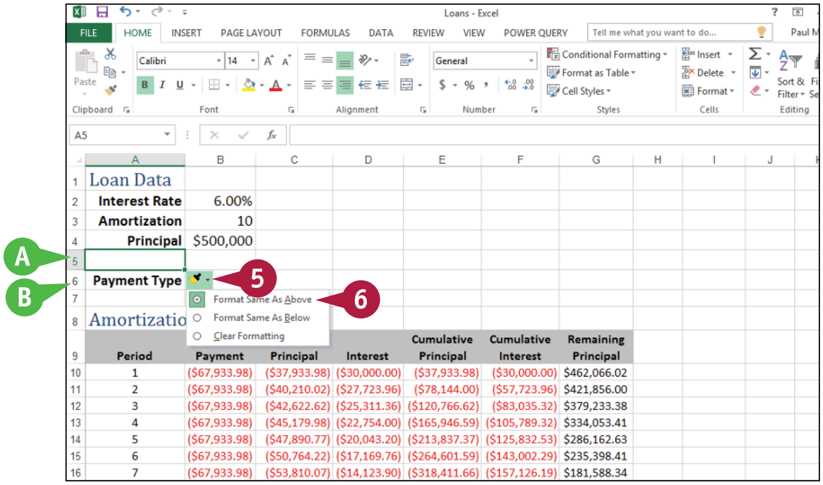
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Insert Cells...
Insert Sheet Rows
Insert Sheet Columns
Insert Sheet
A5
Payment Type
1
2
3
4

	A	B	C	D	E	F	G
1	Loan Data						
2	Interest Rate	6.00%					
3	Amortization	10					
4	Principal	$500,000					
5	Payment Type	0					
6							
7	Amortization Schedule						
8	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34

- Ⓐ Excel inserts the new row.
- Ⓑ The rows below the new row are shifted down.

5. Click the **Insert Options** smart tag (🖌).
6. Select a formatting option for the new row (○ changes to ●).



Loans - Excel
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Insert
Delete
Format
Cells
Sort & Filter
Editing
A5
A
B
5
6
● Format Same As Above
○ Format Same As Below
○ Clear Formatting

	A	B	C	D	E	F	G
1	Loan Data						
2	Interest Rate	6.00%					
3	Amortization	10					
4	Principal	$500,000					
5							
6	Payment Type						
7							
8	Amortizatio						
9	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
10	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02
11	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00
12	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38
13	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41
14	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63
15	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41
16	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34

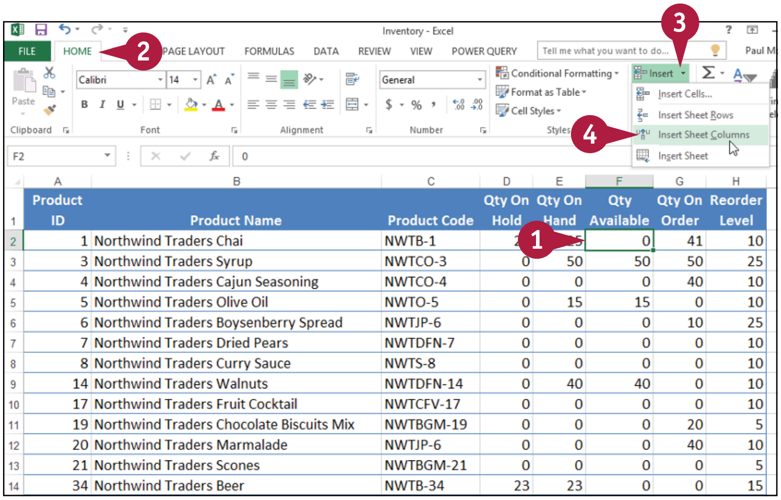
Insert a Column

1 Click any cell in the row to the right of where you want to insert the new column.

2 Click the **Home** tab.

3 Click the **Insert** ▾.

4 Click **Insert Sheet Columns**.


Inventory - Excel
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Format as Table
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Insert
Insert Cells...
Insert Sheet Rows
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Styles
F2
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4

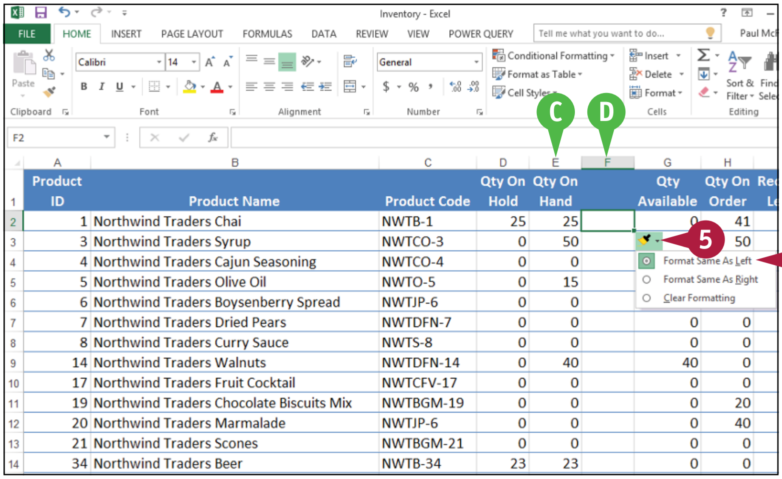
	A	B	C	D	E	F	G	H
1	Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
2	1	Northwind Traders Chai	NWTB-1	[illegible]	[illegible]	0	41	10
3	3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10
8	8	Northwind Traders Curry Sauce	NWTS-8	0	0	0	0	10
9	14	Northwind Traders Walnuts	NWTDFN-14	0	40	40	0	10
10	17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	0	0	10
11	19	Northwind Traders Chocolate Biscuits Mix	NWTBGM-19	0	0	0	20	5
12	20	Northwind Traders Marmalade	NWTJP-6	0	0	0	40	10
13	21	Northwind Traders Scones	NWTBGM-21	0	0	0	0	5
14	34	Northwind Traders Beer	NWTB-34	23	23	0	0	15

C Excel inserts the new column.

D The columns to the right of the new column are shifted to the right.

5 Click the **Insert Options** smart tag (🖌).

6 Select a formatting option for the new column (○ changes to ●).


Inventory - Excel
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F2
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6
Format Same As Left
Format Same As Right
Clear Formatting

	A	B	C	D	E	F	G	H
1	Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand		Qty Available	Qty On Order
2	1	Northwind Traders Chai	NWTB-1	25	25		0	41
3	3	Northwind Traders Syrup	NWTCO-3	0	50			50
4	4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0			
5	5	Northwind Traders Olive Oil	NWTO-5	0	15			
6	6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0			
7	7	Northwind Traders Dried Pears	NWTDFN-7	0	0		0	0
8	8	Northwind Traders Curry Sauce	NWTS-8	0	0		0	0
9	14	Northwind Traders Walnuts	NWTDFN-14	0	40		40	0
10	17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0		0	0
11	19	Northwind Traders Chocolate Biscuits Mix	NWTBGM-19	0	0		0	20
12	20	Northwind Traders Marmalade	NWTJP-6	0	0		0	40
13	21	Northwind Traders Scones	NWTBGM-21	0	0		0	0
14	34	Northwind Traders Beer	NWTB-34	23	23		0	0

TIP

Can I insert more than one row or column at a time?

Yes. You can insert as many new rows or columns as you need. First, select the same number of rows or columns that you want to insert. (See the "Select a Range" section earlier in this chapter to learn how to select rows and columns.) For example, if you want to insert four rows, select four existing rows. For rows, be sure to select existing rows below where you want the new rows inserted and then follow steps 2 to 4 in the "Insert a Row" subsection. For columns, be sure to select existing columns to the right of where you want to insert the new columns and then follow steps 2 to 4 in the "Insert a Column" subsection.

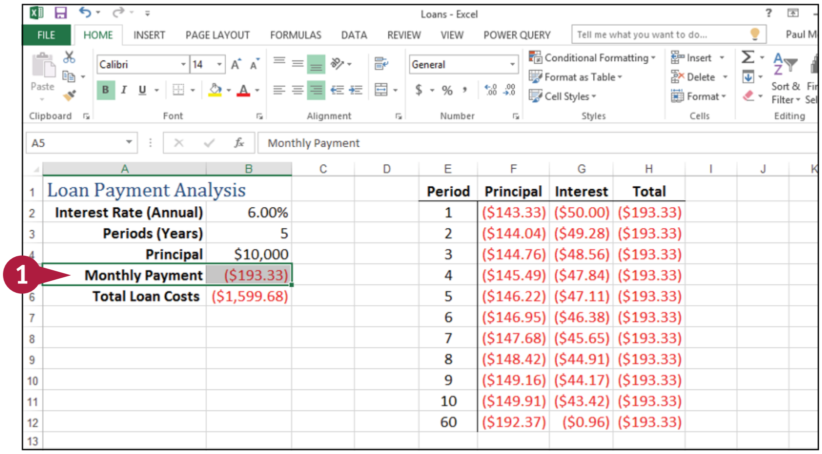
Insert a Cell or Range

If you need to add data to an existing range, you can insert a single cell or a range of cells within that range. When you insert a cell or range, Excel shifts the existing data to accommodate the new cells.

Although it is often easiest to create room for new data within a range by inserting an entire row or column, as explained in the previous section, "Insert a Row or Column," this causes problems for some types of worksheet layouts. (See the first tip to learn more.) You can work around such problems by inserting just a cell or range.

Insert a Cell or Range

1. Select the cell or range where you want the inserted cell or range to appear.


Loans - Excel
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Format as Table
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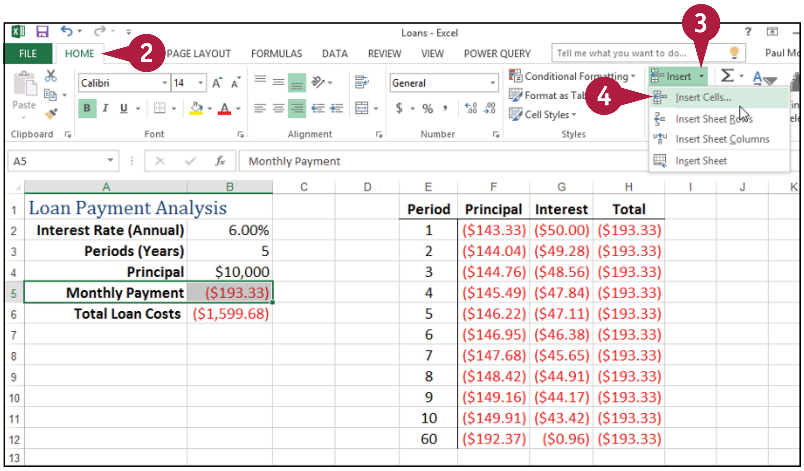
Cells
Sort & Filter
Editing
1

A5 | Monthly Payment

	A	B	C	D	E	F	G	H
1	Loan Payment Analysis				Period	Principal	Interest	Total
2	Interest Rate (Annual)	6.00%			1	($143.33)	($50.00)	($193.33)
3	Periods (Years)	5			2	($144.04)	($49.28)	($193.33)
4	Principal	$10,000			3	($144.76)	($48.56)	($193.33)
5	Monthly Payment	($193.33)			4	($145.49)	($47.84)	($193.33)
6	Total Loan Costs	($1,599.68)			5	($146.22)	($47.11)	($193.33)
7					6	($146.95)	($46.38)	($193.33)
8					7	($147.68)	($45.65)	($193.33)
9					8	($148.42)	($44.91)	($193.33)
10					9	($149.16)	($44.17)	($193.33)
11					10	($149.91)	($43.42)	($193.33)
12					60	($192.37)	($0.96)	($193.33)
13								

2. Click the **Home** tab.
3. Click the **Insert** ▼.
4. Click **Insert Cells.**

Note: You can also press Ctrl + Shift + =.


Loans - Excel
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Format as Table
Cell Styles
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Insert
Insert Cells...
Insert Sheet Rows
Insert Sheet Columns
Insert Sheet
2
3
4

A5 | Monthly Payment

	A	B	C	D	E	F	G	H
1	Loan Payment Analysis				Period	Principal	Interest	Total
2	Interest Rate (Annual)	6.00%			1	($143.33)	($50.00)	($193.33)
3	Periods (Years)	5			2	($144.04)	($49.28)	($193.33)
4	Principal	$10,000			3	($144.76)	($48.56)	($193.33)
5	Monthly Payment	($193.33)			4	($145.49)	($47.84)	($193.33)
6	Total Loan Costs	($1,599.68)			5	($146.22)	($47.11)	($193.33)
7					6	($146.95)	($46.38)	($193.33)
8					7	($147.68)	($45.65)	($193.33)
9					8	($148.42)	($44.91)	($193.33)
10					9	($149.16)	($44.17)	($193.33)
11					10	($149.91)	($43.42)	($193.33)
12					60	($192.37)	($0.96)	($193.33)
13								

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The Insert dialog box appears.

5 Select the option that corresponds to how you want Excel to shift the existing cells to accommodate your new cells (○ changes to ●).

Note: In most cases, if you selected a horizontal range, you should click the **Shift cells down** option; if you selected a vertical range, you should click the **Shift cells right** option.

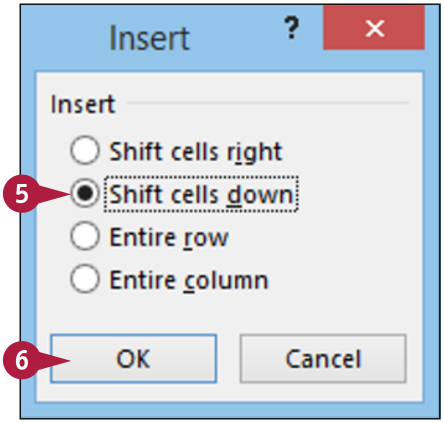
6 Click **OK**.

A Excel inserts the cell or range.

B The existing data is shifted down (in this case) or to the right.

7 Click the **Insert Options** smart tag (🖌).

8 Select a formatting option for the new row (○ changes to ●).



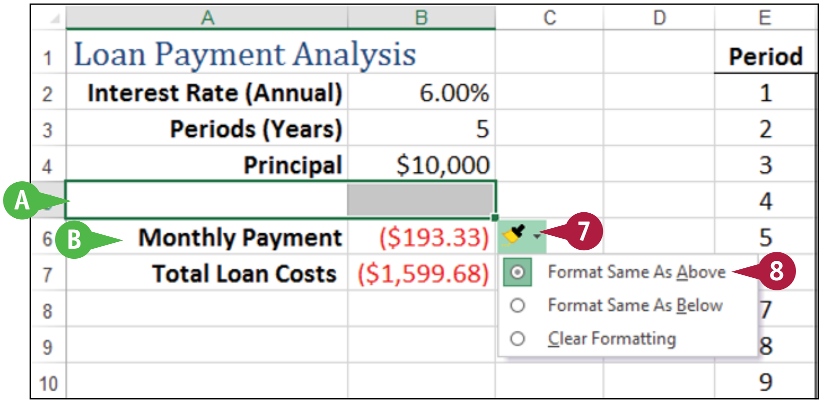
Insert

○ Shift cells right

● Shift cells down

○ Entire row

○ Entire column



	A	B	C	D	E
1	Loan Payment Analysis				Period
2	Interest Rate (Annual)	6.00%			1
3	Periods (Years)	5			2
4	Principal	$10,000			3
5					4
6	Monthly Payment	($193.33)			5
7	Total Loan Costs	($1,599.68)			
8					7
9					8
10					9

● Format Same As Above

○ Format Same As Below

○ Clear Formatting

TIPS

Under what circumstances would I insert a cell or range instead of inserting an entire row or column?

In most cases, it is better to insert a cell or range when you have other data either to the left or right of the existing range, or above or below the range. For example, if you have data to the left or right of the existing range, inserting an entire row would create a gap in the other data.

How do I know which cells to select to get my inserted cell or range in the correct position?

The easiest way to do this is to select the existing cell or range that is exactly where you want the new cell or range to appear. For example, if you want the new range to be A5:B5 as shown in this section's example, you first select the existing A5:B5 range. When you insert the new range, Excel shifts the existing cells (down in this case) to accommodate it.

Delete Data from a Range

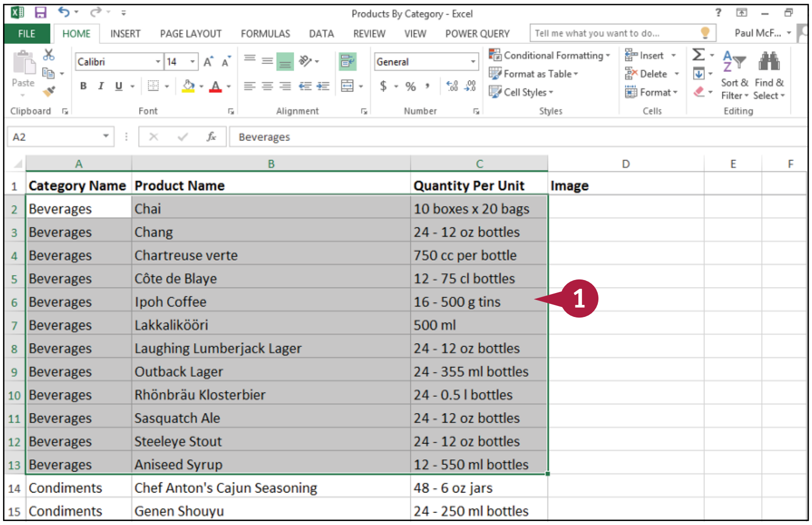
If your worksheet has a range that contains data you no longer need, you can delete that data. This helps to reduce worksheet clutter and makes your worksheet easier to read.

Note that deleting cell data does not adjust the structure of your worksheet in any way. That is, after you delete the cell data, the rest of your worksheet data remains intact and in the same place that it was before the data deletion. If you want to delete cells and not just the data within the cells, see the following section, "Delete a Range."

Delete Data from a Range

Delete Range Data

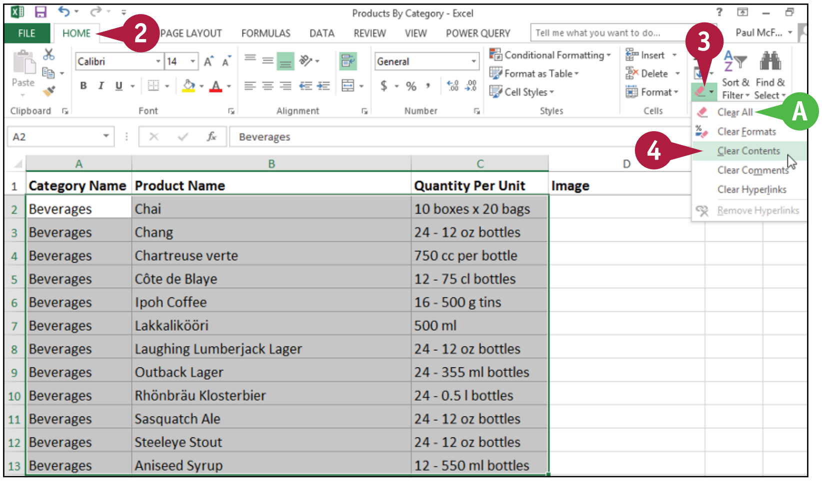
1. Select the range that contains the data you want to delete.


Products By Category - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF...
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
A2
Beverages
1

	A	B	C	D	E	F
1	Category Name	Product Name	Quantity Per Unit	Image		
2	Beverages	Chai	10 boxes x 20 bags			
3	Beverages	Chang	24 - 12 oz bottles			
4	Beverages	Chartreuse verte	750 cc per bottle			
5	Beverages	Côte de Blaye	12 - 75 cl bottles			
6	Beverages	Ipoh Coffee	16 - 500 g tins			
7	Beverages	Lakkalikööri	500 ml			
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles			
9	Beverages	Outback Lager	24 - 355 ml bottles			
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles			
11	Beverages	Sasquatch Ale	24 - 12 oz bottles			
12	Beverages	Steeleye Stout	24 - 12 oz bottles			
13	Beverages	Aniseed Syrup	12 - 550 ml bottles			
14	Condiments	Chef Anton's Cajun Seasoning	48 - 6 oz jars			
15	Condiments	Genen Shouyu	24 - 250 ml bottles			

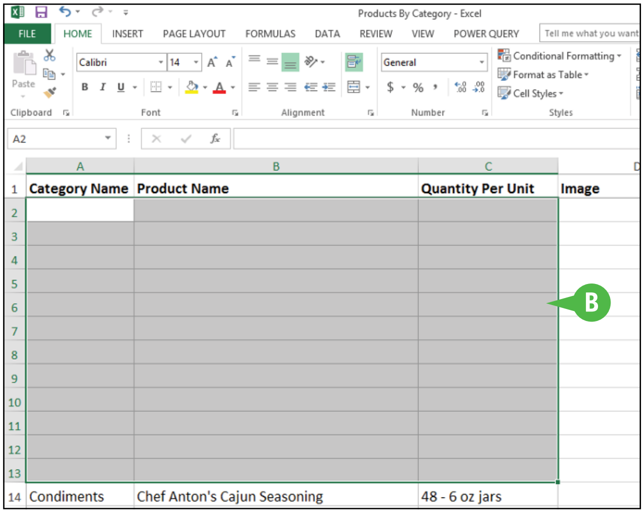
2. Click the **Home** tab.
3. Click **Clear** (🧽).
4. Click **Clear Contents**.

- Ⓐ If you want to delete the range data and its formatting, click **Clear All** instead.


Products By Category - Excel
FILE
HOME
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF...
Clipboard
Font
Alignment
Number
Styles
Cells
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
A2
Beverages
Clear All
Clear Formats
Clear Contents
Clear Comments
Clear Hyperlinks
Remove Hyperlinks
2
3
A
4

	A	B	C	D
1	Category Name	Product Name	Quantity Per Unit	Image
2	Beverages	Chai	10 boxes x 20 bags	
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl bottles	
6	Beverages	Ipoh Coffee	16 - 500 g tins	
7	Beverages	Lakkalikööri	500 ml	
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles	
9	Beverages	Outback Lager	24 - 355 ml bottles	
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles	
11	Beverages	Sasquatch Ale	24 - 12 oz bottles	
12	Beverages	Steeleye Stout	24 - 12 oz bottles	
13	Beverages	Aniseed Syrup	12 - 550 ml bottles	

B Excel removes the range data.


Products By Category - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want
Paste
Calibri
14
General
Conditional Formatting
Format as Table
Cell Styles
Clipboard
Font
Alignment
Number
Styles
A2
B

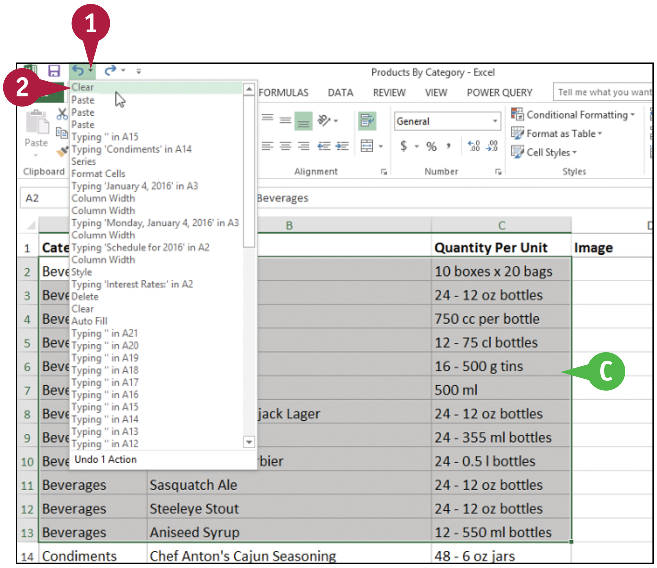
	A	B	C	D
1	Category Name	Product Name	Quantity Per Unit	Image
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14	Condiments	Chef Anton's Cajun Seasoning	48 - 6 oz jars	

Undo Range Data Deletion

1. Click the **Undo** ▼.
2. Click **Clear**.

Note: If the data deletion was the most recent action you performed, you can undo it by pressing Ctrl + Z or by clicking **Undo** (↶).

C Excel restores the data to the range.


1
2
Products By Category - Excel
Clear
Paste
Paste
Paste
Typing '' in A15
Typing 'Condiments' in A14
Series
Format Cells
Typing 'January 4, 2016' in A3
Column Width
Column Width
Typing 'Monday, January 4, 2016' in A3
Column Width
Typing 'Schedule for 2016' in A2
Column Width
Style
Typing 'Interest Rates:' in A2
Delete
Clear
Auto Fill
Typing '' in A21
Typing '' in A20
Typing '' in A19
Typing '' in A18
Typing '' in A17
Typing '' in A16
Typing '' in A15
Typing '' in A14
Typing '' in A13
Typing '' in A12
Undo 1 Action
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want
General
Conditional Formatting
Format as Table
Cell Styles
Paste
Clipboard
Alignment
Number
Styles
A2
Beverages
C

	A	B	C	D
1	Cate		Quantity Per Unit	Image
2	Beve		10 boxes x 20 bags	
3	Beve		24 - 12 oz bottles	
4	Beve		750 cc per bottle	
5	Beve		12 - 75 cl bottles	
6	Beve		16 - 500 g tins	
7	Beve		500 ml	
8	Beve	jack Lager	24 - 12 oz bottles	
9	Beve		24 - 355 ml bottles	
10	Beve	bier	24 - 0.5 l bottles	
11	Beverages	Sasquatch Ale	24 - 12 oz bottles	
12	Beverages	Steeleye Stout	24 - 12 oz bottles	
13	Beverages	Aniseed Syrup	12 - 550 ml bottles	
14	Condiments	Chef Anton's Cajun Seasoning	48 - 6 oz jars	

TIPS

Are there faster ways to delete the data from a range?

Yes. Probably the fastest method is to select the range and then press Delete. You can also select the range, right-click any part of the range, and then click **Clear Contents**.

Is it possible to delete a cell's numeric formatting?

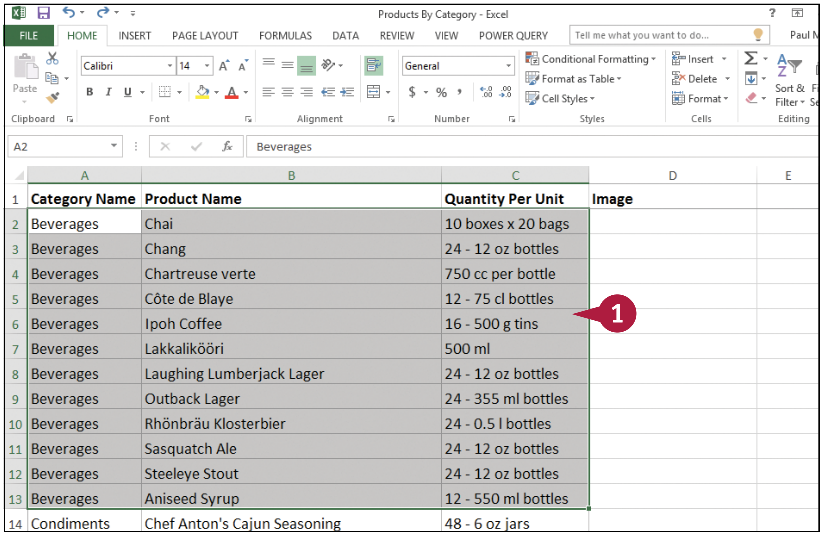
Yes. Select the range with the formatting that you want to remove, click **Home**, click ✎, and then click **Clear Formats**. Excel removes all the formatting from the selected range. If you prefer to delete only the numeric formatting, click **Home**, click the **Number Format** ▼, and then click **General**.

Delete a Range

If your worksheet contains a range that you no longer need, you can delete that range. Note that this is not the same as deleting the data within a cell or range, as described in the previous section, "Delete Data from a Range." When you delete a range, Excel deletes not just the data within the range, but also the range of cells. Excel then shifts the remaining worksheet data to replace the deleted range. Excel displays a dialog box that enables you to choose whether the data is shifted up or to the left.

Delete a Range

1. Select the range that you want to delete.


Products By Category - Excel
FILE
HOME
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FORMULAS
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REVIEW
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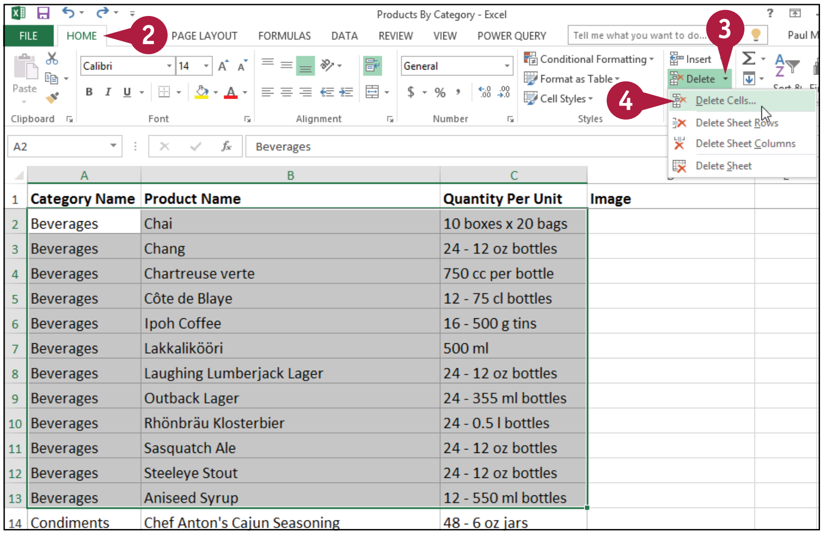
POWER QUERY
Tell me what you want to do...
Calibri
14
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
1

A2 Beverages

	A	B	C	D
1	Category Name	Product Name	Quantity Per Unit	Image
2	Beverages	Chai	10 boxes x 20 bags	
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl bottles	
6	Beverages	Ipoh Coffee	16 - 500 g tins	
7	Beverages	Lakkalikööri	500 ml	
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles	
9	Beverages	Outback Lager	24 - 355 ml bottles	
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles	
11	Beverages	Sasquatch Ale	24 - 12 oz bottles	
12	Beverages	Steeleye Stout	24 - 12 oz bottles	
13	Beverages	Aniseed Syrup	12 - 550 ml bottles	
14	Condiments	Chef Anton's Cajun Seasoning	48 - 6 oz jars	

2. Click the **Home** tab.
3. Click the **Delete** ▼.
4. Click **Delete Cells**.


Products By Category - Excel
FILE
HOME
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Insert
Delete
Delete Cells...
Delete Sheet Rows
Delete Sheet Columns
Delete Sheet
2
3
4

A2 Beverages

	A	B	C
1	Category Name	Product Name	Quantity Per Unit
2	Beverages	Chai	10 boxes x 20 bags
3	Beverages	Chang	24 - 12 oz bottles
4	Beverages	Chartreuse verte	750 cc per bottle
5	Beverages	Côte de Blaye	12 - 75 cl bottles
6	Beverages	Ipoh Coffee	16 - 500 g tins
7	Beverages	Lakkalikööri	500 ml
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles
9	Beverages	Outback Lager	24 - 355 ml bottles
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles
11	Beverages	Sasquatch Ale	24 - 12 oz bottles
12	Beverages	Steeleye Stout	24 - 12 oz bottles
13	Beverages	Aniseed Syrup	12 - 550 ml bottles
14	Condiments	Chef Anton's Cajun Seasoning	48 - 6 oz jars

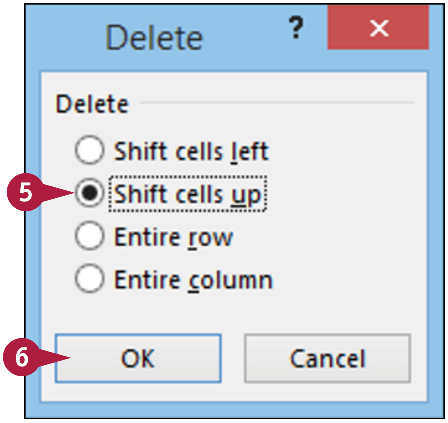
The Delete dialog box appears.

5 Select the option that corresponds to how you want Excel to shift the remaining cells after it deletes the range (○ changes to ●).

Note: In most cases, if you have data below the selected range, you should click the **Shift cells up** option; if you have data to the right of the selected range, you should click the **Shift cells left** option.

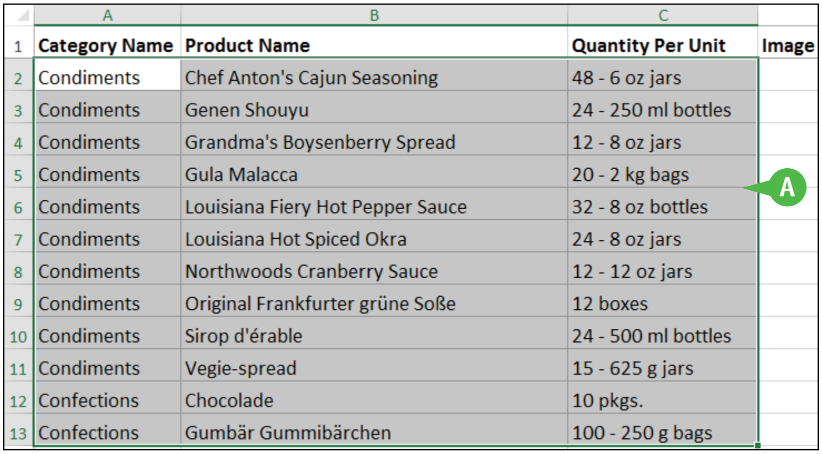
6 Click **OK**.

A Excel deletes the range and shifts the remaining data.


Delete

Delete

○ Shift cells left
● Shift cells up
○ Entire row
○ Entire column


	A	B	C	
1	**Category Name**	**Product Name**	**Quantity Per Unit**	**Image**
2	Condiments	Chef Anton's Cajun Seasoning	48 - 6 oz jars	
3	Condiments	Genen Shouyu	24 - 250 ml bottles	
4	Condiments	Grandma's Boysenberry Spread	12 - 8 oz jars	
5	Condiments	Gula Malacca	20 - 2 kg bags	
6	Condiments	Louisiana Fiery Hot Pepper Sauce	32 - 8 oz bottles	
7	Condiments	Louisiana Hot Spiced Okra	24 - 8 oz jars	
8	Condiments	Northwoods Cranberry Sauce	12 - 12 oz jars	
9	Condiments	Original Frankfurter grüne Soße	12 boxes	
10	Condiments	Sirop d'érable	24 - 500 ml bottles	
11	Condiments	Vegie-spread	15 - 625 g jars	
12	Confections	Chocolade	10 pkgs.	
13	Confections	Gumbär Gummibärchen	100 - 250 g bags	

TIPS

Are there faster ways to delete a range?

Yes. Probably the fastest method is to select the range and then press Ctrl + -. You can also select the range, right-click any part of the range, and then click **Delete**. Both methods display the Delete dialog box.

How do I delete a row or column?

To delete a row, select any cell in the row, click the **Home** tab, click the **Delete** ▼, and then click **Delete Sheet Rows**. To delete a column, select any cell in the column, click the **Home** tab, click the **Delete** ▼, and then click **Delete Sheet Columns**. Note, too, that you can delete multiple rows or columns by selecting at least one cell in each row or column.

Hide a Row or Column

If you do not need to see or work with a row or column temporarily, you can make your worksheet easier to read and to navigate by hiding the row or column. Hiding a row or column is also useful if you are showing someone a worksheet that contains private or sensitive data that you do not want the person to see.

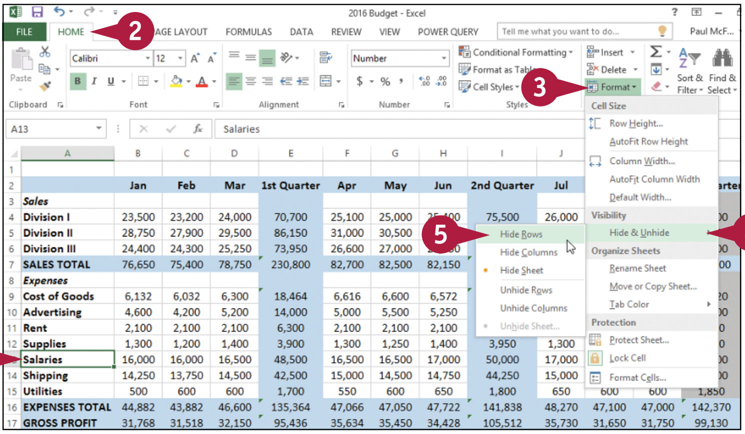
Hiding a row or column does not affect other parts of your worksheet. In particular, formulas that use or rely on data in the hidden rows and columns still display the same results.

Hide a Row or Column

Hide a Row

1. Click in any cell in the row you want to hide.
2. Click the **Home** tab.
3. Click **Format**.
4. Click **Hide & Unhide**.
5. Click **Hide Rows**.

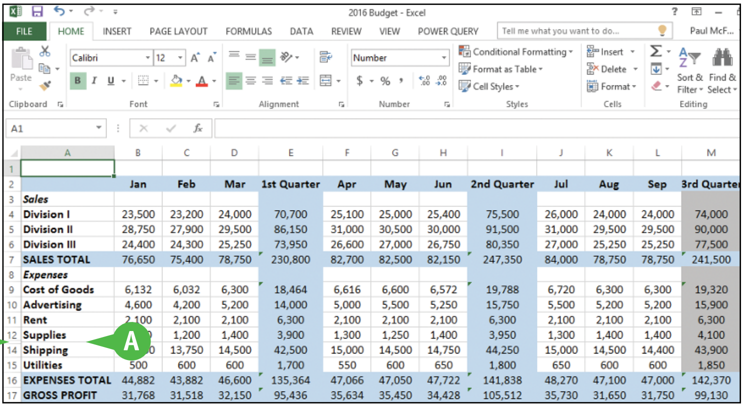
Note: You can also hide a row by pressing Ctrl + 9.


2016 Budget - Excel
FILE
HOME
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF...
Calibri
12
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Clipboard
Font
Alignment
Number
Styles
A13
Salaries
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Hide Rows
Hide Columns
Hide Sheet
Unhide Rows
Unhide Columns
Unhide Sheet...
1
2
3
4
5

Ⓐ Excel removes the row from the worksheet display.

Ⓑ Excel displays a double-line border between the surrounding row headers to indicate that a hidden row lies between them.

Another way to hide a row is to move the mouse (✚) over the bottom edge of the row heading (✚ changes to ╪), and then click and drag the edge up until the height displays 0.


2016 Budget - Excel
FILE
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POWER QUERY
Tell me what you want to do...
Paul McF...
Calibri
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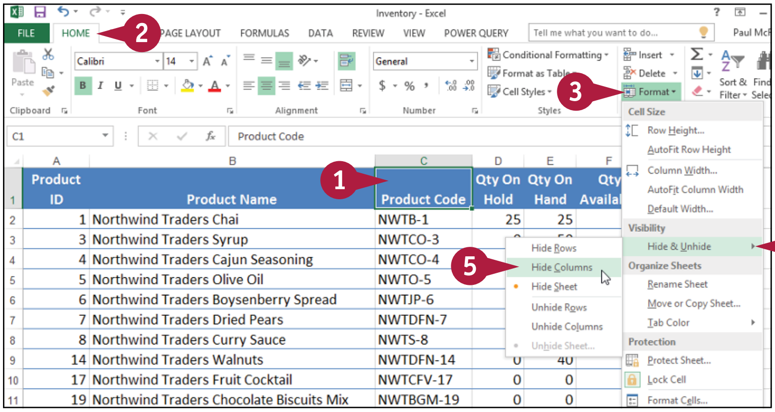
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
A1
A
B

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2		Jan	Feb	Mar	1st Quarter	Apr	May	Jun	2nd Quarter	Jul	Aug	Sep	3rd Quarter
3	*Sales*												
4	Division I	23,500	23,200	24,000	70,700	25,100	25,000	25,400	75,500	26,000	24,000	24,000	74,000
5	Division II	28,750	27,900	29,500	86,150	31,000	30,500	30,000	91,500	31,000	29,500	29,500	90,000
6	Division III	24,400	24,300	25,250	73,950	26,600	27,000	26,750	80,350	27,000	25,250	25,250	77,500
7	SALES TOTAL	76,650	75,400	78,750	230,800	82,700	82,500	82,150	247,350	84,000	78,750	78,750	241,500
8	*Expenses*												
9	Cost of Goods	6,132	6,032	6,300	18,464	6,616	6,600	6,572	19,788	6,720	6,300	6,300	19,320
10	Advertising	4,600	4,200	5,200	14,000	5,000	5,500	5,250	15,750	5,500	5,200	5,200	15,900
11	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300
12	Supplies	1,300	1,200	1,400	3,900	1,300	1,250	1,400	3,950	1,300	1,400	1,400	4,100
14	Shipping	14,250	13,750	14,500	42,500	15,000	14,500	14,750	44,250	15,000	14,500	14,400	43,900
15	Utilities	500	600	600	1,700	550	600	650	1,800	650	600	600	1,850
16	EXPENSES TOTAL	44,882	43,882	46,600	135,364	47,066	47,050	47,722	141,838	48,270	47,100	47,000	142,370
17	GROSS PROFIT	31,768	31,518	32,150	95,436	35,634	35,450	34,428	105,512	35,730	31,650	31,750	99,130

Hide a Column

1. Click in any cell in the column you want to hide.
2. Click the **Home** tab.
3. Click **Format**.
4. Click **Hide & Unhide**.
5. Click **Hide Columns**.

Note: You can also hide a column by pressing Ctrl+0.


Inventory - Excel
FILE
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FORMULAS
DATA
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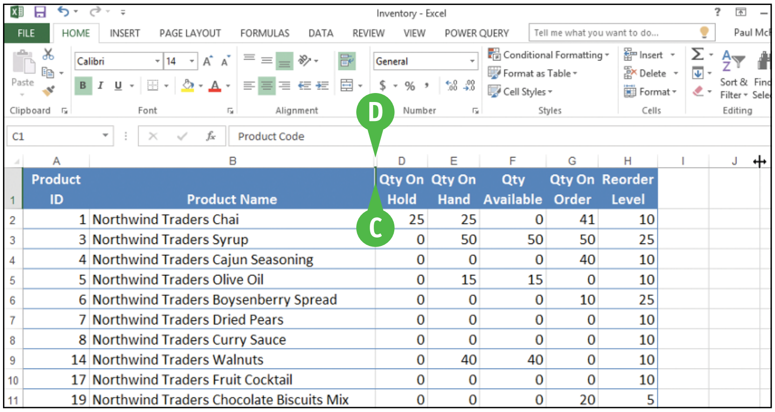
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF
Paste
Clipboard
Calibri
14
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Hide Rows
Hide Columns
Hide Sheet
Unhide Rows
Unhide Columns
Unhide Sheet...
1
2
3
4
5

C1 | Product Code

	A	B	C	D	E	F
1	Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Availal
2	1	Northwind Traders Chai	NWTB-1	25	25	
3	3	Northwind Traders Syrup	NWTCO-3			
4	4	Northwind Traders Cajun Seasoning	NWTCO-4			
5	5	Northwind Traders Olive Oil	NWTO-5			
6	6	Northwind Traders Boysenberry Spread	NWTJP-6			
7	7	Northwind Traders Dried Pears	NWTDFN-7			
8	8	Northwind Traders Curry Sauce	NWTS-8			
9	14	Northwind Traders Walnuts	NWTDFN-14	0	40	
10	17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	
11	19	Northwind Traders Chocolate Biscuits Mix	NWTBGM-19	0	0	

- C Excel removes the column from the worksheet display.
- D Excel displays a slightly thicker heading border between the surrounding columns to indicate that a hidden column lies between them.

Another way to hide a column is to move the mouse (✚) over the right edge of the column heading (✚ changes to ↔), and then click and drag the edge left until the width displays 0.


Inventory - Excel
FILE
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REVIEW
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POWER QUERY
Tell me what you want to do...
Paul McF
Paste
Clipboard
Calibri
14
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Sort & Filter
Find & Select
Editing
D
C

C1 | Product Code

	A	B	D	E	F	G	H
1	Product ID	Product Name	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
2	1	Northwind Traders Chai	25	25	0	41	10
3	3	Northwind Traders Syrup	0	50	50	50	25
4	4	Northwind Traders Cajun Seasoning	0	0	0	40	10
5	5	Northwind Traders Olive Oil	0	15	15	0	10
6	6	Northwind Traders Boysenberry Spread	0	0	0	10	25
7	7	Northwind Traders Dried Pears	0	0	0	0	10
8	8	Northwind Traders Curry Sauce	0	0	0	0	10
9	14	Northwind Traders Walnuts	0	40	40	0	10
10	17	Northwind Traders Fruit Cocktail	0	0	0	0	10
11	19	Northwind Traders Chocolate Biscuits Mix	0	0	0	20	5

TIP

How do I display a hidden row or column?

To display a hidden row, select the row above and the row below the hidden row, click **Home**, click **Format**, click **Hide & Unhide**, and then click **Unhide Rows**. Alternatively, move the mouse (✚) between the headings of the selected rows (✚ changes to ⇕) and then double-click. To unhide row 1, right-click the top edge of the row 2 header and then click **Unhide**.

To display a hidden column, select the column to the left and the column to the right of the hidden column, click **Home**, click **Format**, click **Hide & Unhide**, and then click **Unhide Columns**. Alternatively, move the ✚ between the headings of the selected columns (✚ changes to ↔) and then double-click. To unhide column A, right-click the left edge of the column B header and then click **Unhide**.

Freeze Rows or Columns

You can keep your column labels in view as you scroll the worksheet by freezing the row or rows that contain the labels. This makes it easier to review and add data to the worksheet because you can always see the column labels.

If your worksheet also includes row labels, you can keep those labels in view as you horizontally scroll the worksheet by freezing the column or columns that contain the labels.

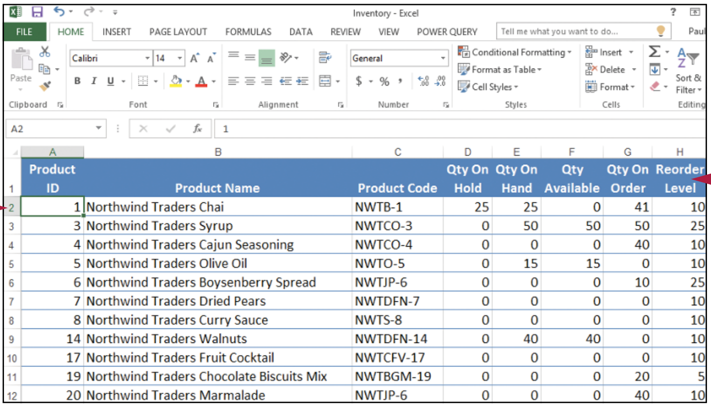
Freeze Rows or Columns

Freeze Rows

① Scroll the worksheet so that the row or rows that you want to freeze are visible.

② Select the cell in column A that is one row below the last row you want to freeze.

For example, if you want to freeze row 1, select cell A2.


Inventory - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
A2
1
2

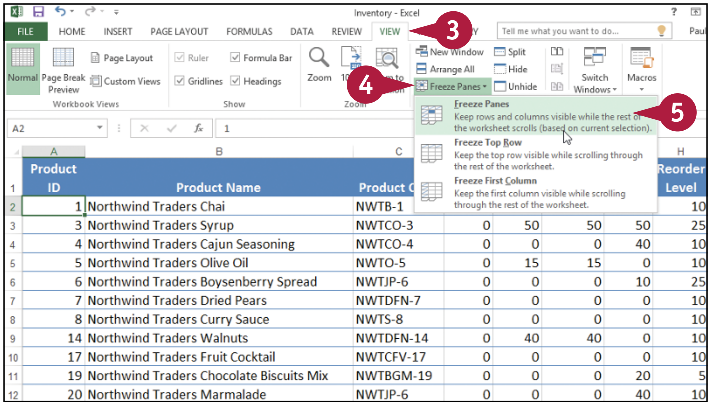
	Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
2	1	Northwind Traders Chai	NWTB-1	25	25	0	41	10
3	3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10
8	8	Northwind Traders Curry Sauce	NWTS-8	0	0	0	0	10
9	14	Northwind Traders Walnuts	NWTDFN-14	0	40	40	0	10
10	17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	0	0	10
11	19	Northwind Traders Chocolate Biscuits Mix	NWTBGM-19	0	0	0	20	5
12	20	Northwind Traders Marmalade	NWTJP-6	0	0	0	40	10

③ Click the **View** tab.

④ Click **Freeze Panes**.

⑤ Click **Freeze Panes**.

Excel freezes the rows.


Inventory - Excel
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Headings
Zoom
New Window
Arrange All
Freeze Panes
Split
Hide
Unhide
Switch Windows
Macros
Workbook Views
Show
A2
3
4
5

Freeze Panes
Keep rows and columns visible while the rest of the worksheet scrolls (based on current selection).

Freeze Top Row
Keep the top row visible while scrolling through the rest of the worksheet.

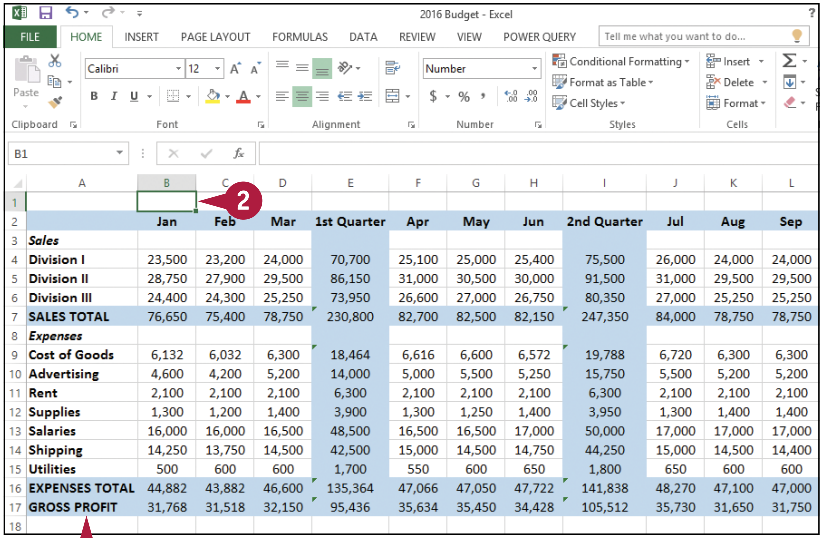
Freeze First Column
Keep the first column visible while scrolling through the rest of the worksheet.

Freeze Columns

① Scroll the worksheet so that the column or columns that you want to freeze are visible.

② Select the cell in row 1 that is one row to the right of the last column you want to freeze.

For example, if you want to freeze column A, select cell B1.


2016 Budget - Excel
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Styles
Cells
B1
2
1

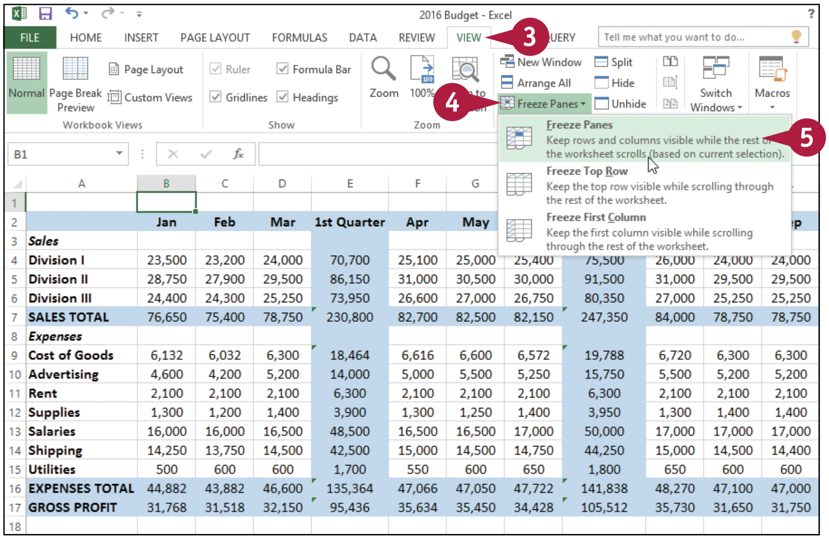
	A	B	C	D	E	F	G	H	I	J	K	L
1												
2		Jan	Feb	Mar	1st Quarter	Apr	May	Jun	2nd Quarter	Jul	Aug	Sep
3	*Sales*											
4	Division I	23,500	23,200	24,000	70,700	25,100	25,000	25,400	75,500	26,000	24,000	24,000
5	Division II	28,750	27,900	29,500	86,150	31,000	30,500	30,000	91,500	31,000	29,500	29,500
6	Division III	24,400	24,300	25,250	73,950	26,600	27,000	26,750	80,350	27,000	25,250	25,250
7	SALES TOTAL	76,650	75,400	78,750	230,800	82,700	82,500	82,150	247,350	84,000	78,750	78,750
8	*Expenses*											
9	Cost of Goods	6,132	6,032	6,300	18,464	6,616	6,600	6,572	19,788	6,720	6,300	6,300
10	Advertising	4,600	4,200	5,200	14,000	5,000	5,500	5,250	15,750	5,500	5,200	5,200
11	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	2,100	2,100	2,100
12	Supplies	1,300	1,200	1,400	3,900	1,300	1,250	1,400	3,950	1,300	1,400	1,400
13	Salaries	16,000	16,000	16,500	48,500	16,500	16,500	17,000	50,000	17,000	17,000	17,000
14	Shipping	14,250	13,750	14,500	42,500	15,000	14,500	14,750	44,250	15,000	14,500	14,400
15	Utilities	500	600	600	1,700	550	600	650	1,800	650	600	600
16	EXPENSES TOTAL	44,882	43,882	46,600	135,364	47,066	47,050	47,722	141,838	48,270	47,100	47,000
17	GROSS PROFIT	31,768	31,518	32,150	95,436	35,634	35,450	34,428	105,512	35,730	31,650	31,750
18												

③ Click the **View** tab.

④ Click **Freeze Panes**.

⑤ Click **Freeze Panes**.

Excel freezes the columns.


2016 Budget - Excel
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Switch Windows
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Workbook Views
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Freeze Panes
Keep rows and columns visible while the rest o the worksheet scrolls (based on current selection).

Freeze Top Row
Keep the top row visible while scrolling through the rest of the worksheet.

Freeze First Column
Keep the first column visible while scrolling through the rest of the worksheet.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2		Jan	Feb	Mar	1st Quarter	Apr	May					p
3	*Sales*											
4	Division I	23,500	23,200	24,000	70,700	25,100	25,000	25,400	75,500	26,000	24,000	24,000
5	Division II	28,750	27,900	29,500	86,150	31,000	30,500	30,000	91,500	31,000	29,500	29,500
6	Division III	24,400	24,300	25,250	73,950	26,600	27,000	26,750	80,350	27,000	25,250	25,250
7	SALES TOTAL	76,650	75,400	78,750	230,800	82,700	82,500	82,150	247,350	84,000	78,750	78,750
8	*Expenses*											
9	Cost of Goods	6,132	6,032	6,300	18,464	6,616	6,600	6,572	19,788	6,720	6,300	6,300
10	Advertising	4,600	4,200	5,200	14,000	5,000	5,500	5,250	15,750	5,500	5,200	5,200
11	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	2,100	2,100	2,100
12	Supplies	1,300	1,200	1,400	3,900	1,300	1,250	1,400	3,950	1,300	1,400	1,400
13	Salaries	16,000	16,000	16,500	48,500	16,500	16,500	17,000	50,000	17,000	17,000	17,000
14	Shipping	14,250	13,750	14,500	42,500	15,000	14,500	14,750	44,250	15,000	14,500	14,400
15	Utilities	500	600	600	1,700	550	600	650	1,800	650	600	600
16	EXPENSES TOTAL	44,882	43,882	46,600	135,364	47,066	47,050	47,722	141,838	48,270	47,100	47,000
17	GROSS PROFIT	31,768	31,518	32,150	95,436	35,634	35,450	34,428	105,512	35,730	31,650	31,750
18												

TIPS

Are there easier methods I can use to freeze just the top row or the first column?

Yes. To freeze just the top row, click **View**, click **Freeze Panes**, and then click **Freeze Top Row**. To freeze just the first column, click **View**, click **Freeze Panes**, and then click **Freeze First Column**. Note that in both cases you do not need to select a cell in advance.

How do I unfreeze a row or column?

If you no longer require a row or column to be frozen, you can unfreeze it by clicking **View**, clicking **Freeze Panes**, and then clicking **Unfreeze Panes**.

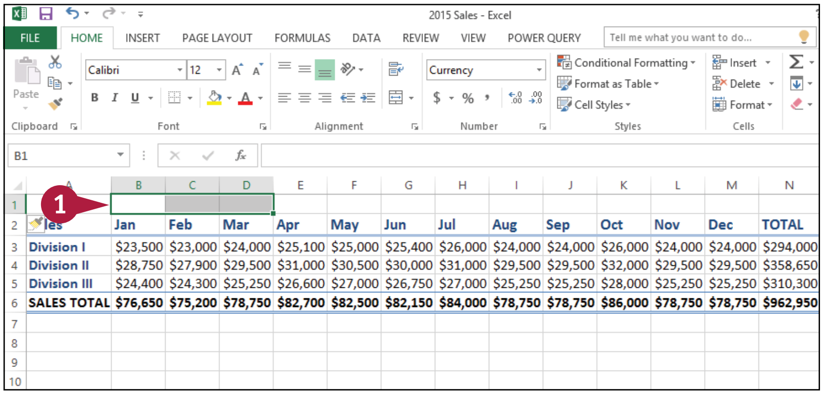
Merge Two or More Cells

You can create a single large cell by merging two or more cells. For example, it is common to merge several cells in the top row to use as a worksheet title.

Another common reason for merging cells is to create a label that applies to multiple columns of data. For example, if you have three columns labeled *January*, *February*, and *March*, you could select the three cells in the row above these labels, merge them, and then use the merged cell to add the label *First Quarter*.

Merge Two or More Cells

1. Select the cells that you want to merge.



2015 Sales - Excel
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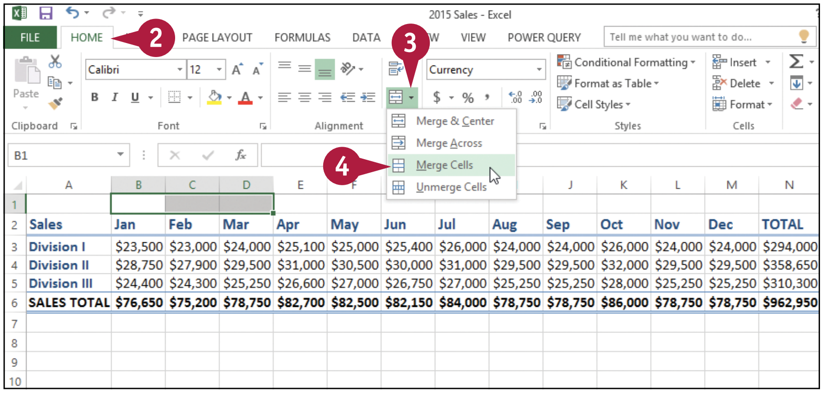
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2	les	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
3	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
4	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
5	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
6	SALES TOTAL	$76,650	$75,200	$78,750	$82,700	$82,500	$82,150	$84,000	$78,750	$78,750	$86,000	$78,750	$78,750	$962,950
7														
8														
9														
10														

2. Click the **Home** tab.
3. Click the **Merge & Center** ▼.
4. Click **Merge Cells**.



2015 Sales - Excel
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Tell me what you want to do...
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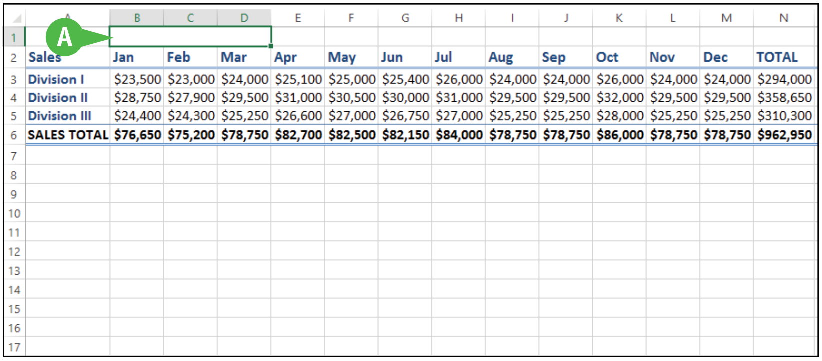
Font
Alignment
Styles
Cells
B1
Merge & Center
Merge Across
Merge Cells
Unmerge Cells
2
3
4

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
3	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
4	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
5	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
6	SALES TOTAL	$76,650	$75,200	$78,750	$82,700	$82,500	$82,150	$84,000	$78,750	$78,750	$86,000	$78,750	$78,750	$962,950
7														
8														
9														
10														

Ⓐ Excel merges the selected cells into a single cell.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
3	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
4	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
5	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
6	**SALES TOTAL**	**$76,650**	**$75,200**	**$78,750**	**$82,700**	**$82,500**	**$82,150**	**$84,000**	**$78,750**	**$78,750**	**$86,000**	**$78,750**	**$78,750**	**$962,950**
7														
8														
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11														
12														
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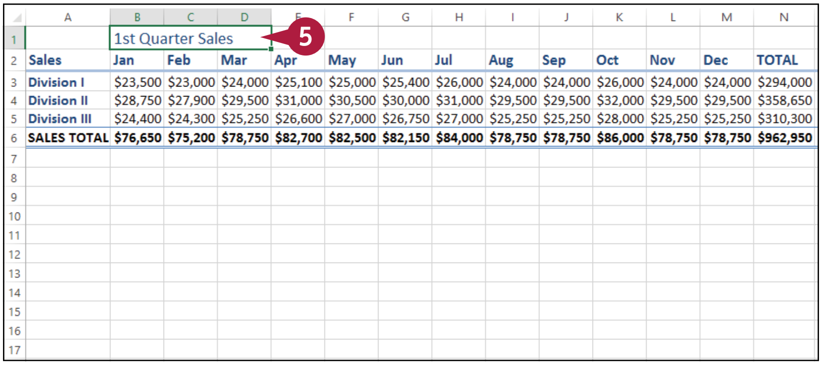
15														
16														
17														

⑤ Type your text in the merged cell.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		1st Quarter Sales												
2	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
3	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
4	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
5	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
6	**SALES TOTAL**	**$76,650**	**$75,200**	**$78,750**	**$82,700**	**$82,500**	**$82,150**	**$84,000**	**$78,750**	**$78,750**	**$86,000**	**$78,750**	**$78,750**	**$962,950**
7														
8														
9														
10														
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12														
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17														

TIP

How do I center text across multiple columns?

This is a useful technique for your worksheet titles or headings. You can center a title across the entire worksheet, or you can center a heading across the columns that it refers to. Follow steps 1 to 3 and then click **Merge & Center**. Excel creates the merged cell and formats the cell with the Center alignment option. Any text you enter into the merged cell appears centered within the cell.

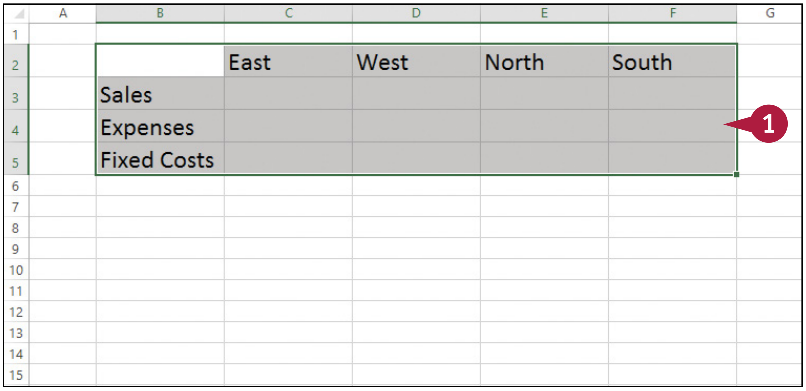
Transpose Rows and Columns

You can use the Transpose command in Excel to easily turn a row of data into a column of data, or a column of data into a row of data.

The Transpose command is useful when you enter data into a row (or column) or receive a worksheet from another person that has data in a row (or column), and you decide the data would be better presented as a column (or row). You can also transpose rows and columns together in a single command, which is handy when you need to restructure a worksheet.

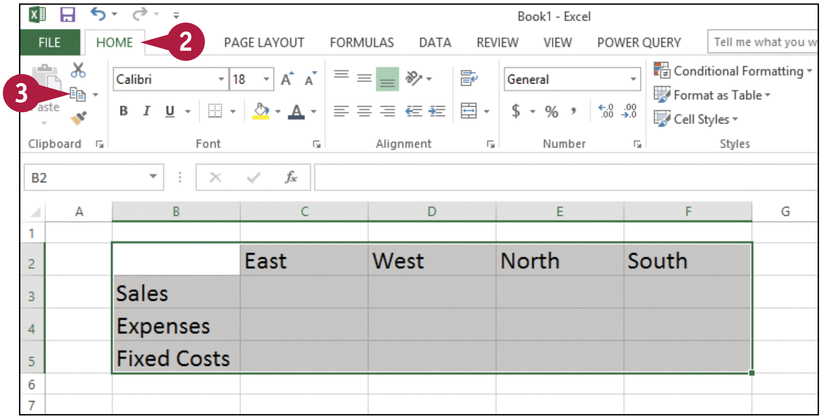
Transpose Rows and Columns

1. Select the range that includes the data you want to transpose.



	East	West	North	South
Sales				
Expenses				
Fixed Costs				

2. Click the **Home** tab.
3. Click **Copy** (📋).


Book1 - Excel
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Alignment
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Styles
B2
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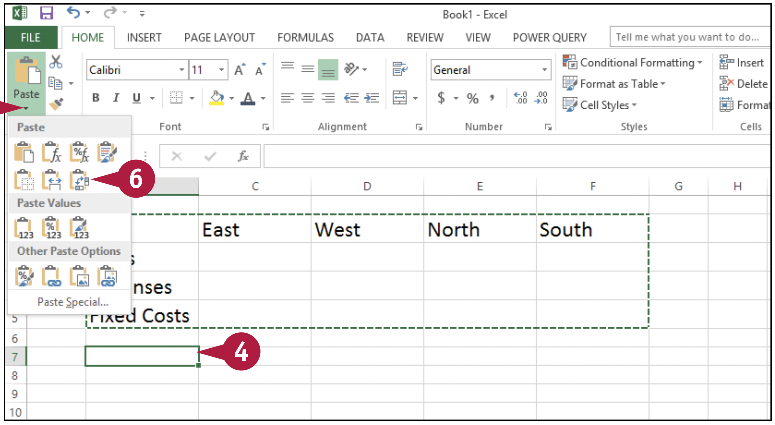
3

	East	West	North	South
Sales				
Expenses				
Fixed Costs				

4 Click where you want the transposed range to appear.

5 Click the **Paste** ▼.

6 Click **Transpose** ( ).


Book1 - Excel
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Tell me what you want to do...
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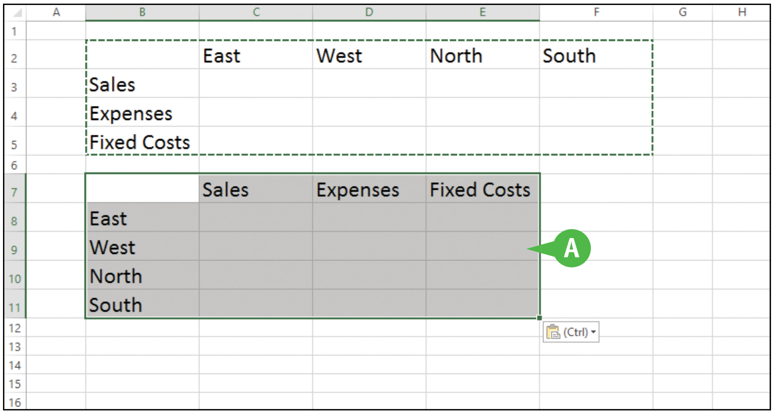
Fixed Costs

A Excel transposes the data and then pastes it to the worksheet.



	A	B	C	D	E	F	G	H
1								
2			East	West	North	South		
3		Sales						
4		Expenses						
5		Fixed Costs						
6								
7			Sales	Expenses	Fixed Costs			
8		East						
9		West						
10		North						
11		South						

TIPS

How do I know which cells to select?

The range you select before copying depends on what you want to transpose. If you want to transpose a single horizontal or vertical range of cells, then select just that range. If you want to transpose a horizontal range of cells and a vertical range of cells at the same time, select the range that includes all the cells, as shown in this section's example.

Can I transpose range values as well as range labels?

Yes. The Transpose command works with text, numbers, dates, formulas, and any other data that you can add to a cell. So if you have a rectangular region of data that includes row labels, column labels, and cell values within each row and column, you can select the entire range and transpose it.

Select and Enter Data Using Touch Gestures

If you will also be working with the Excel app on a touchscreen device, such as an iPad or Surface, you need to know how to use touch gestures to select, enter, and edit data. Although you can attach external keyboards to these devices, most of the time you might not have access to a physical keyboard. In such cases, you need to use touch gestures — tapping, sliding, and so on — to manipulate the data that you see on the Excel screen.

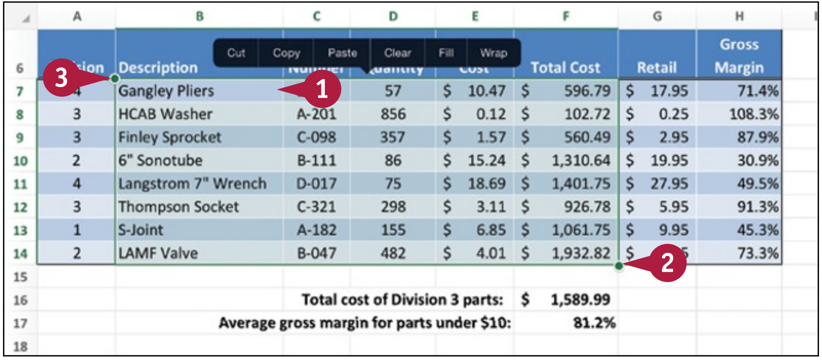
Select and Enter Data Using Touch Gestures

Select Data

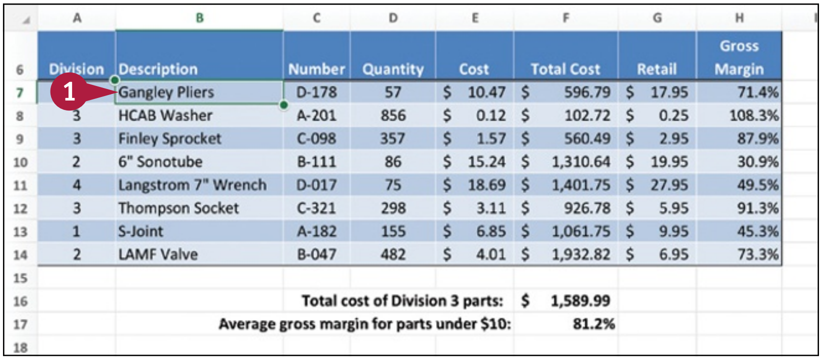
1. Tap the first cell you want to select.
2. Tap and hold the lower-right selector, and then slide down and/or to the right to extend the selection.
3. Tap and hold the upper-left selector, and then slide up and/or to the left to extend the selection.

Enter and Edit Data

1. Double-tap the cell you want to use to enter or edit data.



	A	B	C	D	E	F	G	H
6	ion	Description	[illegible]	[illegible]	[illegible]	Total Cost	Retail	Gross Margin
7	4	Gangley Pliers	[illegible]	57	$ 10.47	$ 596.79	$ 17.95	71.4%
8	3	HCAB Washer	A-201	856	$ 0.12	$ 102.72	$ 0.25	108.3%
9	3	Finley Sprocket	C-098	357	$ 1.57	$ 560.49	$ 2.95	87.9%
10	2	6" Sonotube	B-111	86	$ 15.24	$ 1,310.64	$ 19.95	30.9%
11	4	Langstrom 7" Wrench	D-017	75	$ 18.69	$ 1,401.75	$ 27.95	49.5%
12	3	Thompson Socket	C-321	298	$ 3.11	$ 926.78	$ 5.95	91.3%
13	1	S-Joint	A-182	155	$ 6.85	$ 1,061.75	$ 9.95	45.3%
14	2	LAMF Valve	B-047	482	$ 4.01	$ 1,932.82	$ [illegible]	73.3%
15								
16			Total cost of Division 3 parts:			$ 1,589.99		
17			Average gross margin for parts under $10:			81.2%		
18								



	A	B	C	D	E	F	G	H
6	Division	Description	Number	Quantity	Cost	Total Cost	Retail	Gross Margin
7		Gangley Pliers	D-178	57	$ 10.47	$ 596.79	$ 17.95	71.4%
8	3	HCAB Washer	A-201	856	$ 0.12	$ 102.72	$ 0.25	108.3%
9	3	Finley Sprocket	C-098	357	$ 1.57	$ 560.49	$ 2.95	87.9%
10	2	6" Sonotube	B-111	86	$ 15.24	$ 1,310.64	$ 19.95	30.9%
11	4	Langstrom 7" Wrench	D-017	75	$ 18.69	$ 1,401.75	$ 27.95	49.5%
12	3	Thompson Socket	C-321	298	$ 3.11	$ 926.78	$ 5.95	91.3%
13	1	S-Joint	A-182	155	$ 6.85	$ 1,061.75	$ 9.95	45.3%
14	2	LAMF Valve	B-047	482	$ 4.01	$ 1,932.82	$ 6.95	73.3%
15								
16			Total cost of Division 3 parts:			$ 1,589.99		
17			Average gross margin for parts under $10:			81.2%		
18								

The Excel app opens the Formula bar for editing and displays the on-screen keyboard.

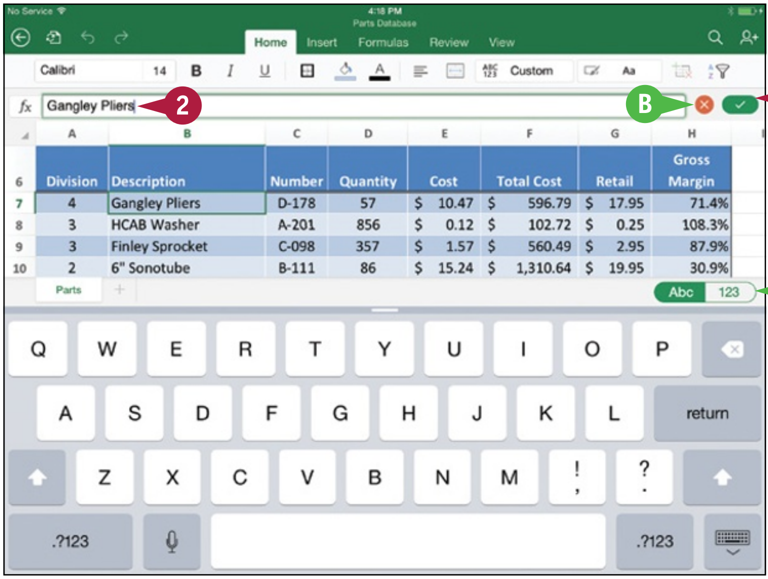
② Using the on-screen keyboard, add or edit the cell data.

Note: To position the cursor within the Formula bar, tap and hold inside the Formula bar, then slide left or right.

Ⓐ Tap **Abc** or **123** to toggle the keyboard between letters and numbers.

③ To confirm the cell entry or edit, tap **OK** (✓).

Ⓑ If you do not want to accept the changes to the cell, tap **Cancel** (✕).


No Service
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.?123
.?123

fx Gangley Pliers

	A	B	C	D	E	F	G	H
6	Division	Description	Number	Quantity	Cost	Total Cost	Retail	Gross Margin
7	4	Gangley Pliers	D-178	57	$ 10.47	$ 596.79	$ 17.95	71.4%
8	3	HCAB Washer	A-201	856	$ 0.12	$ 102.72	$ 0.25	108.3%
9	3	Finley Sprocket	C-098	357	$ 1.57	$ 560.49	$ 2.95	87.9%
10	2	6" Sonotube	B-111	86	$ 15.24	$ 1,310.64	$ 19.95	30.9%

TIPS

Is there an easier way to enter a long list of items in a column or a row of cells?

Yes. Rather than tapping **OK** (✓) after each entry, tap **123** to display the numeric keyboard, and then tap an arrow key. The active cell moves in the direction of the arrow or to the cell you tapped, and Excel leaves the Formula bar open for editing.

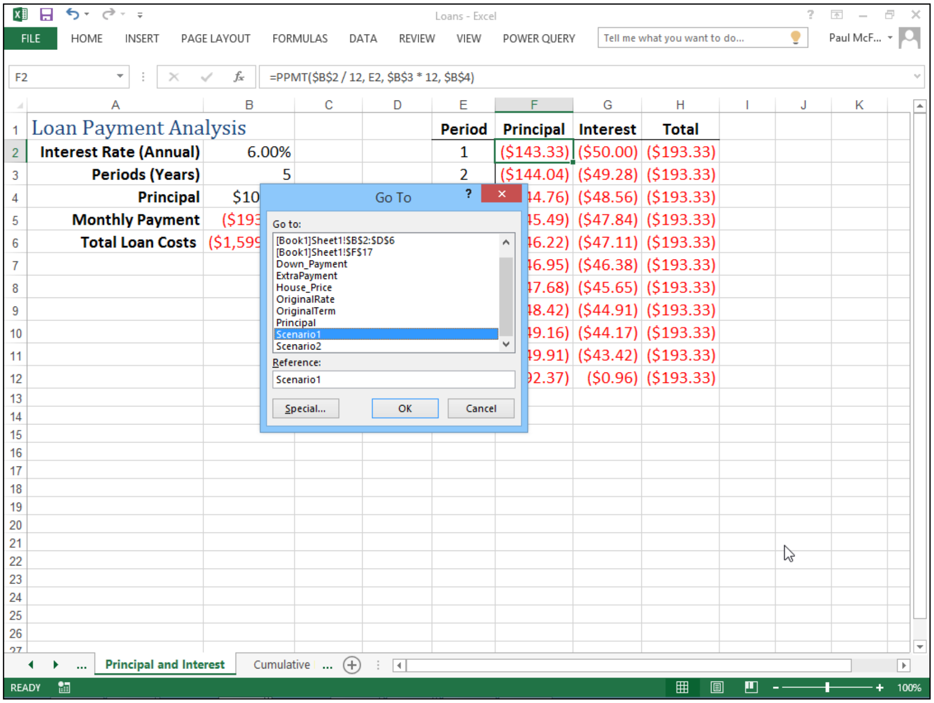
Is there an easier way to enter several items randomly in a worksheet?

Yes. Instead of tapping **OK** (✓) after each entry, tap the next cell you want to use. The active cell moves to the cell you tapped, and Excel leaves the Formula bar open for editing.

CHAPTER 2

Working with Range Names

You can make it easier to navigate Excel worksheets and build Excel formulas by applying names to your ranges. This chapter explains range names and shows you how to define, edit, and use range names.


Loans - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF...
Principal and Interest
Cumulative
READY
100%

F2

=PPMT($B$2 / 12, E2, $B$3 * 12, $B$4)

	A	B	C	D	E	F	G	H
1	Loan Payment Analysis				Period	Principal	Interest	Total
2	Interest Rate (Annual)	6.00%			1	($143.33)	($50.00)	($193.33)
3	Periods (Years)	5			2	($144.04)	($49.28)	($193.33)
4	Principal	$10				4.76)	($48.56)	($193.33)
5	Monthly Payment	($193				5.49)	($47.84)	($193.33)
6	Total Loan Costs	($1,599				6.22)	($47.11)	($193.33)
7						6.95)	($46.38)	($193.33)
8						7.68)	($45.65)	($193.33)
9						8.42)	($44.91)	($193.33)
10						9.16)	($44.17)	($193.33)
11						9.91)	($43.42)	($193.33)
12						2.37)	($0.96)	($193.33)

Go To

Go to:

- [Book1]Sheet1!$B$2:$D$6
- [Book1]Sheet1!$F$17
- Down_Payment
- ExtraPayment
- House_Price
- OriginalRate
- OriginalTerm
- Principal
- Scenario1
- Scenario2

Reference: Scenario1

Special... OK Cancel

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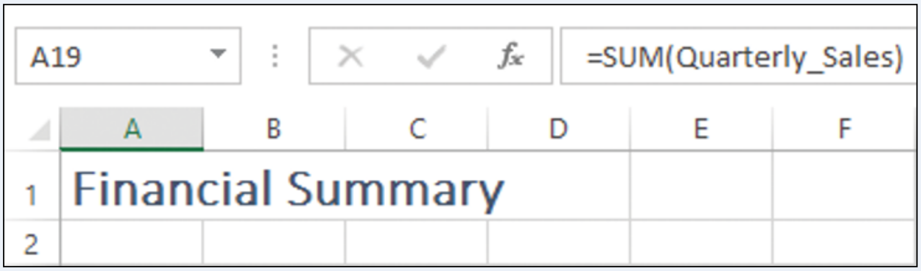
Navigate a Workbook Using Range Names 40
Change a Range Name 42
Delete a Range Name. 44
Paste a List of Range Names 46

Understanding the Benefits of Using Range Names

A *range name* is a text label that you apply to a single cell or to a range of cells. Once you have defined a name for a range, you can use that name in place of the range coordinates, which has several benefits. These benefits include making your worksheets more intuitive and making your work more accurate. In addition, a range name is easier to remember than range coordinates, it does not change when you move the underlying range, and it makes it easier to navigate your worksheets.

More Intuitive

Range names are more intuitive than range coordinates, particularly in formulas. For example, if you see the range B2:B10 in a formula, the only way to know what the range refers to is to look at the data. However, if you see the name Quarterly_Sales in the formula, then you already know what the range refers to.



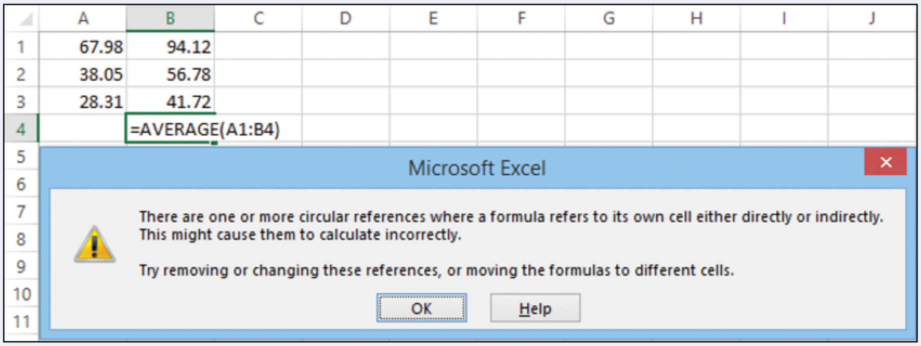
A19

=SUM(Quarterly_Sales)

	A	B	C	D	E	F
1	Financial Summary					
2						

More Accurate

Range names are more accurate than range coordinates. For example, consider the range address A1:B3, which consists of four different pieces of information: the column (A) and row (1) of the cell in the upper-left corner of the range, and the column (B) and row (3) of the cell in the lower-right corner. If you get even one of these values wrong, it can cause errors throughout a spreadsheet. By contrast, with a range name you need only reference the actual name.



	A	B
1	67.98	94.12
2	38.05	56.78
3	28.31	41.72
4		=AVERAGE(A1:B4)

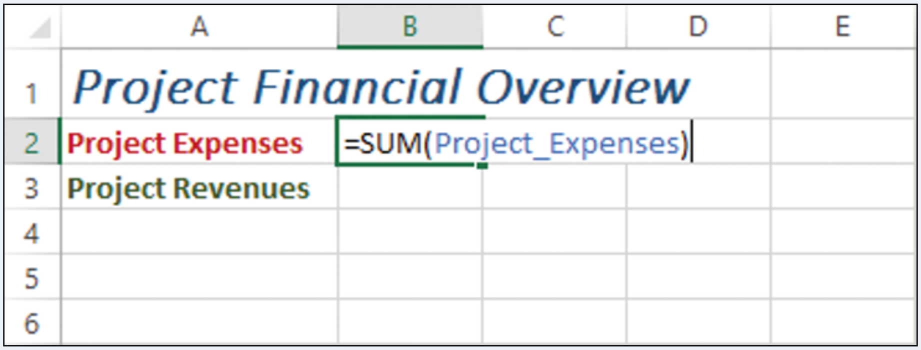
Microsoft Excel

There are one or more circular references where a formula refers to its own cell either directly or indirectly. This might cause them to calculate incorrectly.

Try removing or changing these references, or moving the formulas to different cells.

Easier to Remember

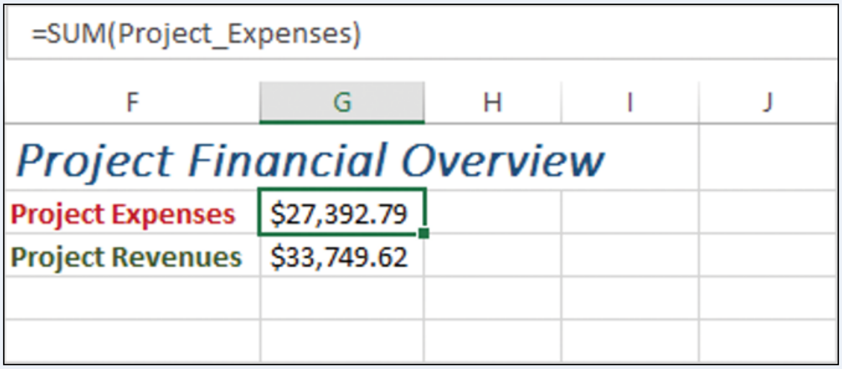
Range names are easier to remember than range coordinates. For example, if you want to use a particular range in a formula, but that range is not currently visible, to get the coordinates you must scroll until you can see the range and then determine the range's coordinates. However, if you have already assigned the range an intuitive name such as Project_Expenses, you can add that name directly without having to view the range.



	A	B	C	D	E
1	Project Financial Overview				
2	Project Expenses	=SUM(Project_Expenses)			
3	Project Revenues				
4					
5					
6					

Names Do Not Change

Range names do not change when you adjust the position of a range, as they do with range coordinates. For example, if you move the range A1:B5 to the right by five columns, the range coordinates change to F1:G5. If you have a formula that references that range, Excel updates the formula with the new range coordinates, which could confuse someone examining the worksheet. By contrast, a range name does not change when you move the range.

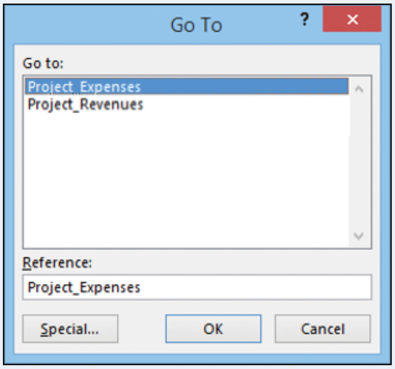


=SUM(Project_Expenses)

F	G	H	I	J
Project Financial Overview				
Project Expenses	$27,392.79			
Project Revenues	$33,749.62			

Easier Navigation

Range names make it easier to navigate a worksheet. For example, Excel has a Go To command that enables you to choose a range name, and Excel takes you directly to the range. You can also use the Name box to select a range name and navigate to that range. You can also use Go To and the Name box to specify range coordinates, but range coordinates are much more difficult to work with.



Go to:
Project_Expenses
Project_Revenues

Reference: Project_Expenses

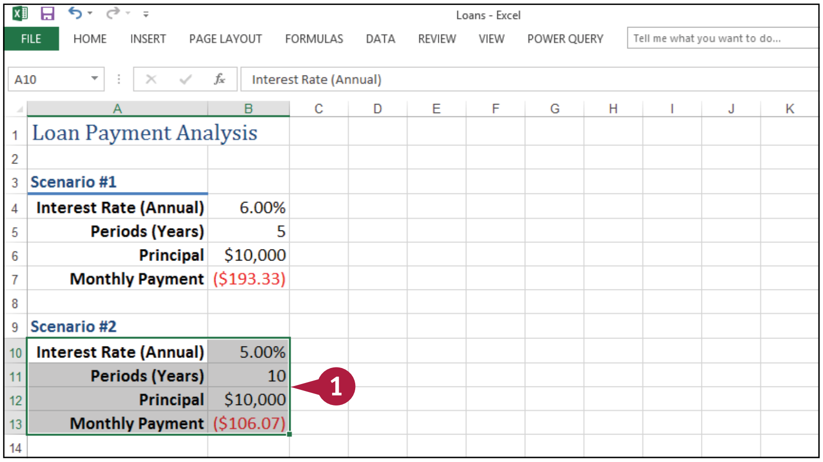
Define a Range Name

Before you can use a range name in your formulas or to navigate a worksheet, you must first define the range name. You can define as many names as you need, and you can even define multiple names for the same range.

You can create range names manually, or you can get Excel to create the names for you automatically based on the existing text labels in a worksheet. To do this, see the following section, "Using Worksheet Text to Define a Range Name."

Define a Range Name

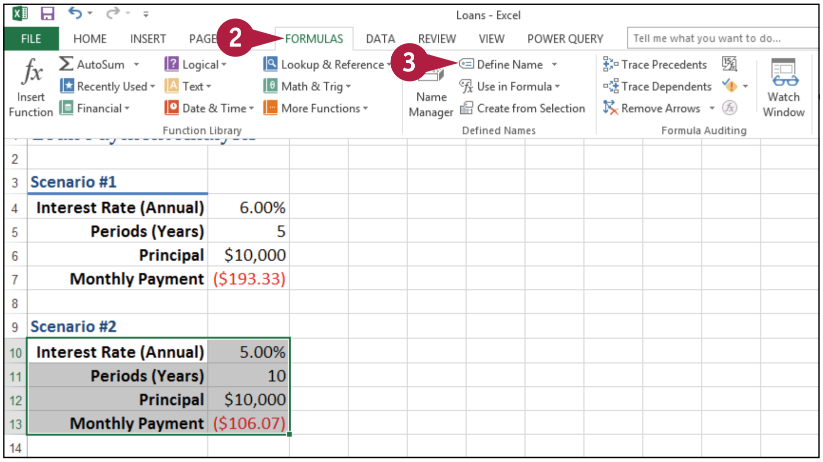
1. Select the range you want to name.


Loans - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
1

A10 | Interest Rate (Annual)

	A	B
1	Loan Payment Analysis	
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Monthly Payment	($193.33)
8		
9	Scenario #2	
10	Interest Rate (Annual)	5.00%
11	Periods (Years)	10
12	Principal	$10,000
13	Monthly Payment	($106.07)
14		

2. Click the **Formulas** tab.
3. Click **Define Name**.


Loans - Excel
FILE
HOME
INSERT
PAGE
2
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Insert Function
AutoSum
Recently Used
Financial
Logical
Text
Date & Time
Lookup & Reference
Math & Trig
More Functions
Function Library
3
Name Manager
Define Name
Use in Formula
Create from Selection
Defined Names
Trace Precedents
Trace Dependents
Remove Arrows
Formula Auditing
Watch Window

	A	B
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Monthly Payment	($193.33)
8		
9	Scenario #2	
10	Interest Rate (Annual)	5.00%
11	Periods (Years)	10
12	Principal	$10,000
13	Monthly Payment	($106.07)
14		

www.allitebooks.com

The New Name dialog box appears.

4. Type the name you want to use in the **Name** text box.

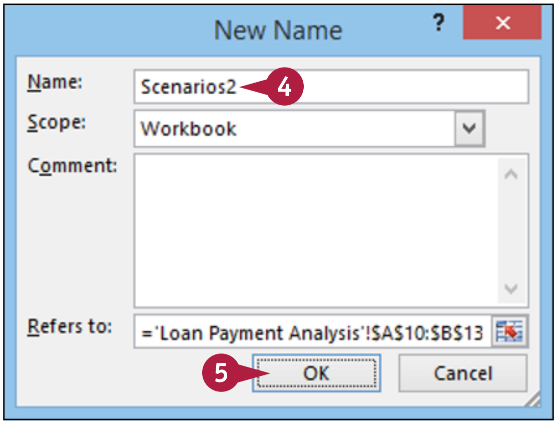
Note: The first character of the name must be a letter or an underscore (_). The name cannot include spaces or cell references, and it cannot be any longer than 255 characters.

Note: You can only use a particular range name once in a workbook.

5. Click **OK**.

Excel assigns the name to the range.

A The new name appears in the Name box whenever you select the range.

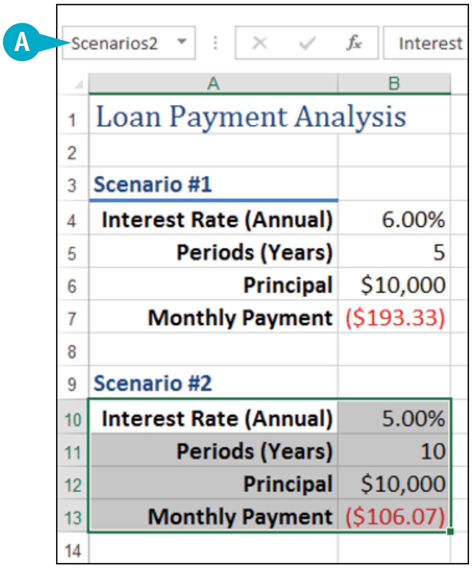


Name: Scenarios2

Scope: Workbook

Comment:

Refers to: ='Loan Payment Analysis'!$A$10:$B$13



	A	B
1	Loan Payment Analysis	
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Monthly Payment	($193.33)
8		
9	Scenario #2	
10	Interest Rate (Annual)	5.00%
11	Periods (Years)	10
12	Principal	$10,000
13	Monthly Payment	($106.07)
14		

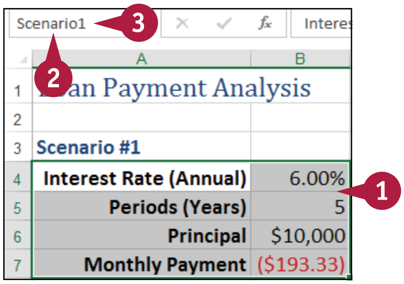
TIP

Is there an easier way to define a range name?

Yes, you can follow these steps to bypass the New Name dialog box:

1. Select the range you want to name.
2. Click inside the **Name** box.
3. Type the name you want to use.
4. Press **Enter**.

Excel assigns the name to the range.



	A	B
1	Loan Payment Analysis	
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Monthly Payment	($193.33)

Using Worksheet Text to Define a Range Name

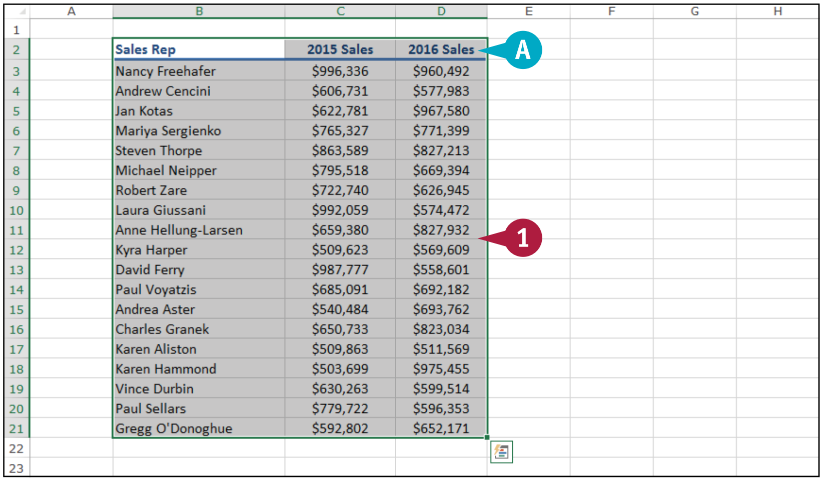
If you have several ranges to name, you can speed up the process by getting Excel to create the names for you automatically based on each range's text labels.

You can create range names from worksheet text when the labels are in the top or bottom row of the range, or the left or right column of the range. For example, if you have a column named Company, using the technique in this section results in that column's data being assigned the range name "Company."

Using Worksheet Text to Define a Range Name

1. Select the range or ranges you want to name.

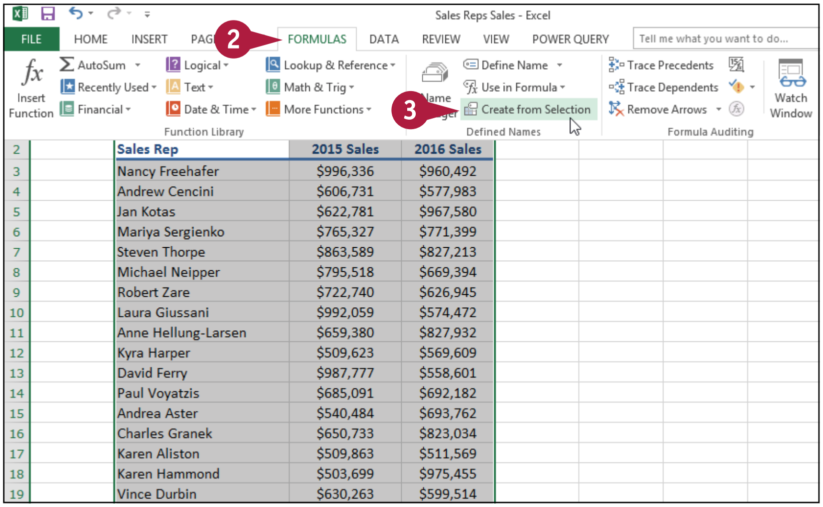
   A. Be sure to include the text labels you want to use for the range names.



	A	B	C	D	E	F	G	H
1								
2		Sales Rep	2015 Sales	2016 Sales				
3		Nancy Freehafer	$996,336	$960,492				
4		Andrew Cencini	$606,731	$577,983				
5		Jan Kotas	$622,781	$967,580				
6		Mariya Sergienko	$765,327	$771,399				
7		Steven Thorpe	$863,589	$827,213				
8		Michael Neipper	$795,518	$669,394				
9		Robert Zare	$722,740	$626,945				
10		Laura Giussani	$992,059	$574,472				
11		Anne Hellung-Larsen	$659,380	$827,932				
12		Kyra Harper	$509,623	$569,609				
13		David Ferry	$987,777	$558,601				
14		Paul Voyatzis	$685,091	$692,182				
15		Andrea Aster	$540,484	$693,762				
16		Charles Granek	$650,733	$823,034				
17		Karen Aliston	$509,863	$511,569				
18		Karen Hammond	$503,699	$975,455				
19		Vince Durbin	$630,263	$599,514				
20		Paul Sellars	$779,722	$596,353				
21		Gregg O'Donoghue	$592,802	$652,171				
22								
23								

2. Click the **Formulas** tab.

3. Click **Create from Selection**.


Sales Reps Sales - Excel
FILE
HOME
INSERT
PAG
2
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Insert Function
AutoSum
Recently Used
Financial
Logical
Text
Date & Time
Lookup & Reference
Math & Trig
More Functions
Function Library
Name
3
Define Name
Use in Formula
Create from Selection
Defined Names
Trace Precedents
Trace Dependents
Remove Arrows
Formula Auditing
Watch Window

		Sales Rep	2015 Sales	2016 Sales
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freehafer	$996,336	$960,492
4		Andrew Cencini	$606,731	$577,983
5		Jan Kotas	$622,781	$967,580
6		Mariya Sergienko	$765,327	$771,399
7		Steven Thorpe	$863,589	$827,213
8		Michael Neipper	$795,518	$669,394
9		Robert Zare	$722,740	$626,945
10		Laura Giussani	$992,059	$574,472
11		Anne Hellung-Larsen	$659,380	$827,932
12		Kyra Harper	$509,623	$569,609
13		David Ferry	$987,777	$558,601
14		Paul Voyatzis	$685,091	$692,182
15		Andrea Aster	$540,484	$693,762
16		Charles Granek	$650,733	$823,034
17		Karen Aliston	$509,863	$511,569
18		Karen Hammond	$503,699	$975,455
19		Vince Durbin	$630,263	$599,514

The Create Names from Selection dialog box appears.

4 Select the setting or settings that correspond to where the text labels are located in the selected range (☐ changes to ☑).

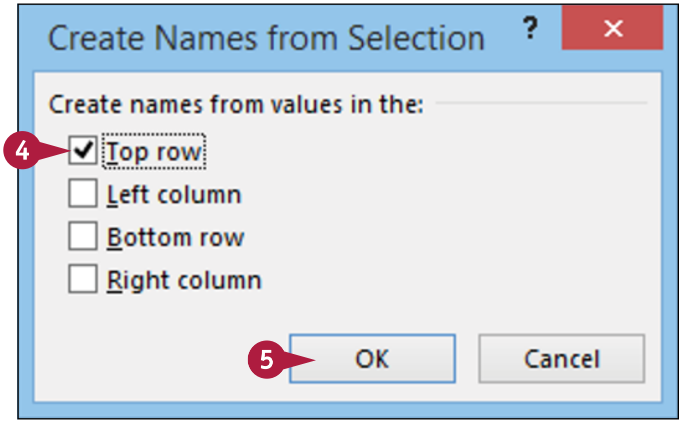
If Excel has activated a check box that does not apply to your data, deselect it (☑ changes to ☐).

5 Click **OK**.

Excel assigns the text labels as range names.

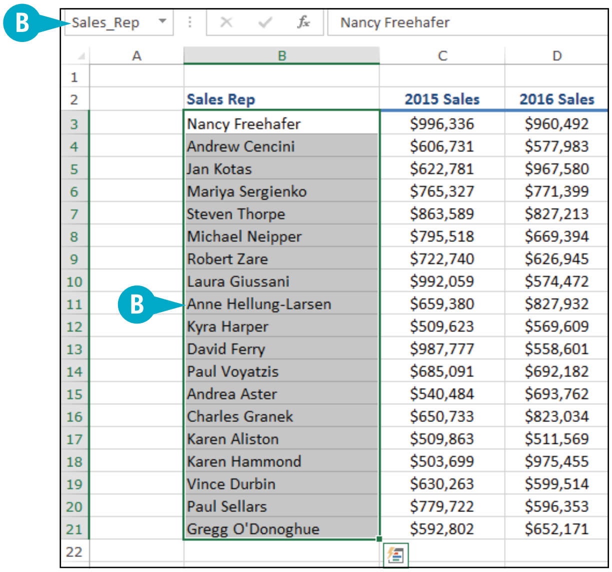
B When you select one of the ranges, the range name assigned by Excel appears in the Name box.

Note: If the label text contains any illegal characters, such as a space, Excel replaces each of those characters with an underscore (_).



Create names from values in the:

☑ Top row
☐ Left column
☐ Bottom row
☐ Right column



Sales_Rep | Nancy Freehafer

	A	B	C	D
1				
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freehafer	$996,336	$960,492
4		Andrew Cencini	$606,731	$577,983
5		Jan Kotas	$622,781	$967,580
6		Mariya Sergienko	$765,327	$771,399
7		Steven Thorpe	$863,589	$827,213
8		Michael Neipper	$795,518	$669,394
9		Robert Zare	$722,740	$626,945
10		Laura Giussani	$992,059	$574,472
11		Anne Hellung-Larsen	$659,380	$827,932
12		Kyra Harper	$509,623	$569,609
13		David Ferry	$987,777	$558,601
14		Paul Voyatzis	$685,091	$692,182
15		Andrea Aster	$540,484	$693,762
16		Charles Granek	$650,733	$823,034
17		Karen Aliston	$509,863	$511,569
18		Karen Hammond	$503,699	$975,455
19		Vince Durbin	$630,263	$599,514
20		Paul Sellars	$779,722	$596,353
21		Gregg O'Donoghue	$592,802	$652,171
22				

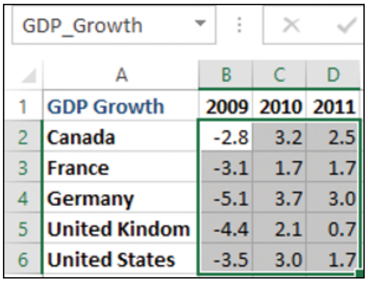
TIPS

Is there a faster way to run the Create from Selection command?

Yes, Excel offers a keyboard shortcut for the command. Select the range or ranges you want to work with and then press Ctrl+Shift+F3. Excel displays the Create Names from Selection dialog box. Follow steps 4 and 5 to create the range names.

Given a table with labels in the top row and left column, is there a way to automatically assign a name to the table data?

Yes. The table data refers to the range of cells that does not include the table headings in the top row and left column. To assign a name to the data range, type a label in the top-left corner of the table. When you run the Create from Selection command on the entire table, Excel assigns the top-left label to the data range, as shown here.



GDP_Growth

	A	B	C	D
1	GDP Growth	2009	2010	2011
2	Canada	-2.8	3.2	2.5
3	France	-3.1	1.7	1.7
4	Germany	-5.1	3.7	3.0
5	United Kindom	-4.4	2.1	0.7
6	United States	-3.5	3.0	1.7

Navigate a Workbook Using Range Names

One of the big advantages of defining range names is that they make it easier to navigate a workbook. You can choose a range name from a list and Excel automatically selects the associated range. This works even if the named range exists in a different worksheet of the same workbook.

Excel offers two methods for navigating a workbook using range names: the Name box and the Go To command.

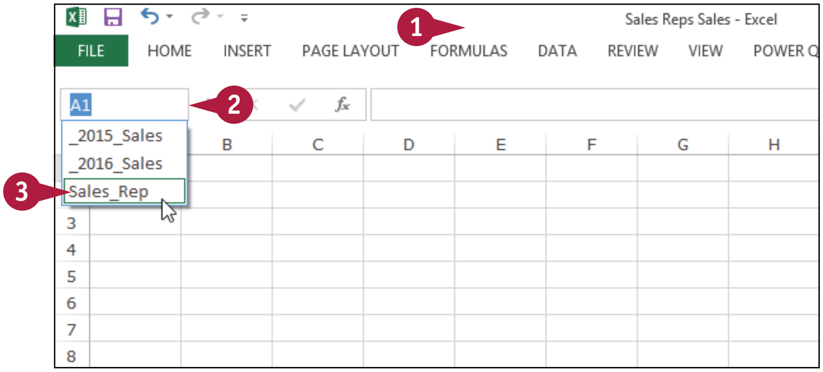
Navigate a Workbook Using Range Names

Use the Name Box

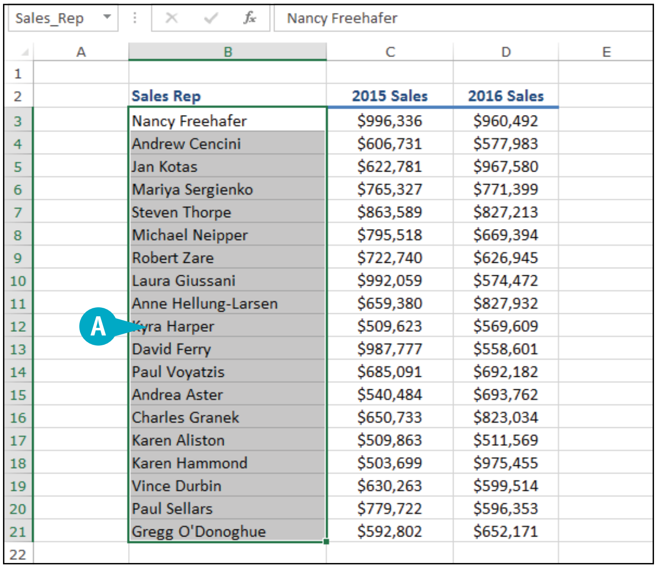
① Open the workbook that contains the range you want to work with.

② Click the **Name** box ▼.

③ Click the name of the range you want to select.


Sales Reps Sales - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER Q
A1
_2015_Sales
_2016_Sales
Sales_Rep
1
2
3
B
C
D
E
F
G
H
3
4
5
6
7
8

Ⓐ Excel selects the range.


Sales_Rep
Nancy Freehafer
A

	A	B	C	D	E
1					
2		Sales Rep	2015 Sales	2016 Sales	
3		Nancy Freehafer	$996,336	$960,492	
4		Andrew Cencini	$606,731	$577,983	
5		Jan Kotas	$622,781	$967,580	
6		Mariya Sergienko	$765,327	$771,399	
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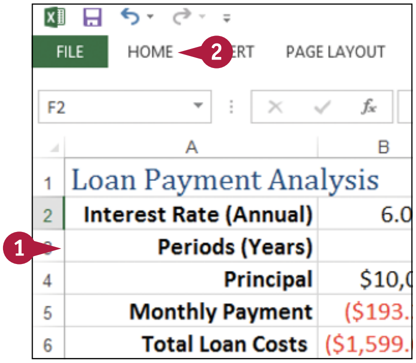
11		Anne Hellung-Larsen	$659,380	$827,932	
12		Kyra Harper	$509,623	$569,609	
13		David Ferry	$987,777	$558,601	
14		Paul Voyatzis	$685,091	$692,182	
15		Andrea Aster	$540,484	$693,762	
16		Charles Granek	$650,733	$823,034	
17		Karen Aliston	$509,863	$511,569	
18		Karen Hammond	$503,699	$975,455	
19		Vince Durbin	$630,263	$599,514	
20		Paul Sellars	$779,722	$596,353	
21		Gregg O'Donoghue	$592,802	$652,171	
22					

Use the Go To Command

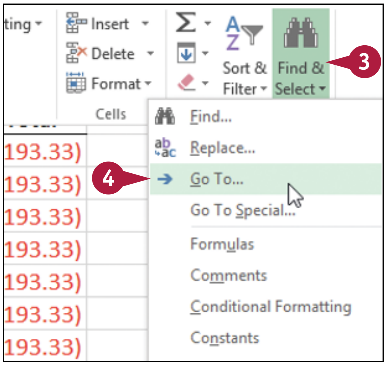
1. Open the workbook that contains the range you want to work with.
2. Click the **Home** tab.


FILE
HOME
2
ERT
PAGE LAYOUT
F2
A
B
1

	A	B
1	Loan Payment Analysis	
2	Interest Rate (Annual)	6.0
3	Periods (Years)	
4	Principal	$10,(
5	Monthly Payment	($193.
6	Total Loan Costs	($1,599.

3. Click **Find & Select** (🔍).
4. Click **Go To**.

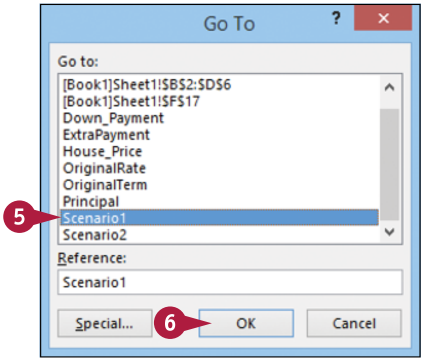
Note: You can also select the Go To command by pressing Ctrl+G.


ting
Insert
Delete
Format
Cells
Sort & Filter
Find & Select
3
Find...
Replace...
4
Go To...
Go To Special...
Formulas
Comments
Conditional Formatting
Constants
193.33)
193.33)
193.33)
193.33)
193.33)
193.33)
193.33)

The Go To dialog box appears.

5. Click the name of the range you want to select.
6. Click **OK**.

Excel selects the range.


Go To
?
Go to:
5
Reference:
Special...
6
OK
Cancel

[Book1]Sheet1!$B$2:$D$6
[Book1]Sheet1!$F$17
Down_Payment
ExtraPayment
House_Price
OriginalRate
OriginalTerm
Principal
Scenario1
Scenario2

Reference: Scenario1

TIP

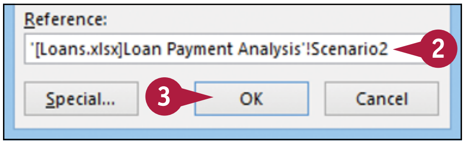
Is it possible to navigate to a named range in a different workbook?

Yes, but it is not easy or straightforward:

1. Follow steps 1 to 4 in the "Use the Go To Command" subsection to display the Go To dialog box.
2. In the **Reference** text box, type the following: **'[*workbook*]*worksheet*'!*name***

Replace *workbook* with the filename of the workbook; replace *worksheet* with the name of the worksheet that contains the range; and replace *name* with the range name.

3. Click **OK**.


2
Special...
3
OK
Cancel

Reference: '[Loans.xlsx]Loan Payment Analysis'!Scenario2

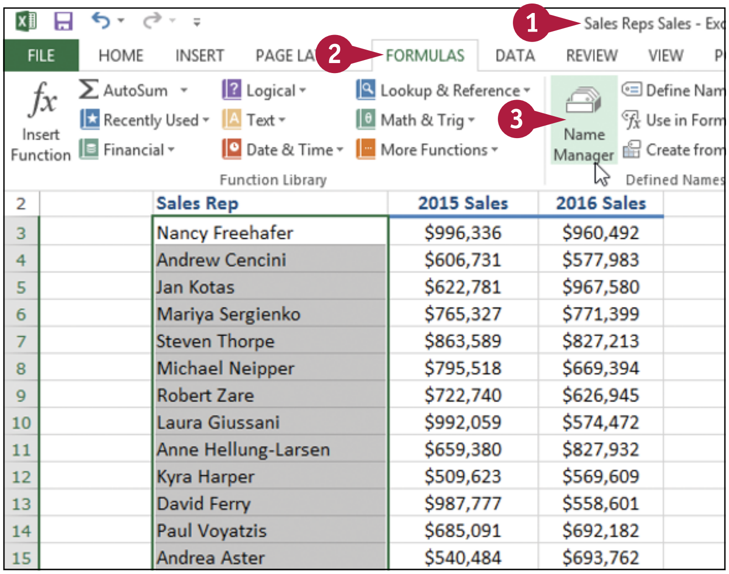
Change a Range Name

You can change any range name to a more suitable or accurate name. Changing a range name is useful if you are no longer satisfied with the original name you applied to a range or if the existing name no longer accurately reflects the contents of the range. You might also want to change a range name if you do not like the name that Excel generated automatically from the worksheet labels.

If you want to change the range coordinates associated with a range name, see the second tip.

Change a Range Name

1. Open the workbook that contains the range name you want to change.
2. Click the **Formulas** tab.
3. Click **Name Manager**.

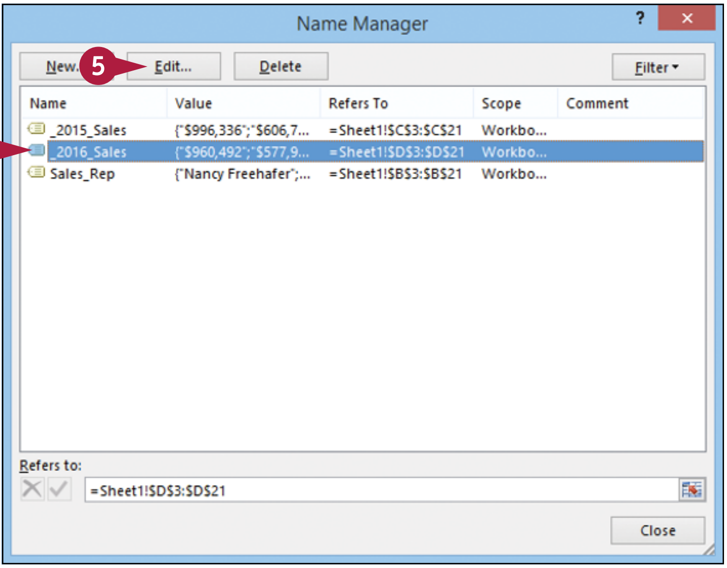


1
Sales Reps Sales - Exc
FILE
HOME
INSERT
PAGE LA
2
FORMULAS
DATA
REVIEW
VIEW
Insert Function
AutoSum
Recently Used
Financial
Logical
Text
Date & Time
Lookup & Reference
Math & Trig
More Functions
3
Name Manager
Define Nam
Use in Form
Create from
Function Library
Defined Names

	Sales Rep	2015 Sales	2016 Sales
3	Nancy Freehafer	$996,336	$960,492
4	Andrew Cencini	$606,731	$577,983
5	Jan Kotas	$622,781	$967,580
6	Mariya Sergienko	$765,327	$771,399
7	Steven Thorpe	$863,589	$827,213
8	Michael Neipper	$795,518	$669,394
9	Robert Zare	$722,740	$626,945
10	Laura Giussani	$992,059	$574,472
11	Anne Hellung-Larsen	$659,380	$827,932
12	Kyra Harper	$509,623	$569,609
13	David Ferry	$987,777	$558,601
14	Paul Voyatzis	$685,091	$692,182
15	Andrea Aster	$540,484	$693,762

The Name Manager dialog box appears.

4. Click the name you want to change.
5. Click **Edit**.



Name Manager
?
×
New...
5
Edit...
Delete
Filter
4
Close

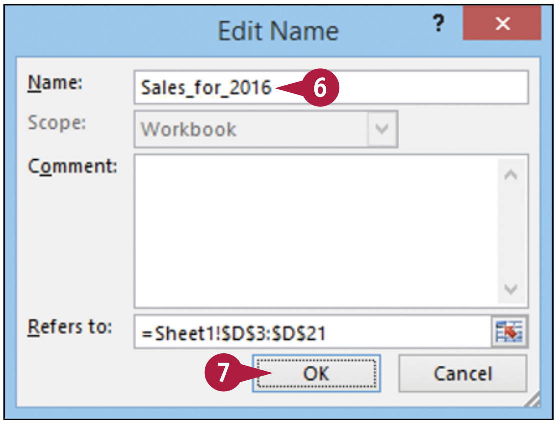
Name	Value	Refers To	Scope	Comment
_2015_Sales	{"$996,336";"$606,7...	=Sheet1!$C$3:$C$21	Workbo...	
_2016_Sales	{"$960,492";"$577,9...	=Sheet1!$D$3:$D$21	Workbo...	
Sales_Rep	{"Nancy Freehafer";...	=Sheet1!$B$3:$B$21	Workbo...	

Refers to: =Sheet1!$D$3:$D$21

The Edit Name dialog box appears.

6 Use the **Name** text box to edit the name.

7 Click **OK**.



Name: Sales_for_2016

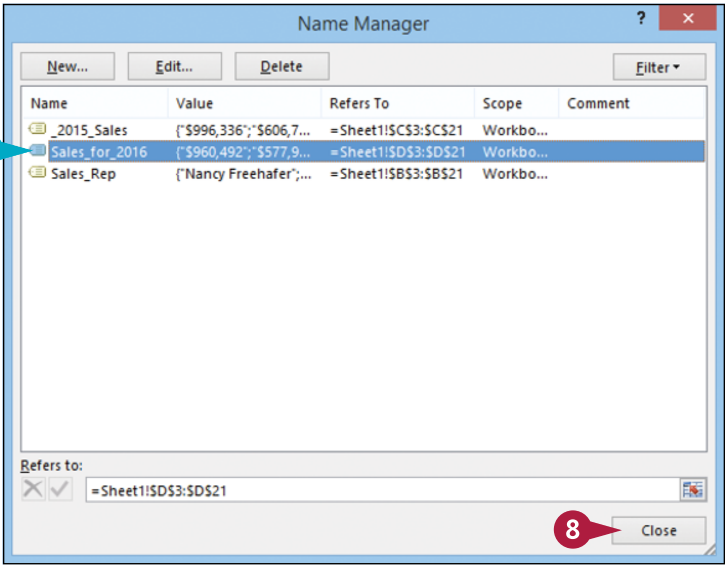
Scope: Workbook

Refers to: =Sheet1!$D$3:$D$21

A The new name appears in the Name Manager dialog box.

8 Click **Close**.

Excel closes the dialog box and returns you to the worksheet.



Name	Value	Refers To	Scope	Comment
_2015_Sales	{"$996,336";"$606,7...	=Sheet1!$C$3:$C$21	Workbo...	
Sales_for_2016	{"$960,492";"$577,9...	=Sheet1!$D$3:$D$21	Workbo...	
Sales_Rep	{"Nancy Freehafer";...	=Sheet1!$B$3:$B$21	Workbo...	

Refers to: =Sheet1!$D$3:$D$21

TIPS

Is there a faster method I can use to open the Name Manager dialog box?

Yes, Excel offers a shortcut key that enables you to bypass steps 2 and 3. Open the workbook that contains the range name you want to change, and then press Ctrl+F3. Excel opens the Name Manager dialog box.

Can I assign a name to a different range?

Yes. If you add another range to your workbook and you feel that an existing name would be more suited to that range, you can modify the name to refer to the new range. Follow steps 1 to 5 to open the Edit Name dialog box. Click inside the **Refers to** reference box, click and drag the mouse (✚) on the worksheet to select the new range, and then press Enter. Click **Close**.

Delete a Range Name

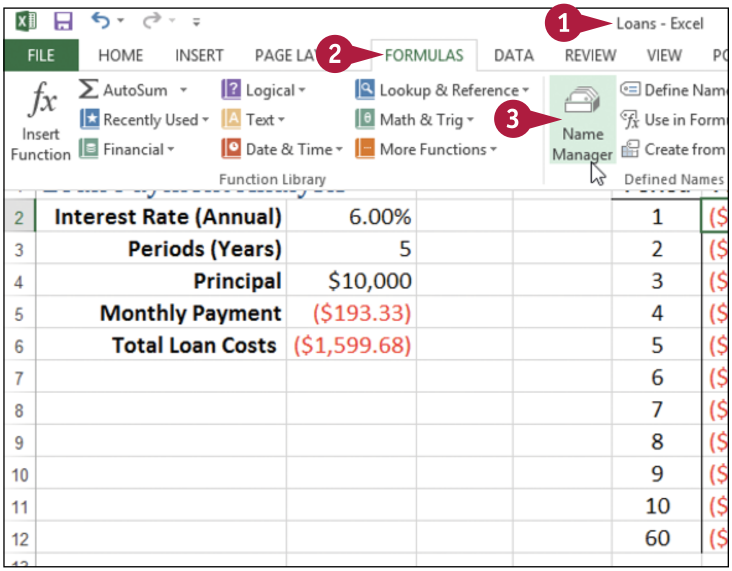
If you have a range name that you no longer need, you should delete it. This reduces clutter in the Name Manager dialog box, and makes the Name box easier to navigate.

Note, however, that deleting a range name will generate an error in any formula that uses the name. This occurs because when you delete a range name, Excel does not convert the name to its range coordinates in formulas that use the name. Therefore, before deleting a range name, you should convert that name to its range coordinates in every formula that uses the name.

Delete a Range Name

1. Open the workbook that contains the range name you want to delete.
2. Click the **Formulas** tab.
3. Click **Name Manager**.

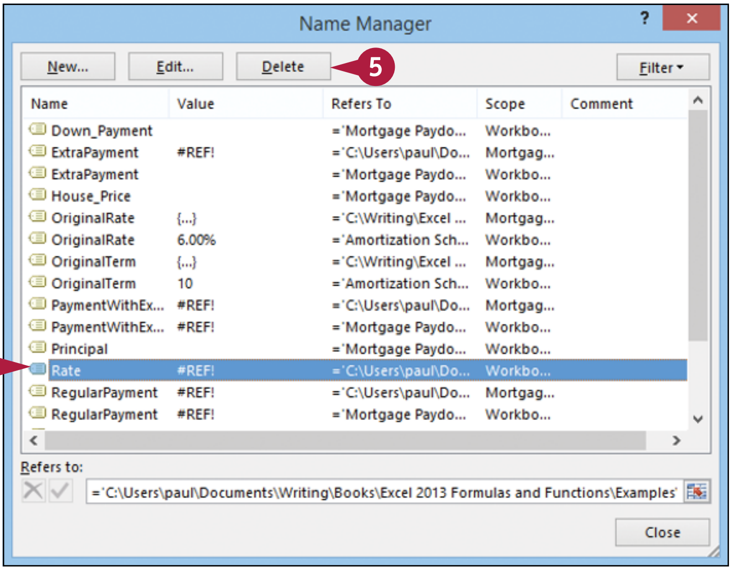
Note: You can also open the Name Manager dialog box by pressing Ctrl+F3.


1
Loans - Excel
FILE
HOME
INSERT
PAGE LA
2
FORMULAS
DATA
REVIEW
VIEW
P
Insert Function
AutoSum
Recently Used
Financial
Logical
Text
Date & Time
Lookup & Reference
Math & Trig
More Functions
Function Library
3
Name Manager
Define Nam
Use in Form
Create from
Defined Names

2	Interest Rate (Annual)	6.00%			1	($
3	Periods (Years)	5			2	($
4	Principal	$10,000			3	($
5	Monthly Payment	($193.33)			4	($
6	Total Loan Costs	($1,599.68)			5	($
7					6	($
8					7	($
9					8	($
10					9	($
11					10	($
12					60	($

The Name Manager dialog box appears.

4. Click the name you want to delete.
5. Click **Delete**.

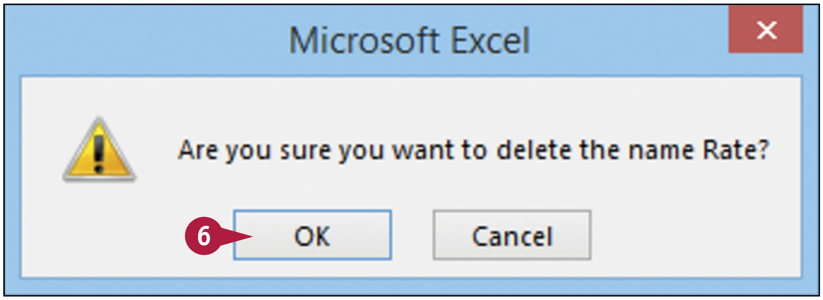

Name Manager
?
New...
Edit...
Delete
5
Filter
4
Close

Name	Value	Refers To	Scope	Comment
Down_Payment		='Mortgage Paydo...	Workbo...	
ExtraPayment	#REF!	='C:\Users\paul\Do...	Mortgag...	
ExtraPayment		='Mortgage Paydo...	Workbo...	
House_Price		='Mortgage Paydo...	Workbo...	
OriginalRate	{...}	='C:\Writing\Excel ...	Mortgag...	
OriginalRate	6.00%	='Amortization Sch...	Workbo...	
OriginalTerm	{...}	='C:\Writing\Excel ...	Mortgag...	
OriginalTerm	10	='Amortization Sch...	Workbo...	
PaymentWithEx...	#REF!	='C:\Users\paul\Do...	Mortgag...	
PaymentWithEx...	#REF!	='Mortgage Paydo...	Workbo...	
Principal		='Mortgage Paydo...	Workbo...	
Rate	#REF!	='C:\Users\paul\Do...	Workbo...	
RegularPayment	#REF!	='C:\Users\paul\Do...	Mortgag...	
RegularPayment	#REF!	='Mortgage Paydo...	Workbo...	

Refers to: ='C:\Users\paul\Documents\Writing\Books\Excel 2013 Formulas and Functions\Examples'

Excel asks you to confirm the deletion.

6 Click **OK**.

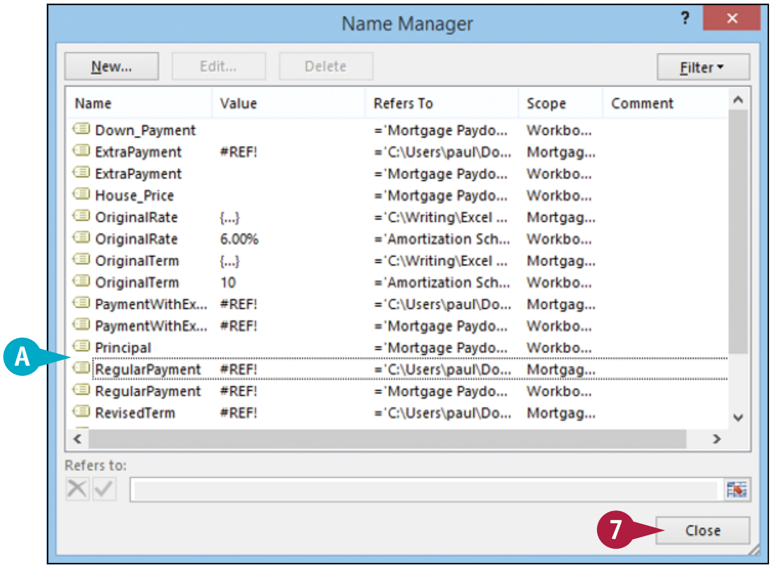


Are you sure you want to delete the name Rate?

A Excel deletes the range name.

7 Click **Close**.

Excel closes the dialog box and returns you to the worksheet.



Name	Value	Refers To	Scope	Comment
Down_Payment		='Mortgage Paydo...	Workbo...	
ExtraPayment	#REF!	='C:\Users\paul\Do...	Mortgag...	
ExtraPayment		='Mortgage Paydo...	Workbo...	
House_Price		='Mortgage Paydo...	Workbo...	
OriginalRate	{...}	='C:\Writing\Excel ...	Mortgag...	
OriginalRate	6.00%	='Amortization Sch...	Workbo...	
OriginalTerm	{...}	='C:\Writing\Excel ...	Mortgag...	
OriginalTerm	10	='Amortization Sch...	Workbo...	
PaymentWithEx...	#REF!	='C:\Users\paul\Do...	Mortgag...	
PaymentWithEx...	#REF!	='Mortgage Paydo...	Workbo...	
Principal		='Mortgage Paydo...	Workbo...	
RegularPayment	#REF!	='C:\Users\paul\Do...	Mortgag...	
RegularPayment	#REF!	='Mortgage Paydo...	Workbo...	
RevisedTerm	#REF!	='C:\Users\paul\Do...	Mortgag...	

TIP

Is there a faster way to delete multiple range names?

Yes, you can delete two or more range names at once. First, follow steps 1 to 3 to display the Name Manager dialog box. Next, select the range names you want to delete: To select consecutive names, click the first name you want to delete, hold down Shift, and then click the last name you want to delete; to select nonconsecutive names, hold down Ctrl and click each name you want to delete. When you have selected the names you want to remove, click **Delete** and then click **OK** when Excel asks you to confirm the deletion. Click **Close** to return to the worksheet.

Paste a List of Range Names

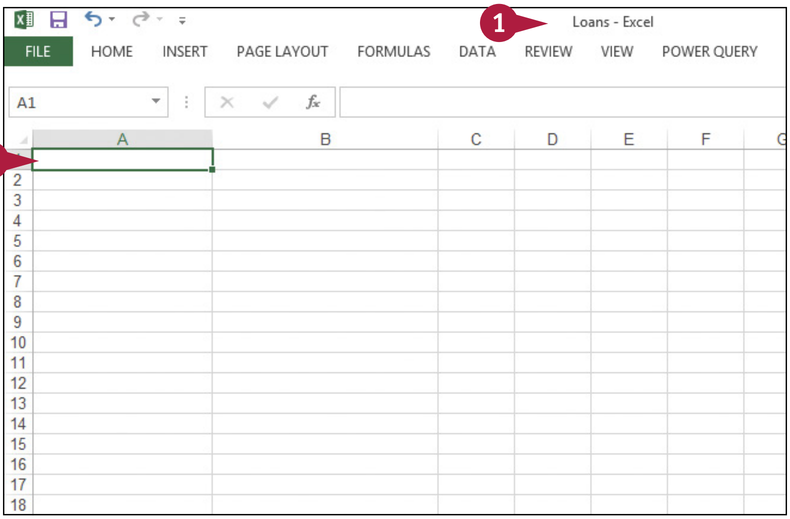
To make your workbook easier to use, particularly for other people who are not familiar with the names you have defined, you can paste a list of the workbook's range names to a worksheet. This is also useful for a workbook you have not used in a while. Examining the list of range names can help you familiarize yourself once again with the workbook's contents.

The pasted list contains two columns: one for the range names and one for the range coordinates associated with each name.

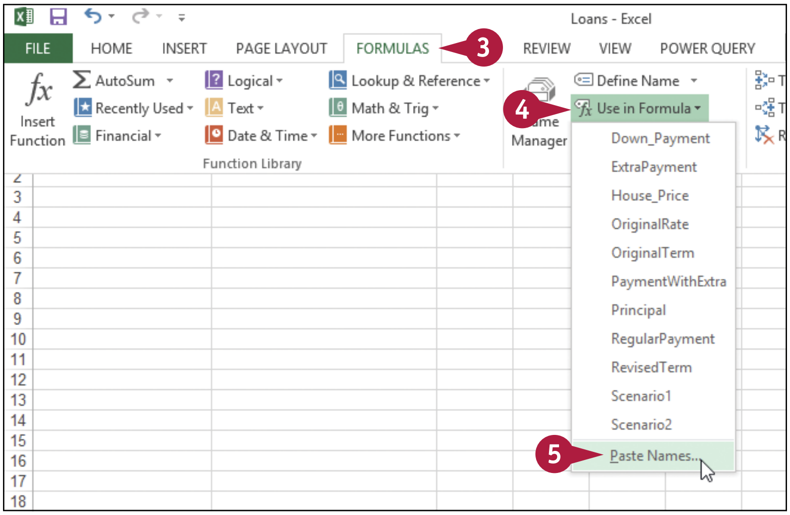
Paste a List of Range Names

1. Open the workbook that contains the range names you want to paste.
2. Select the cell where you want the pasted list to appear.

Note: Excel will overwrite existing data, so select a location where there is no existing cell data or where it is okay to delete the existing cell data.

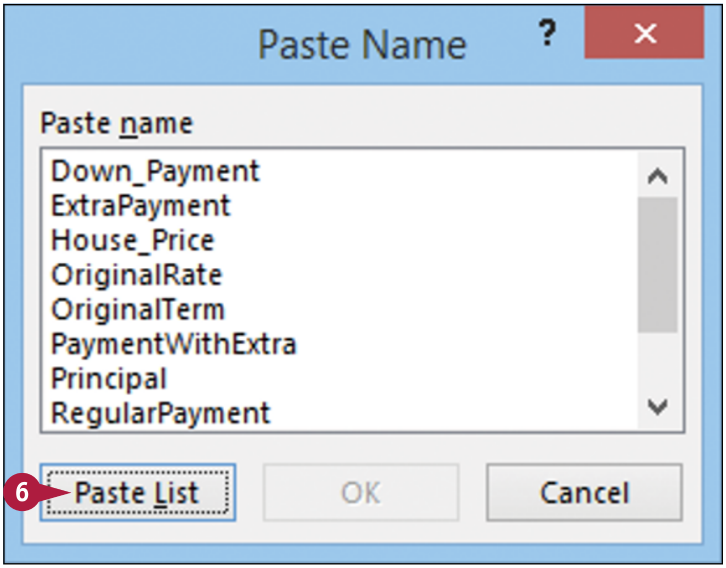

Loans - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
A1
1
2

3. Click the **Formulas** tab.
4. Click **Use in Formula**.
5. Click **Paste Names**.


Loans - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
REVIEW
VIEW
POWER QUERY
Insert Function
AutoSum
Recently Used
Financial
Logical
Text
Date & Time
Lookup & Reference
Math & Trig
More Functions
Function Library
Name Manager
Define Name
Use in Formula
Down_Payment
ExtraPayment
House_Price
OriginalRate
OriginalTerm
PaymentWithExtra
Principal
RegularPayment
RevisedTerm
Scenario1
Scenario2
Paste Names...
3
4
5

The Paste Name dialog box appears.

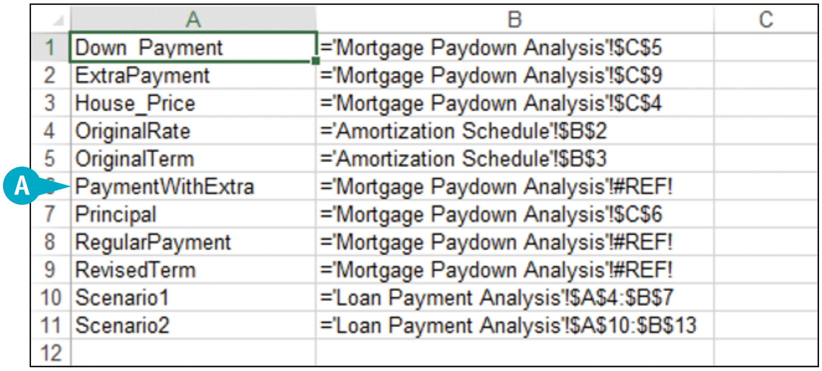
6 Click **Paste List**.



Down_Payment
ExtraPayment
House_Price
OriginalRate
OriginalTerm
PaymentWithExtra
Principal
RegularPayment

Excel closes the Paste Name dialog box.

A Excel pastes the list of range names to the worksheet.



	A	B	C
1	Down_Payment	='Mortgage Paydown Analysis'!$C$5	
2	ExtraPayment	='Mortgage Paydown Analysis'!$C$9	
3	House_Price	='Mortgage Paydown Analysis'!$C$4	
4	OriginalRate	='Amortization Schedule'!$B$2	
5	OriginalTerm	='Amortization Schedule'!$B$3	
	PaymentWithExtra	='Mortgage Paydown Analysis'!#REF!	
7	Principal	='Mortgage Paydown Analysis'!$C$6	
8	RegularPayment	='Mortgage Paydown Analysis'!#REF!	
9	RevisedTerm	='Mortgage Paydown Analysis'!#REF!	
10	Scenario1	='Loan Payment Analysis'!$A$4:$B$7	
11	Scenario2	='Loan Payment Analysis'!$A$10:$B$13	
12			

TIP

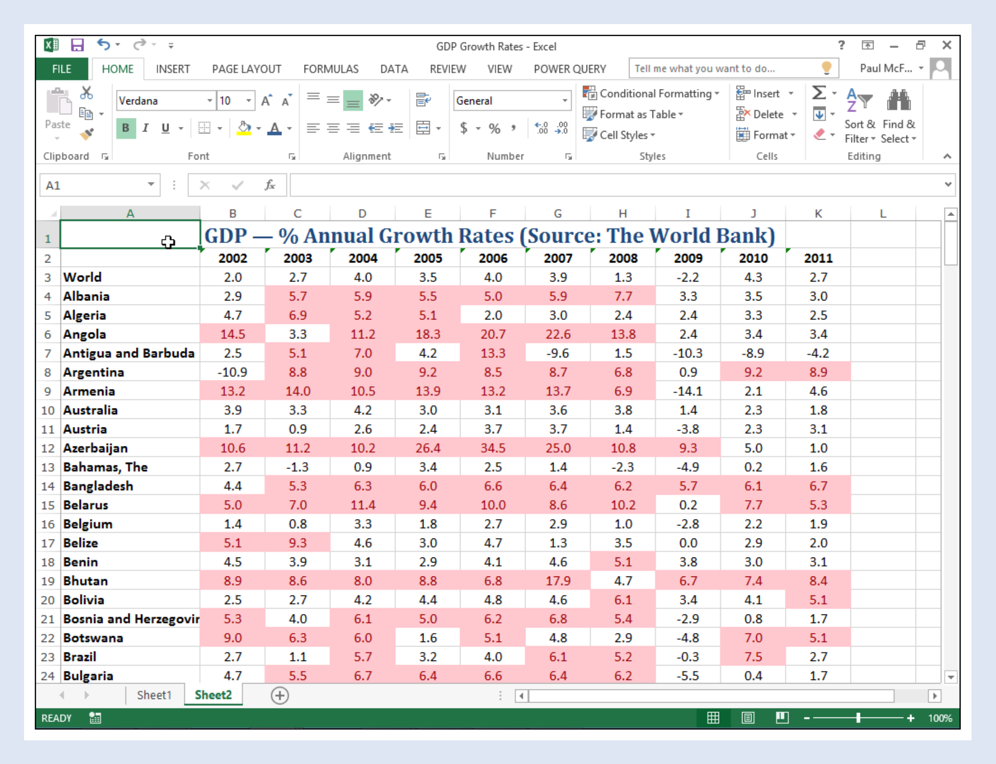
Is there a faster method I can use to paste a list of range names?

Yes, Excel offers a handy keyboard shortcut that you can use. Open the workbook that contains the range names you want to paste, and then select the cell where you want the pasted list to appear. Press F3 to open the Paste Name dialog box, and then click **Paste List**.

CHAPTER 3

Formatting Excel Ranges

Microsoft Excel 2016 offers many commands and options for formatting ranges, including the font, text color, text alignment, background color, number format, column width, row height, and more.


GDP Growth Rates - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paul McF...
Paste
Clipboard
Verdana
10
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Sort & Filter
Find & Select
Editing
A1
Sheet1
Sheet2
READY
100%

	A	B	C	D	E	F	G	H	I	J	K
1		GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0
18	Benin	4.5	3.9	3.1	2.9	4.1	4.6	5.1	3.8	3.0	3.1
19	Bhutan	8.9	8.6	8.0	8.8	6.8	17.9	4.7	6.7	7.4	8.4
20	Bolivia	2.5	2.7	4.2	4.4	4.8	4.6	6.1	3.4	4.1	5.1
21	Bosnia and Herzegovir	5.3	4.0	6.1	5.0	6.2	6.8	5.4	-2.9	0.8	1.7
22	Botswana	9.0	6.3	6.0	1.6	5.1	4.8	2.9	-4.8	7.0	5.1
23	Brazil	2.7	1.1	5.7	3.2	4.0	6.1	5.2	-0.3	7.5	2.7
24	Bulgaria	4.7	5.5	6.7	6.4	6.6	6.4	6.2	-5.5	0.4	1.7

Change the Font and Font Size 50
Apply Font Effects 52
Change the Font Color 54
Align Text Within a Cell 56
Center Text Across Multiple Columns 58
Rotate Text Within a Cell 60
Add a Background Color to a Range 62
Apply a Number Format 64
Change the Number of Decimal Places Displayed 66
Apply an AutoFormat to a Range 68
Apply a Conditional Format to a Range 70
Apply a Style to a Range 72
Change the Column Width 74
Change the Row Height 76
Wrap Text Within a Cell 78
Add Borders to a Range 80
Copy Formatting from One Cell to Another 82

Change the Font and Font Size

When you work in an Excel worksheet, you can add visual appeal to a cell or range by changing the font. In this section and throughout this book, the term *font* is synonymous with *typeface*, and both terms refer to the overall look of each character.

You can also make labels and other text stand out from the rest of the worksheet by changing the font size. The font size is measured in *points*, where there are roughly 72 points in an inch.

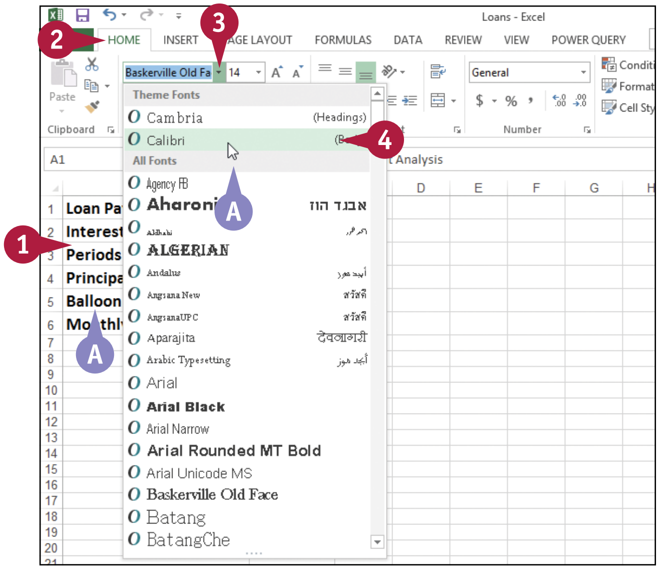
Change the Font and Font Size

Change the Font

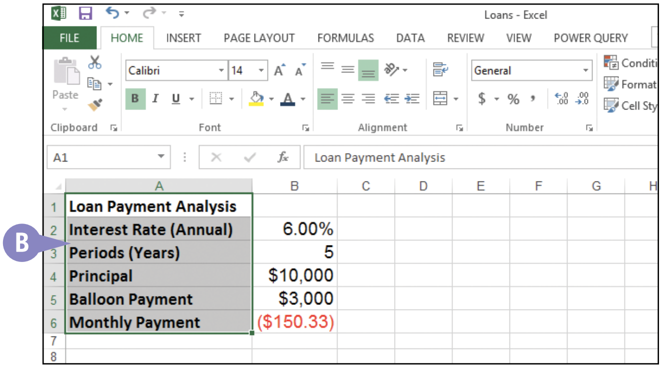
1. Select the range you want to format.
2. Click the **Home** tab.
3. Click ▾ in the **Font** list.

A. When you use the mouse ↖ to point to a typeface, Excel temporarily changes the selected text to that typeface.

4. Click the typeface you want to apply.


Loans - Excel
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Baskerville Old Fa
14
General
Paste
Clipboard
Number
Theme Fonts
Cambria (Headings)
Calibri
All Fonts
Agency FB
Aharoni
ALGERIAN
Andalus
Angsana New
AngsanaUPC
Aparajita
Arabic Typesetting
Arial
Arial Black
Arial Narrow
Arial Rounded MT Bold
Arial Unicode MS
Baskerville Old Face
Batang
BatangChe
A1
Analysis
Loan Pa
Interest
Periods
Principa
Balloon
Monthly
1
2
3
4
A
A

B. Excel applies the font to the text in the selected range.


Loans - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Calibri
14
General
Paste
Clipboard
Font
Alignment
Number
B

A1 Loan Payment Analysis

	A	B
1	Loan Payment Analysis	
2	Interest Rate (Annual)	6.00%
3	Periods (Years)	5
4	Principal	$10,000
5	Balloon Payment	$3,000
6	Monthly Payment	($150.33)

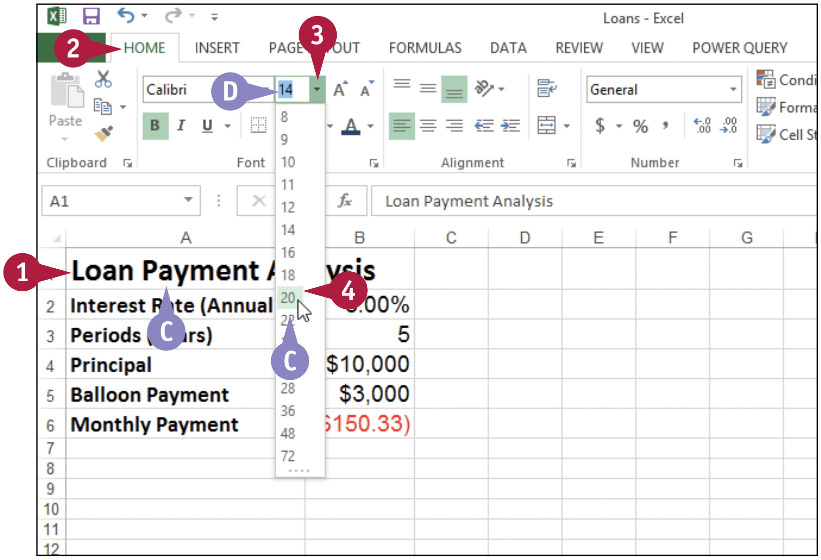
Change the Font Size

1. Select the range you want to format.
2. Click the **Home** tab.
3. Click ▼ in the **Font Size** list.

- C When you use the mouse to point to a font size, Excel temporarily changes the selected text to that size.

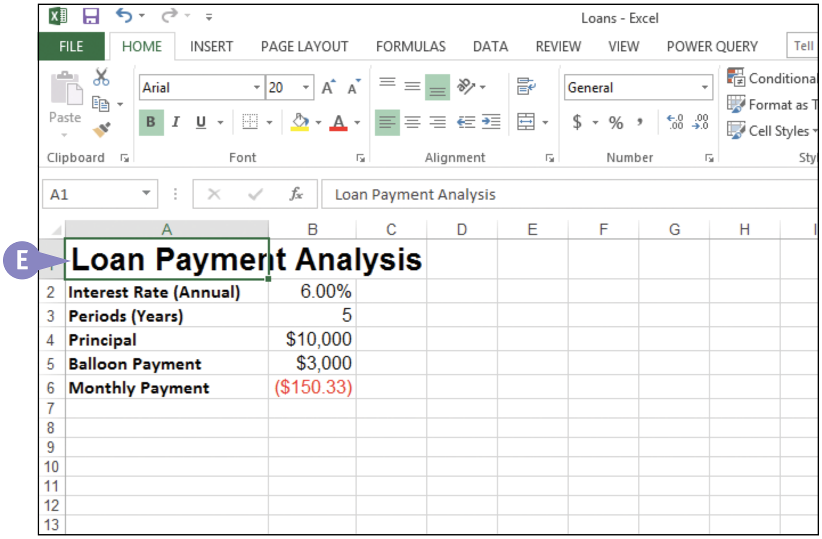
4. Click the size you want to apply.

- D You can also type the size you want in the Size text box.


Loans - Excel
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Paste
Clipboard
Calibri
14
Font
Alignment
General
Number
Conditional
Format
Cell St
8
9
10
11
12
14
16
18
20
22
28
36
48
72
1
2
3
4
C
D

A1 | Loan Payment Analysis

- E Excel applies the font size to the text in the selected range.


Loans - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell
Paste
Clipboard
Arial
20
Font
Alignment
General
Number
Conditional
Format as T
Cell Styles
Sty
E

A1 | Loan Payment Analysis

	A	B
1	Loan Payment Analysis	
2	Interest Rate (Annual)	6.00%
3	Periods (Years)	5
4	Principal	$10,000
5	Balloon Payment	$3,000
6	Monthly Payment	($150.33)

TIPS

In the Theme Fonts section of the Font list, what do the designations Body and Headings mean?

When you create a workbook, Excel automatically applies a document theme to the workbook, and that theme includes predefined fonts. The theme's default font is referred to as Body, and it is the font used for regular worksheet text. Each theme also defines a Headings font, which Excel uses for cells formatted with a heading or title style.

Can I change the default font and font size?

Yes. Click the **File** tab and then click **Options** to open the Excel Options dialog box. Click the **General** tab, click the **Use this as the default font** ▼, and then click the typeface you want to use as the default. Click the **Font size** ▼ and then click the size you prefer to use as the default. Click **OK**.

Apply Font Effects

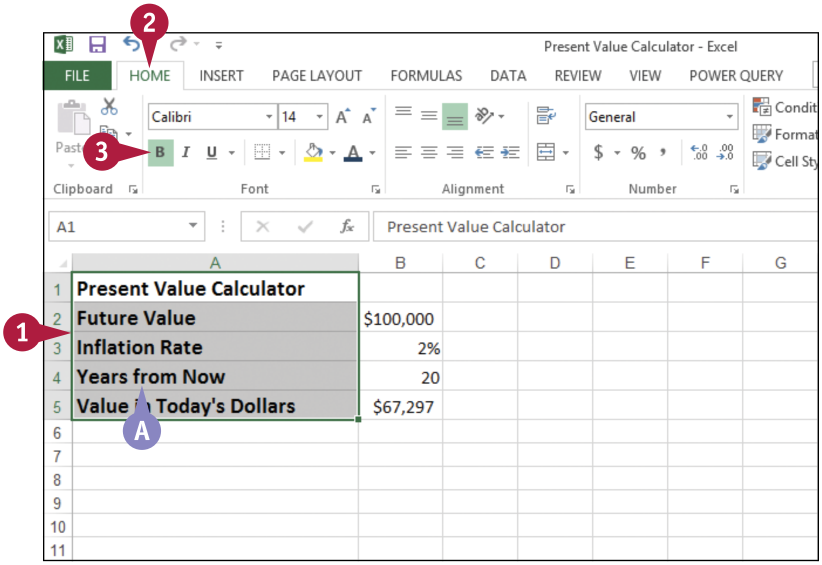
You can improve the look and impact of text in an Excel worksheet by applying font effects to a cell or to a range.

Font effects include common formatting such as **bold**, which is often used to make labels stand out from regular text; *italic*, which is often used to add emphasis to text; and underline, which is often used for worksheet titles and headings. You can also apply special effects such as ~~strikethrough~~, superscripts (for example, x^2+y^2), and subscripts (for example, H_2O).

Apply Font Effects

1. Select the range you want to format.
2. Click the **Home** tab.
3. To format the text as bold, click the **Bold** button (**B**).

Ⓐ Excel applies the bold effect to the selected range.



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Present Value Calculator - Excel
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REVIEW
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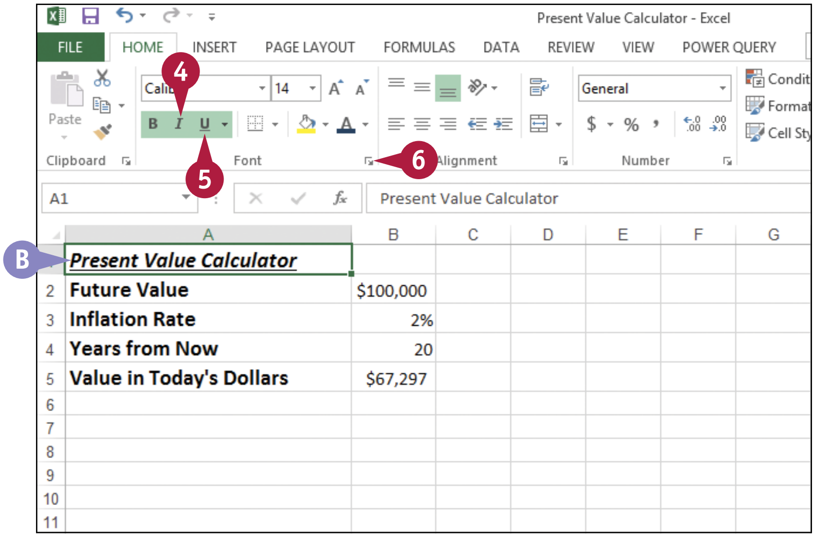
14
General
Clipboard
Font
Alignment
Number
A1
Present Value Calculator

	A	B
1	**Present Value Calculator**	
2	**Future Value**	$100,000
3	**Inflation Rate**	2%
4	**Years from Now**	20
5	**Value in Today's Dollars**	$67,297

4. To format the text as italic, click the **Italic** button (*I*).
5. To format the text as underline, click the **Underline** button (U).

Ⓑ Excel applies the effects to the selected range.

6. Click the **Font** dialog box launcher (◲).



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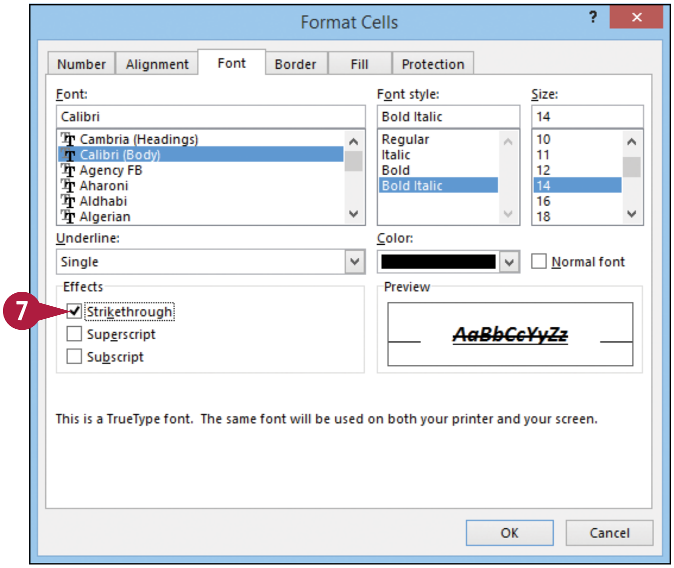
Present Value Calculator

	A	B
1	***Present Value Calculator***	
2	**Future Value**	$100,000
3	**Inflation Rate**	2%
4	**Years from Now**	20
5	**Value in Today's Dollars**	$67,297

The Format Cells dialog box appears with the Font tab displayed.

7 To format the text as strikethrough, click **Strikethrough** (☐ changes to ☑).


Format Cells
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×
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Protection
Cambria (Headings)
Calibri (Body)
Agency FB
Aharoni
Aldhabi
Algerian
Regular
Italic
Bold
Bold Italic
10
11
12
14
16
18
Preview
AaBbCcYyZz
OK
Cancel
7

Font: Calibri

Font style: Bold Italic

Size: 14

Underline: Single

Color:

☐ Normal font

Effects

☑ Strikethrough

☐ Superscript

☐ Subscript

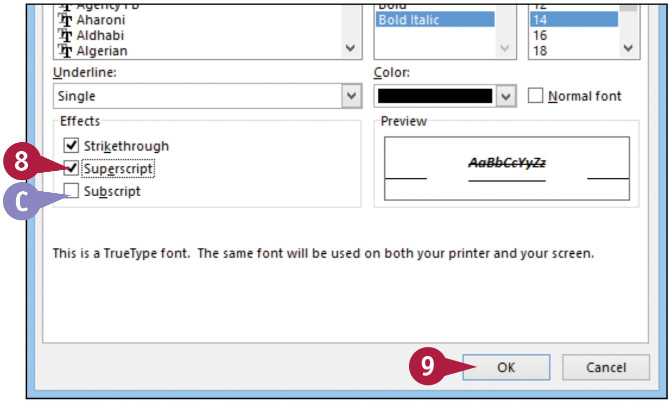
This is a TrueType font. The same font will be used on both your printer and your screen.

8 To format the text as a superscript, click **Superscript** (☐ changes to ☑).

C To format the text as a subscript, click **Subscript** (☐ changes to ☑).

9 Click **OK**.

Excel applies the font effects.


Agency FB
Aharoni
Aldhabi
Algerian
Bold
Bold Italic
12
14
16
18
Preview
AaBbCcYyZz
OK
Cancel
8
C
9

Underline: Single

Color:

☐ Normal font

Effects

☑ Strikethrough

☑ Superscript

☐ Subscript

This is a TrueType font. The same font will be used on both your printer and your screen.

TIP

Are there any font-related keyboard shortcuts I can use?

Yes. Excel supports the following font shortcuts:

Press	To
Ctrl+B	Toggle the selected range as bold
Ctrl+I	Toggle the selected range as italic
Ctrl+U	Toggle the selected range as underline
Ctrl+5	Toggle the selected range as strikethrough
Ctrl+1	Display the Format Cells dialog box

Change the Font Color

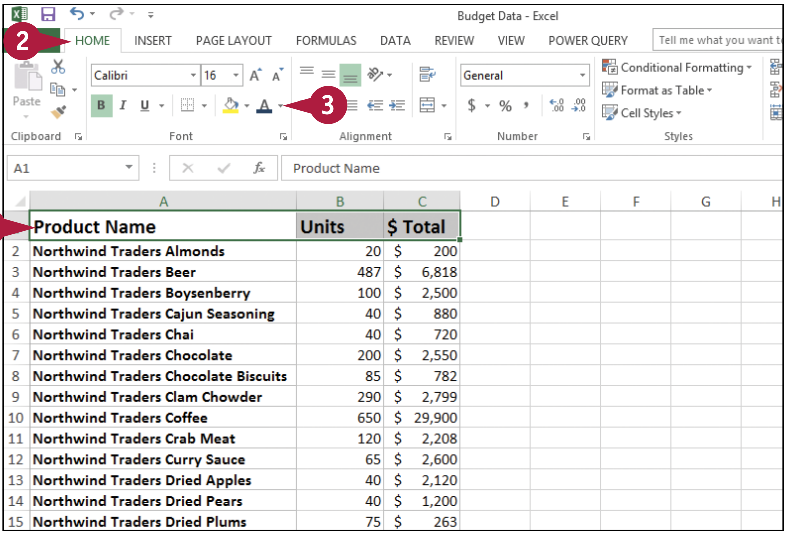
When you work in an Excel worksheet, you can add visual interest by changing the font color. Most worksheets are meant to convey specific information, but that does not mean the sheet has to be plain. By adding a bit of color to your text, you make your worksheets more appealing. Adding color can also make the worksheet easier to read by, for example, differentiating titles, headings, and labels from regular text.

You can change the font color by applying a color from the workbook's theme, from the Excel palette of standard colors, or from a custom color that you create.

Change the Font Color

Select a Theme or Standard Color

1. Select the range you want to format.
2. Click the **Home** tab.
3. Click ▼ in the **Font Color** list (A).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Format as Table
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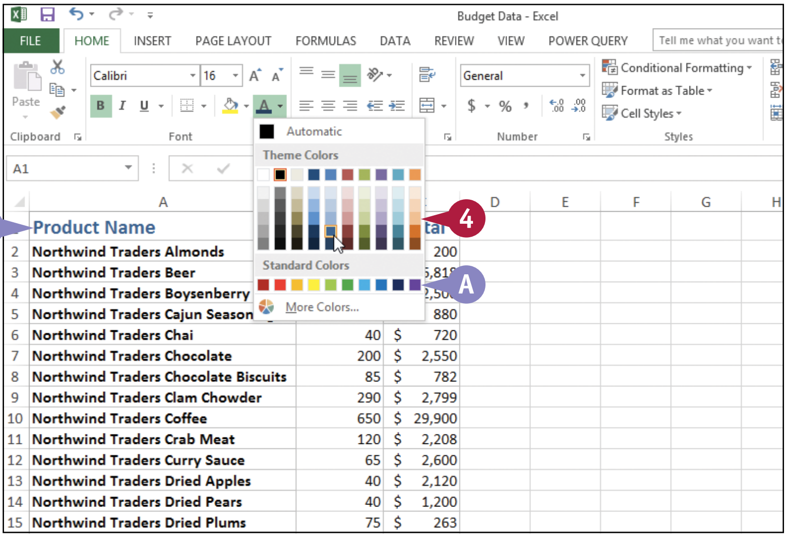
A1 | Product Name

	A	B	C
1	Product Name	Units	$ Total
2	Northwind Traders Almonds	20	$ 200
3	Northwind Traders Beer	487	$ 6,818
4	Northwind Traders Boysenberry	100	$ 2,500
5	Northwind Traders Cajun Seasoning	40	$ 880
6	Northwind Traders Chai	40	$ 720
7	Northwind Traders Chocolate	200	$ 2,550
8	Northwind Traders Chocolate Biscuits	85	$ 782
9	Northwind Traders Clam Chowder	290	$ 2,799
10	Northwind Traders Coffee	650	$ 29,900
11	Northwind Traders Crab Meat	120	$ 2,208
12	Northwind Traders Curry Sauce	65	$ 2,600
13	Northwind Traders Dried Apples	40	$ 2,120
14	Northwind Traders Dried Pears	40	$ 1,200
15	Northwind Traders Dried Plums	75	$ 263

4. Click a theme color.

A. Alternatively, click one of the Excel standard colors.

B. Excel applies the color to the selected range.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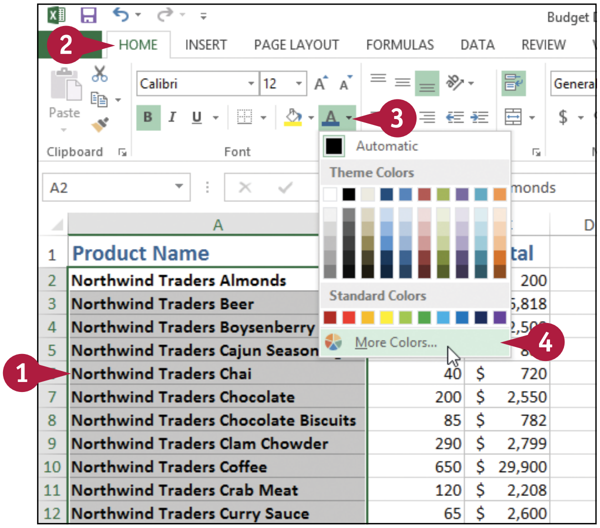
More Colors...
A1
4
A
B

	A	B	C
1	Product Name		tal
2	Northwind Traders Almonds		200
3	Northwind Traders Beer		,818
4	Northwind Traders Boysenberry		2,50
5	Northwind Traders Cajun Season		880
6	Northwind Traders Chai	40	$ 720
7	Northwind Traders Chocolate	200	$ 2,550
8	Northwind Traders Chocolate Biscuits	85	$ 782
9	Northwind Traders Clam Chowder	290	$ 2,799
10	Northwind Traders Coffee	650	$ 29,900
11	Northwind Traders Crab Meat	120	$ 2,208
12	Northwind Traders Curry Sauce	65	$ 2,600
13	Northwind Traders Dried Apples	40	$ 2,120
14	Northwind Traders Dried Pears	40	$ 1,200
15	Northwind Traders Dried Plums	75	$ 263

Select a Custom Color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Genera
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Theme Colors
Standard Colors
More Colors...
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A
D
1 Product Name
2 Northwind Traders Almonds
3 Northwind Traders Beer
4 Northwind Traders Boysenberry
5 Northwind Traders Cajun Season
6 Northwind Traders Chai
7 Northwind Traders Chocolate
8 Northwind Traders Chocolate Biscuits
9 Northwind Traders Clam Chowder
10 Northwind Traders Coffee
11 Northwind Traders Crab Meat
12 Northwind Traders Curry Sauce
1
2
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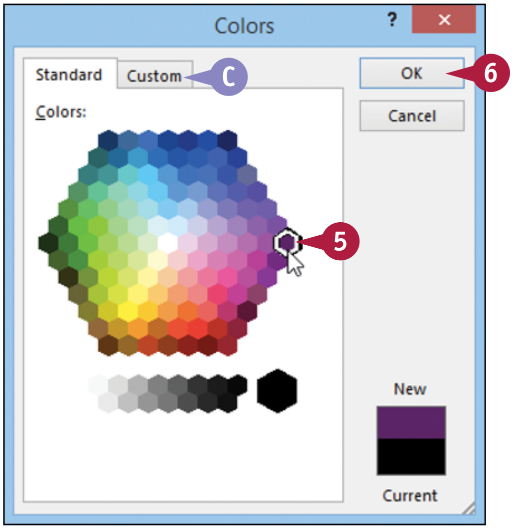
1. Select the range you want to format.
2. Click the **Home** tab.
3. Click ▾ in the **Font Color** list (A).
4. Click **More Colors**.

The Colors dialog box appears.


Colors
?
✕
Standard
Custom
Colors:
OK
Cancel
New
Current
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5. Click the color you want to use.

Ⓒ You can also click the **Custom** tab and then either click the color you want or enter the values for the Red, Green, and Blue components of the color.

6. Click **OK**.

Excel applies the color to the selected range.

TIP

How can I make the best use of fonts in my documents?

- Do not use many different typefaces in a single document. Stick to one, or at most two, typefaces to avoid the ransom note look.
- Avoid overly decorative typefaces because they are often difficult to read.
- Use bold only for document titles, subtitles, and headings.
- Use italics only to emphasize words and phrases, or for the titles of books and magazines.
- Use larger type sizes only for document titles, subtitles, and, possibly, the headings.
- If you change the text color, be sure to leave enough contrast between the text and the background. In general, dark text on a light background is the easiest to read.

Align Text Within a Cell

You can make your worksheets easier to read by aligning text and numbers within each cell. By default, Excel aligns numbers with the right side of the cell, and it aligns text with the left side of the cell. You can also align numbers or text with the center of each cell.

Excel also allows you to align your data vertically within each cell. By default, Excel aligns all data with the bottom of each cell, but you can also align text with the top or middle.

Align Text Within a Cell

Align Text Horizontally

① Select the range you want to format.

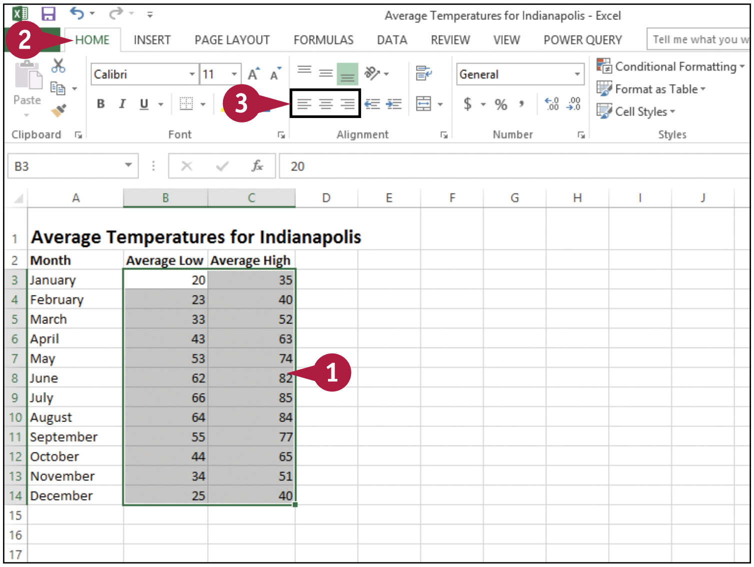
② Click the **Home** tab.

③ In the Alignment group, click the horizontal alignment option you want to use:

Click **Align Text Left** (☰) to align data with the left side of each cell.

Click **Center** (☰) to align data with the center of each cell.

Click **Align Text Right** (☰) to align data with the right side of each cell.


Average Temperatures for Indianapolis - Excel
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Format as Table
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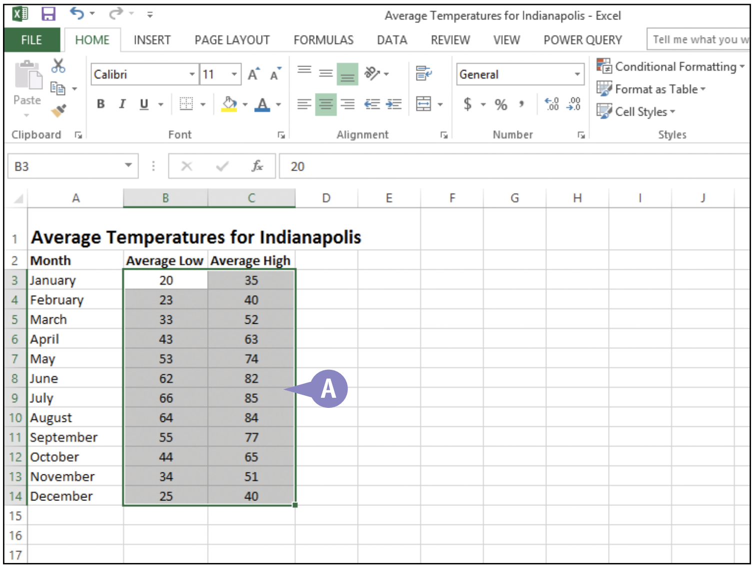
1

	A	B	C
1	**Average Temperatures for Indianapolis**		
2	**Month**	**Average Low**	**Average High**
3	January	20	35
4	February	23	40
5	March	33	52
6	April	43	63
7	May	53	74
8	June	62	82
9	July	66	85
10	August	64	84
11	September	55	77
12	October	44	65
13	November	34	51
14	December	25	40

Excel aligns the data horizontally within each selected cell.

Ⓐ In this example, the data in the cells is centered.


Average Temperatures for Indianapolis - Excel
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Format as Table
Cell Styles
Clipboard
Font
Alignment
Number
Styles
B3
20
A

	A	B	C
1	**Average Temperatures for Indianapolis**		
2	**Month**	**Average Low**	**Average High**
3	January	20	35
4	February	23	40
5	March	33	52
6	April	43	63
7	May	53	74
8	June	62	82
9	July	66	85
10	August	64	84
11	September	55	77
12	October	44	65
13	November	34	51
14	December	25	40

Align Text Vertically

① Select the range you want to format.

② Click the **Home** tab.

③ In the Alignment group, click the vertical alignment option you want to use:

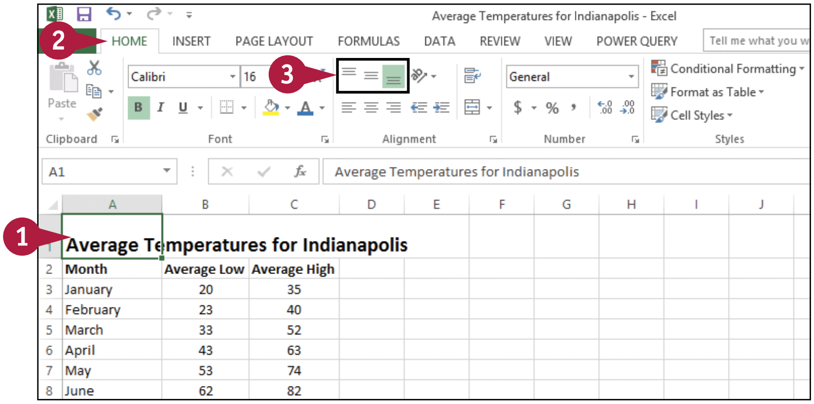
Click **Top Align** (≡) to align data with the top of each cell.

Click **Middle Align** (≡) to align data with the middle of each cell.

Click **Bottom Align** (≡) to align data with the bottom of each cell.

Excel aligns the data vertically within each selected cell.

Ⓑ In this example, the text is aligned with the middle of the cell.


Average Temperatures for Indianapolis - Excel
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Format as Table
Cell Styles
Clipboard
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Alignment
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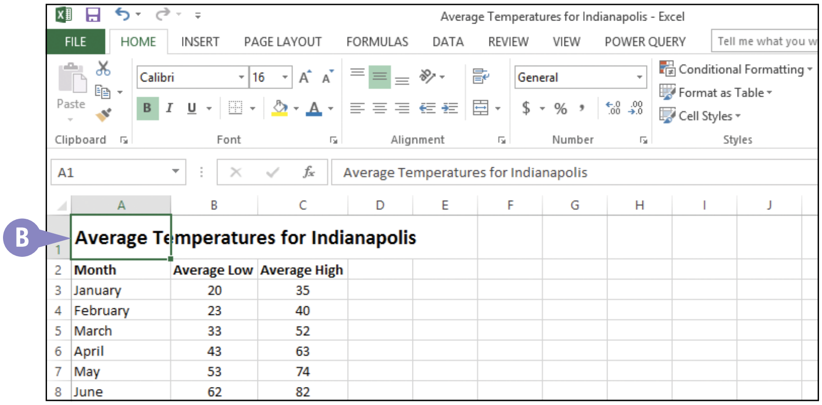
Average Temperatures for Indianapolis

	A	B	C
1	Average Temperatures for Indianapolis		
2	Month	Average Low	Average High
3	January	20	35
4	February	23	40
5	March	33	52
6	April	43	63
7	May	53	74
8	June	62	82


Average Temperatures for Indianapolis - Excel
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Format as Table
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Average Temperatures for Indianapolis

	A	B	C
1	Average Temperatures for Indianapolis		
2	Month	Average Low	Average High
3	January	20	35
4	February	23	40
5	March	33	52
6	April	43	63
7	May	53	74
8	June	62	82

TIPS

How do I format text so that it aligns with both the left and right sides of the cell?

This is called *justified* text, and it is useful if you have a lot of text in one or more cells. Select the range, click the **Home** tab, and then click the dialog box launcher (↘) in the Alignment group. The Format Cells dialog box appears with the Alignment tab displayed. In the **Horizontal** list, click ▼ and then click **Justify**. Click **OK** to justify the cells.

How do I indent cell text?

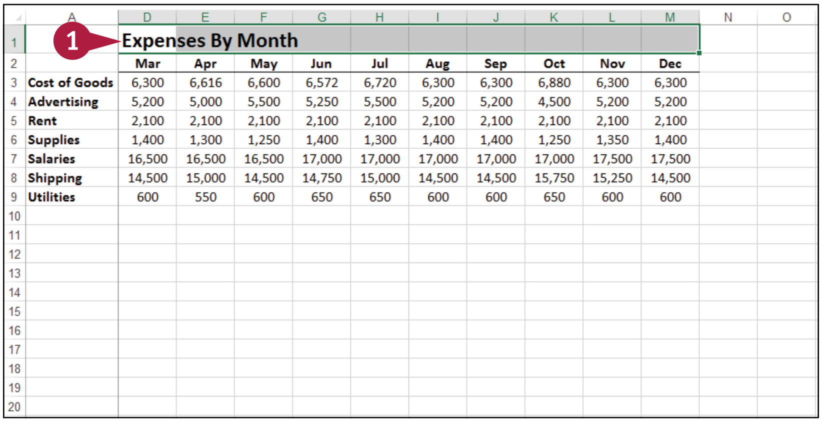
Select the range you want to indent, click the **Home** tab, and then click the Alignment group's dialog box launcher (↘). In the Alignment tab, click the **Horizontal** list ▼ and then click **Left (Indent)**. Use the **Indent** text box to type the indent, in characters, and then click **OK**. You can also click the **Increase Indent** (→≡) or **Decrease Indent** (←≡) button in the Home tab's Alignment group.

Center Text Across Multiple Columns

You can make a worksheet more visually appealing and easier to read by centering text across multiple columns. This feature is most useful when you have text in a cell that you use as a label or title for a range. Centering the text across the range makes it easier to see that the label or title applies to the entire range.

Center Text Across Multiple Columns

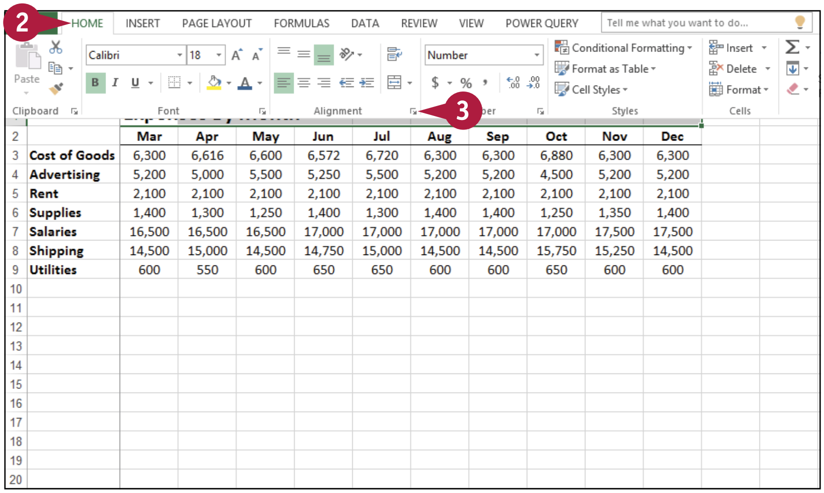
1. Select a range that consists of the text you want to work with and the cells across which you want to center the text.



	A	D	E	F	G	H	I	J	K	L	M	N	O
1		Expenses By Month											
2		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
3	Cost of Goods	6,300	6,616	6,600	6,572	6,720	6,300	6,300	6,880	6,300	6,300		
4	Advertising	5,200	5,000	5,500	5,250	5,500	5,200	5,200	4,500	5,200	5,200		
5	Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100		
6	Supplies	1,400	1,300	1,250	1,400	1,300	1,400	1,400	1,250	1,350	1,400		
7	Salaries	16,500	16,500	16,500	17,000	17,000	17,000	17,000	17,000	17,500	17,500		
8	Shipping	14,500	15,000	14,500	14,750	15,000	14,500	14,500	15,750	15,250	14,500		
9	Utilities	600	550	600	650	650	600	600	650	600	600		

2. Click the **Home** tab.

3. In the **Alignment** group, click the dialog box launcher (⧉).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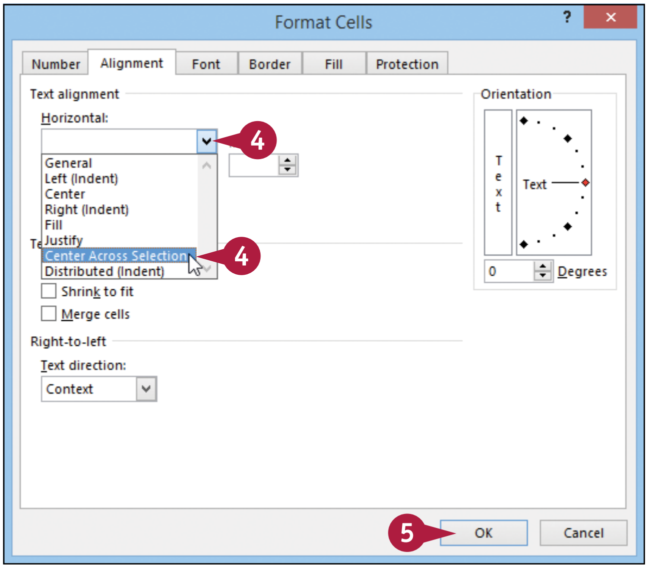
Cells

	A	D	E	F	G	H	I	J	K	L	M
2		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
3	Cost of Goods	6,300	6,616	6,600	6,572	6,720	6,300	6,300	6,880	6,300	6,300
4	Advertising	5,200	5,000	5,500	5,250	5,500	5,200	5,200	4,500	5,200	5,200
5	Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
6	Supplies	1,400	1,300	1,250	1,400	1,300	1,400	1,400	1,250	1,350	1,400
7	Salaries	16,500	16,500	16,500	17,000	17,000	17,000	17,000	17,000	17,500	17,500
8	Shipping	14,500	15,000	14,500	14,750	15,000	14,500	14,500	15,750	15,250	14,500
9	Utilities	600	550	600	650	650	600	600	650	600	600

Excel opens the Format Cells dialog box with the Alignment tab displayed.

4. Click the **Horizontal** ▼ and then click **Center Across Selection**.
5. Click **OK**.


Format Cells
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Font
Border
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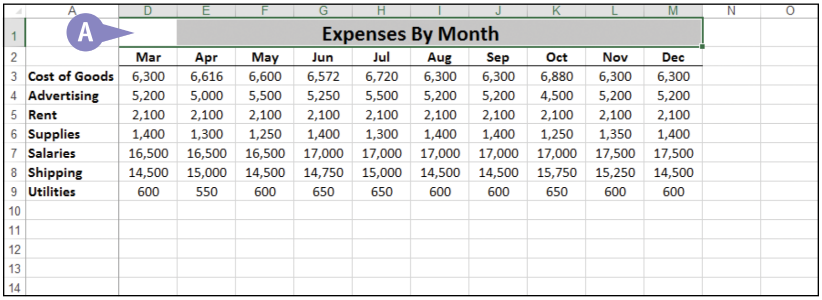
Protection
Text alignment
Horizontal:
4
General
Left (Indent)
Center
Right (Indent)
Fill
Justify
Center Across Selection
Distributed (Indent)
4
Shrink to fit
Merge cells
Right-to-left
Text direction:
Context
Orientation
Text
Text
0
Degrees
5
OK
Cancel

A Excel centers the text across the selected cells.



Expenses By Month

	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cost of Goods	6,300	6,616	6,600	6,572	6,720	6,300	6,300	6,880	6,300	6,300
Advertising	5,200	5,000	5,500	5,250	5,500	5,200	5,200	4,500	5,200	5,200
Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Supplies	1,400	1,300	1,250	1,400	1,300	1,400	1,400	1,250	1,350	1,400
Salaries	16,500	16,500	16,500	17,000	17,000	17,000	17,000	17,000	17,500	17,500
Shipping	14,500	15,000	14,500	14,750	15,000	14,500	14,500	15,750	15,250	14,500
Utilities	600	550	600	650	650	600	600	650	600	600

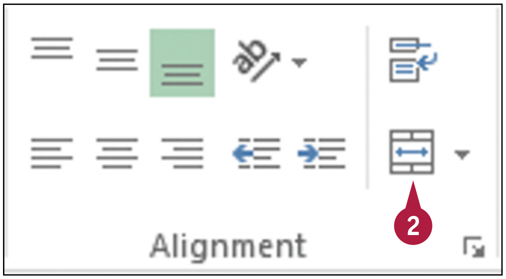
TIP

Is there an easier way to center text across multiple columns?

Yes, although this technique also merges the selected cells into a single cell. (See Chapter 1 to learn more about merging cells.) Follow these steps:

1. Repeat steps 1 and 2.
2. In the Alignment group, click the **Merge & Center** button (⊟).

Excel merges the selected cells into a single cell and centers the text within that cell.


2
Alignment

Rotate Text Within a Cell

You can add visual interest to your text by slanting the text upward or downward in the cell. You can also use this technique to make a long column heading take up less horizontal space on the worksheet.

You can choose a predefined rotation, or you can make cell text angle upward or downward by specifying the degrees of rotation.

Rotate Text Within a Cell

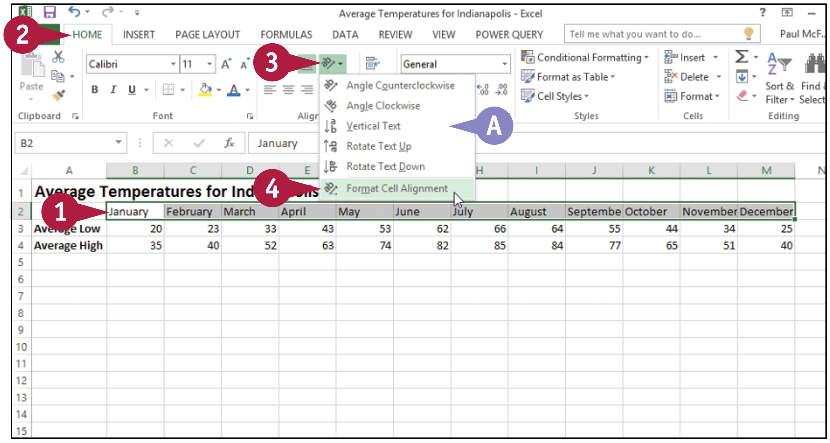
① Select the range containing the text you want to angle.

② Click the **Home** tab.

③ Click **Orientation** (⟋).

Ⓐ If you want to use a predefined orientation, click one of the menu items and skip the rest of the steps.

④ Click **Format Cell Alignment**.


Average Temperatures for Indianapolis - Excel
HOME
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POWER QUERY
Tell me what you want to do...
Paul McF...
Calibri
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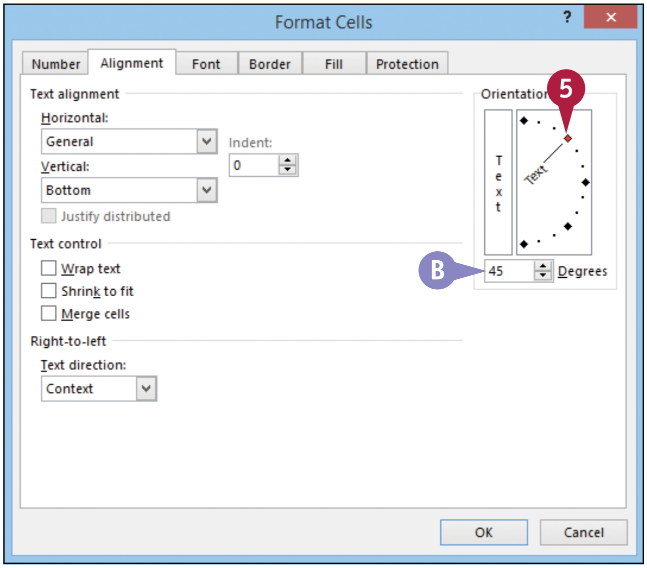
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Paste
Clipboard
Font
Alignment
Styles
Cells
Editing
Angle Counterclockwise
Angle Clockwise
Vertical Text
Rotate Text Up
Rotate Text Down
Format Cell Alignment
B2
January
1
2
3
4
A

	January	February	March	April	May	June	July	August	Septembe	October	November	December
Average Low	20	23	33	43	53	62	66	64	55	44	34	25
Average High	35	40	52	63	74	82	85	84	77	65	51	40

The Format Cells dialog box appears with the Alignment tab displayed.

⑤ Click an orientation marker.

Ⓑ You can also use the Degrees spin box to type or click a degree of rotation (see the tip).


Format Cells
Number
Alignment
Font
Border
Fill
Protection
Text alignment
Text control
Right-to-left
Orientation
Text
Text
5
B
OK
Cancel

Horizontal: General

Indent: 0

Vertical: Bottom

☐ Justify distributed

☐ Wrap text

☐ Shrink to fit

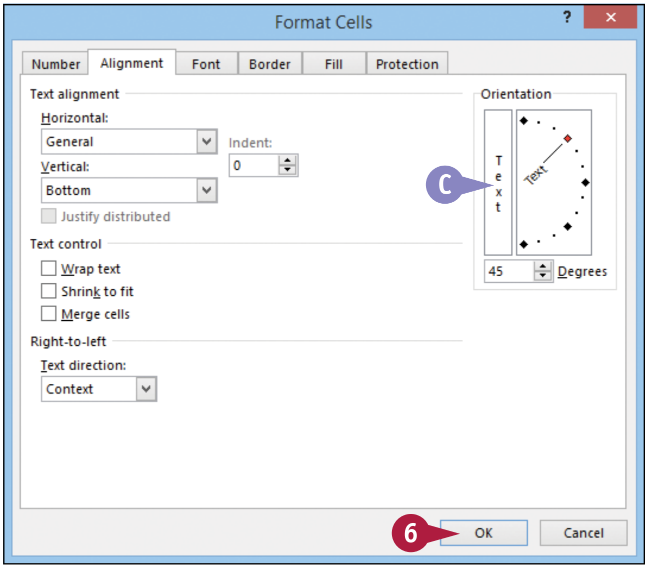
☐ Merge cells

Text direction: Context

45 Degrees

- **C** You can click the vertical text area to display your text vertically instead of horizontally in the cell.

6 Click **OK**.



Horizontal: General

Indent: 0

Vertical: Bottom

☐ Justify distributed

Text control

☐ Wrap text

☐ Shrink to fit

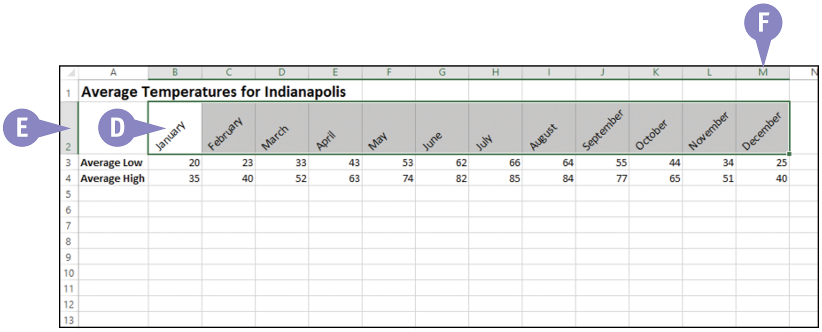
☐ Merge cells

Right-to-left

Text direction: Context

45 Degrees

- **D** Excel rotates the cell text.
- **E** The row height automatically increases to contain the slanted text.
- **F** You can reduce the column width to free up space and make your cells more presentable.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Average Temperatures for Indianapolis													
2		January	February	March	April	May	June	July	August	September	October	November	December	
3	Average Low	20	23	33	43	53	62	66	64	55	44	34	25	
4	Average High	35	40	52	63	74	82	85	84	77	65	51	40	
5														
6														
7														
8														
9														
10														
11														
12														
13														

TIP

How does the Degrees spin box work?

If you use the Degrees spin box to set the text orientation, you can set the orientation to a positive number, such as 25, and Excel angles the text in an upward (counterclockwise) direction. If you set the text orientation to a negative number, such as −40, Excel angles the text in a downward (clockwise) direction.

You can specify values in the range from 90 degrees (which is the same as clicking the Rotate Text Up command in the Orientation menu) to −90 degrees (which is the same as clicking the Rotate Text Down command).

Add a Background Color to a Range

You can make a range stand out from the rest of the worksheet by applying a background color to the range. Note, however, that if you want to apply a background color to a range based on the values in that range — for example, red for negative values and green for positive — it is easier to apply a conditional format, as described in the "Apply a Conditional Format to a Range" section, later in this chapter.

You can change the background color by applying a color from the workbook's theme, from the Excel palette of standard colors, or from a custom color that you create.

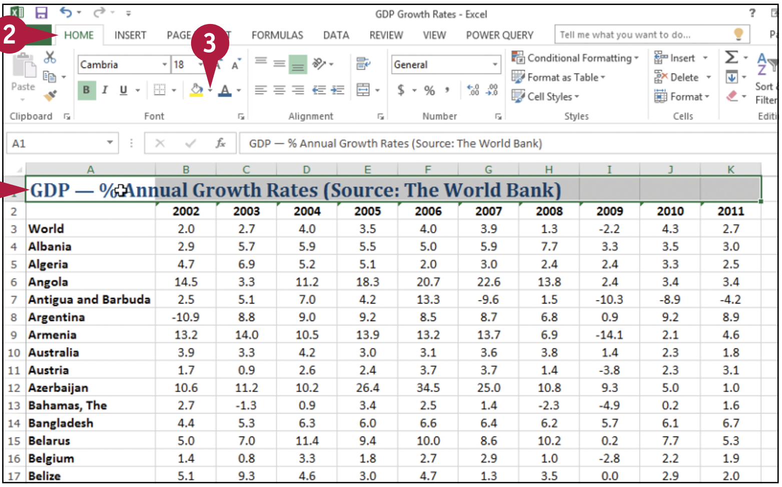
Add a Background Color to a Range

Select a Theme or Standard Color

① Select the range you want to format.

② Click the **Home** tab.

③ Click ▾ in the **Fill Color** list (🖌).



GDP Growth Rates - Excel
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paste
Clipboard
Cambria
18
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Sort & Filter
Editing
1
2
3

A1: GDP — % Annual Growth Rates (Source: The World Bank)

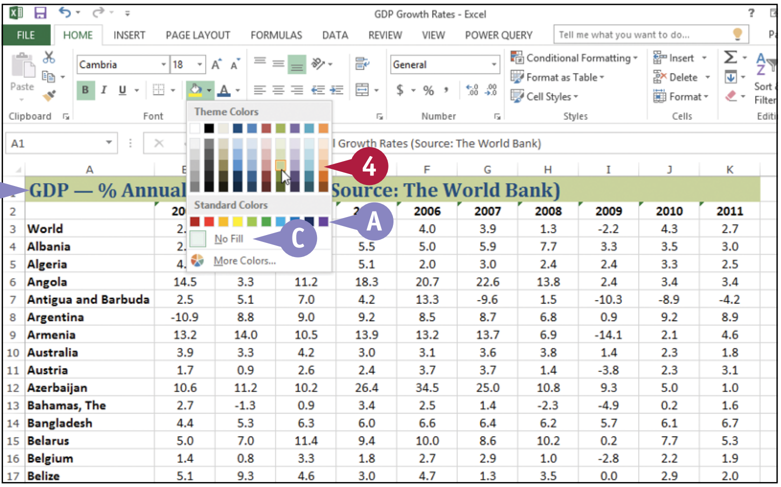
	A	B	C	D	E	F	G	H	I	J	K
1	GDP — % Annual Growth Rates (Source: The World Bank)										
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0

④ Click a theme color.

Ⓐ Alternatively, click one of the standard Excel colors.

Ⓑ Excel applies the color to the selected range.

Ⓒ To remove the background color from the range, click **No Fill**.

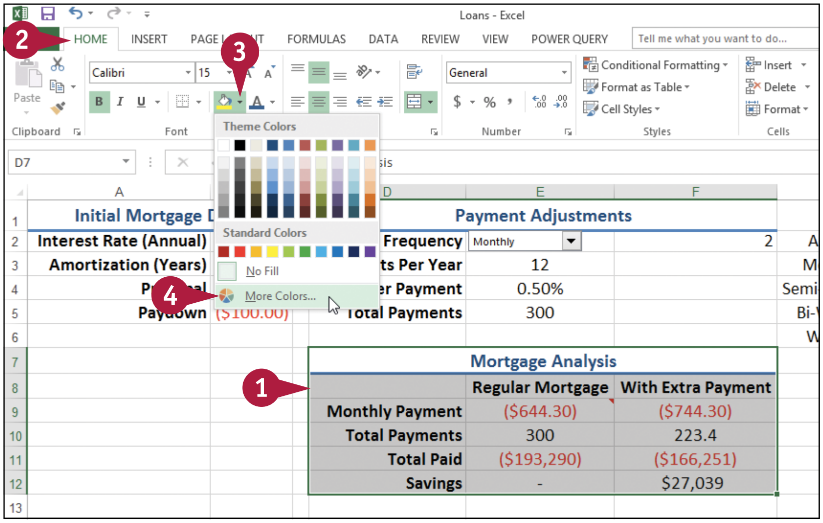


GDP Growth Rates - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paste
Clipboard
Cambria
18
Font
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Sort & Filter
Editing
Theme Colors
Standard Colors
No Fill
More Colors...
4
A
B
C

A1: …l Growth Rates (Source: The World Bank)

	A	B	C	D	E	F	G	H	I	J	K
1	GDP — % Annual … Source: The World Bank)										
2		20			2	2006	2007	2008	2009	2010	2011
3	World	2.				4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.			5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.			5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0

Select a Custom Color


Loans - Excel
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paste
Clipboard
Calibri
15
Font
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Theme Colors
Standard Colors
No Fill
More Colors...
D7
1
2
3
4

	Mortgage Analysis	
	Regular Mortgage	With Extra Payment
Monthly Payment	($644.30)	($744.30)
Total Payments	300	223.4
Total Paid	($193,290)	($166,251)
Savings	-	$27,039

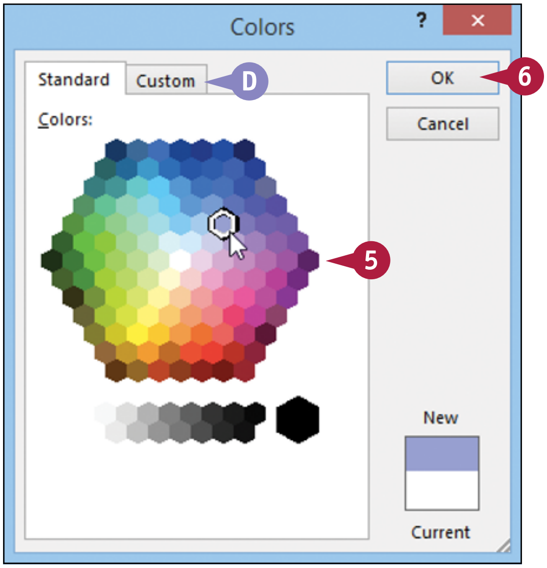
① Select the range you want to format.

② Click the **Home** tab.

③ Click ▼ in the **Fill Color** list ().

④ Click **More Colors.**

The Colors dialog box appears.


Colors
?
×
Standard
Custom
D
OK
Cancel
Colors:
New
Current
5
6

⑤ Click the color you want to use.

Ⓓ You can also click the **Custom** tab and then either click the color you want or enter the values for the Red, Green, and Blue components of the color.

⑥ Click **OK.**

Excel applies the color to the selected range.

TIPS

Are there any pitfalls to watch out for when I apply background colors?

Yes. The biggest pitfall is applying a background color that clashes with the range text. For example, the default text color is black, so if you apply any dark background color, the text will be very difficult to read. Always use either a light background color with dark-colored text, or a dark background color with light-colored text.

Can I apply a background that fades from one color to another?

Yes. This is called a *gradient* effect. Select the range, click the **Home** tab, and then click the Font group's dialog box launcher (↘). Click the **Fill** tab and then click **Fill Effects**. In the Fill Effects dialog box, use the **Color 1** ▼ and the **Color 2** ▼ to choose your colors. Click an option in the **Shading styles** section (○ changes to ●), and then click **OK**.

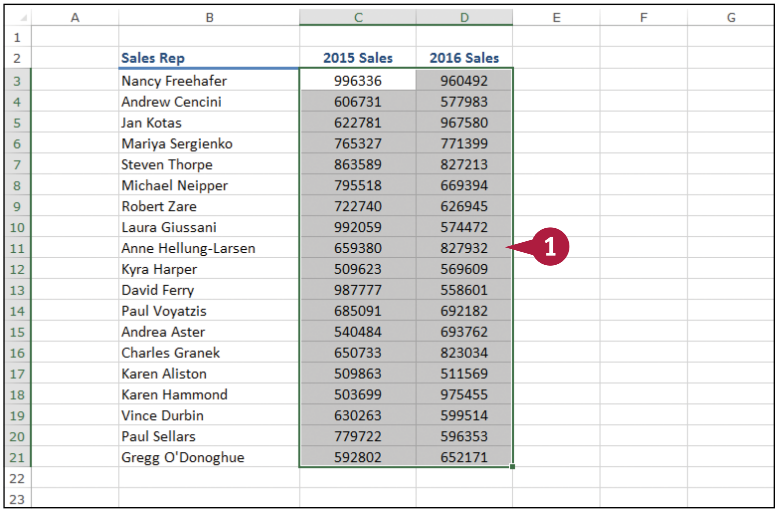
Apply a Number Format

You can make your worksheet easier to read by applying a number format to your data. For example, if your worksheet includes monetary data, you can apply the Currency format to display each value with a dollar sign and two decimal places.

Excel offers ten number formats, most of which apply to numeric data. However, you can also apply the Date format to date data, the Time format to time data, and the Text format to text data.

Apply a Number Format

① Select the range you want to format.

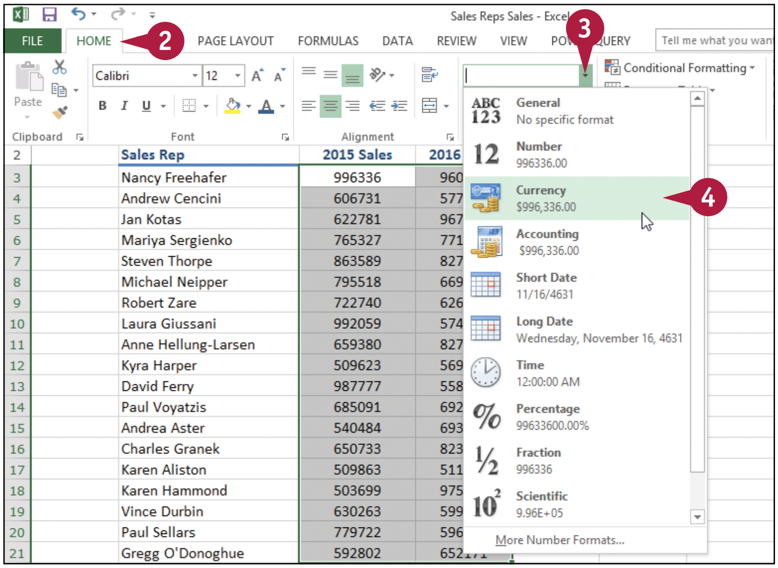


Row	Sales Rep	2015 Sales	2016 Sales
2	Sales Rep	2015 Sales	2016 Sales
3	Nancy Freehafer	996336	960492
4	Andrew Cencini	606731	577983
5	Jan Kotas	622781	967580
6	Mariya Sergienko	765327	771399
7	Steven Thorpe	863589	827213
8	Michael Neipper	795518	669394
9	Robert Zare	722740	626945
10	Laura Giussani	992059	574472
11	Anne Hellung-Larsen	659380	827932
12	Kyra Harper	509623	569609
13	David Ferry	987777	558601
14	Paul Voyatzis	685091	692182
15	Andrea Aster	540484	693762
16	Charles Granek	650733	823034
17	Karen Aliston	509863	511569
18	Karen Hammond	503699	975455
19	Vince Durbin	630263	599514
20	Paul Sellars	779722	596353
21	Gregg O'Donoghue	592802	652171
22			
23			

② Click the **Home** tab.

③ Click the **Number Format** ▼.

④ Click the number format you want to use.



Row	Sales Rep	2015 Sales	2016
2	Sales Rep	2015 Sales	2016
3	Nancy Freehafer	996336	960
4	Andrew Cencini	606731	577
5	Jan Kotas	622781	967
6	Mariya Sergienko	765327	771
7	Steven Thorpe	863589	827
8	Michael Neipper	795518	669
9	Robert Zare	722740	626
10	Laura Giussani	992059	574
11	Anne Hellung-Larsen	659380	827
12	Kyra Harper	509623	569
13	David Ferry	987777	558
14	Paul Voyatzis	685091	692
15	Andrea Aster	540484	693
16	Charles Granek	650733	823
17	Karen Aliston	509863	511
18	Karen Hammond	503699	975
19	Vince Durbin	630263	599
20	Paul Sellars	779722	596
21	Gregg O'Donoghue	592802	652

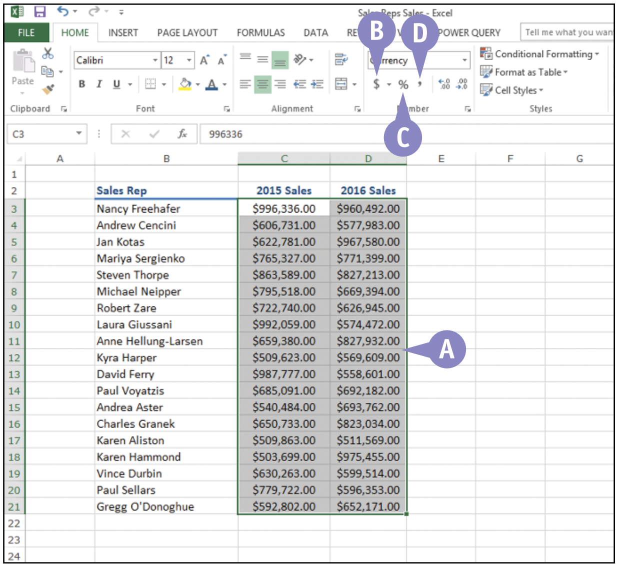
Format	Sample
General	No specific format
Number	996336.00
Currency	$996,336.00
Accounting	$996,336.00
Short Date	11/16/4631
Long Date	Wednesday, November 16, 4631
Time	12:00:00 AM
Percentage	99633600.00%
Fraction	996336
Scientific	9.96E+05

A Excel applies the number format to the selected range.

B For monetary values, you can also click **Accounting Number Format** ($).

C For percentages, you can also click **Percent Style** (%).

D For large numbers, you can also click **Comma Style** (,).


Sales Reps Sales - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
POWER QUERY
Tell me what you want
Paste
Calibri
12
Clipboard
Font
Alignment
Currency
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
C3
A
B
C
D

996336

	A	B	C	D
1				
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freehafer	$996,336.00	$960,492.00
4		Andrew Cencini	$606,731.00	$577,983.00
5		Jan Kotas	$622,781.00	$967,580.00
6		Mariya Sergienko	$765,327.00	$771,399.00
7		Steven Thorpe	$863,589.00	$827,213.00
8		Michael Neipper	$795,518.00	$669,394.00
9		Robert Zare	$722,740.00	$626,945.00
10		Laura Giussani	$992,059.00	$574,472.00
11		Anne Hellung-Larsen	$659,380.00	$827,932.00
12		Kyra Harper	$509,623.00	$569,609.00
13		David Ferry	$987,777.00	$558,601.00
14		Paul Voyatzis	$685,091.00	$692,182.00
15		Andrea Aster	$540,484.00	$693,762.00
16		Charles Granek	$650,733.00	$823,034.00
17		Karen Aliston	$509,863.00	$511,569.00
18		Karen Hammond	$503,699.00	$975,455.00
19		Vince Durbin	$630,263.00	$599,514.00
20		Paul Sellars	$779,722.00	$596,353.00
21		Gregg O'Donoghue	$592,802.00	$652,171.00
22				
23				
24				

TIP

Is there a way to get more control over the number formats?

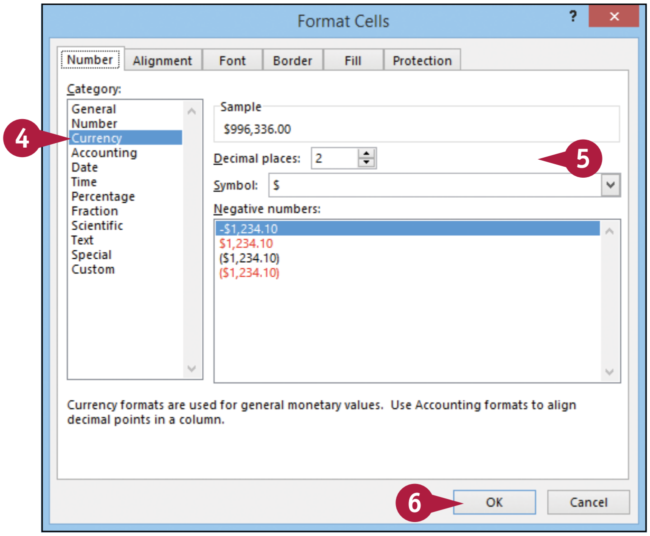
Yes. You can use the Format Cells dialog box to control properties such as the display of negative numbers, the currency symbol used, and how dates and times appear. Follow these steps:

1. Select the range you want to format.
2. Click the **Home** tab.
3. Click the **Number** group's dialog box launcher (⧉).

   The Format Cells dialog box appears with the Number tab displayed.
4. In the **Category** list, click the type of number format you want to apply.
5. Use the controls that Excel displays to customize the number format.

   The controls you see vary, depending on the number format you chose in step 4.
6. Click **OK**.

   Excel applies the number format.


Format Cells
?
×
Number
Alignment
Font
Border
Fill
Protection
4
5
6
OK
Cancel

Category:
General
Number
Currency
Accounting
Date
Time
Percentage
Fraction
Scientific
Text
Special
Custom

Sample: $996,336.00

Decimal places: 2

Symbol: $

Negative numbers:
-$1,234.10
$1,234.10
($1,234.10)
($1,234.10)

Currency formats are used for general monetary values. Use Accounting formats to align decimal points in a column.

Change the Number of Decimal Places Displayed

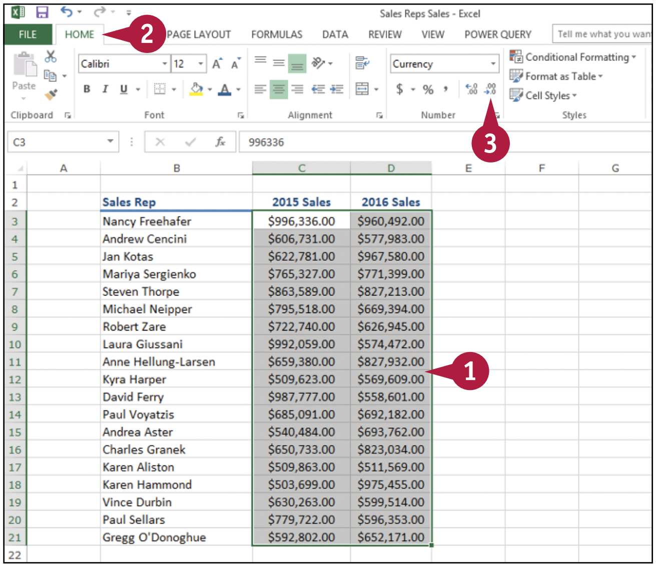
You can make your numeric values easier to read and interpret by adjusting the number of decimal places that Excel displays. For example, you might want to ensure that all dollar-and-cent values show two decimal places, while dollar-only values show no decimal places. Similarly, you can adjust the display of percentage values to suit your audience by showing more decimals (greater accuracy but more difficult to read) or fewer decimals (less accuracy but easier to read).

You can either decrease or increase the number of decimal places that Excel displays.

Change the Number of Decimal Places Displayed

Decrease the Number of Decimal Places

1. Select the range you want to format.
2. Click the **Home** tab.
3. Click the **Decrease Decimal** button (.00→.0).

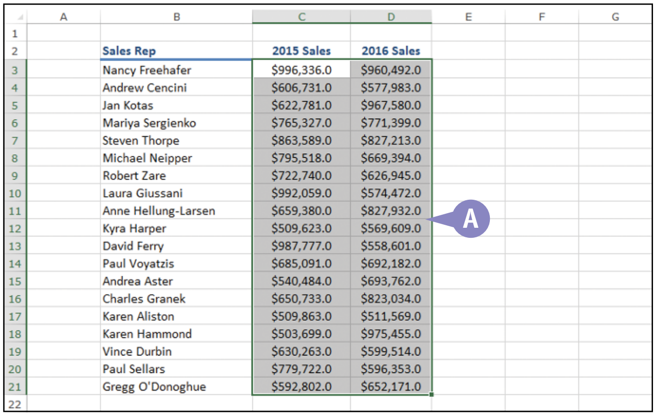


C3 | 996336

Sales Rep	2015 Sales	2016 Sales
Nancy Freehafer	$996,336.00	$960,492.00
Andrew Cencini	$606,731.00	$577,983.00
Jan Kotas	$622,781.00	$967,580.00
Mariya Sergienko	$765,327.00	$771,399.00
Steven Thorpe	$863,589.00	$827,213.00
Michael Neipper	$795,518.00	$669,394.00
Robert Zare	$722,740.00	$626,945.00
Laura Giussani	$992,059.00	$574,472.00
Anne Hellung-Larsen	$659,380.00	$827,932.00
Kyra Harper	$509,623.00	$569,609.00
David Ferry	$987,777.00	$558,601.00
Paul Voyatzis	$685,091.00	$692,182.00
Andrea Aster	$540,484.00	$693,762.00
Charles Granek	$650,733.00	$823,034.00
Karen Aliston	$509,863.00	$511,569.00
Karen Hammond	$503,699.00	$975,455.00
Vince Durbin	$630,263.00	$599,514.00
Paul Sellars	$779,722.00	$596,353.00
Gregg O'Donoghue	$592,802.00	$652,171.00

Ⓐ Excel decreases the number of decimal places by one.

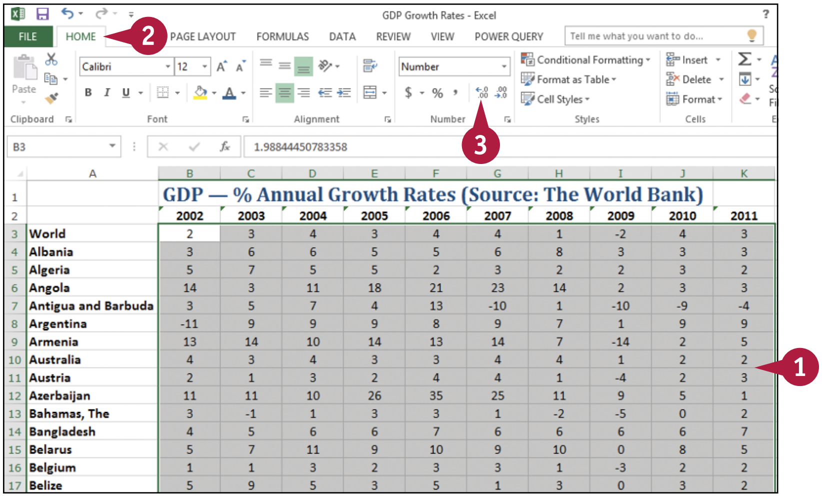
4. Repeat step **3** until you get the number of decimal places you want.



Sales Rep	2015 Sales	2016 Sales
Nancy Freehafer	$996,336.0	$960,492.0
Andrew Cencini	$606,731.0	$577,983.0
Jan Kotas	$622,781.0	$967,580.0
Mariya Sergienko	$765,327.0	$771,399.0
Steven Thorpe	$863,589.0	$827,213.0
Michael Neipper	$795,518.0	$669,394.0
Robert Zare	$722,740.0	$626,945.0
Laura Giussani	$992,059.0	$574,472.0
Anne Hellung-Larsen	$659,380.0	$827,932.0
Kyra Harper	$509,623.0	$569,609.0
David Ferry	$987,777.0	$558,601.0
Paul Voyatzis	$685,091.0	$692,182.0
Andrea Aster	$540,484.0	$693,762.0
Charles Granek	$650,733.0	$823,034.0
Karen Aliston	$509,863.0	$511,569.0
Karen Hammond	$503,699.0	$975,455.0
Vince Durbin	$630,263.0	$599,514.0
Paul Sellars	$779,722.0	$596,353.0
Gregg O'Donoghue	$592,802.0	$652,171.0

Increase the Number of Decimal Places

1. Select the range you want to format.
2. Click the **Home** tab.
3. Click the **Increase Decimal** button (←.0 .00).


GDP Growth Rates - Excel
FILE
HOME
2
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paste
Calibri
12
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
3
1

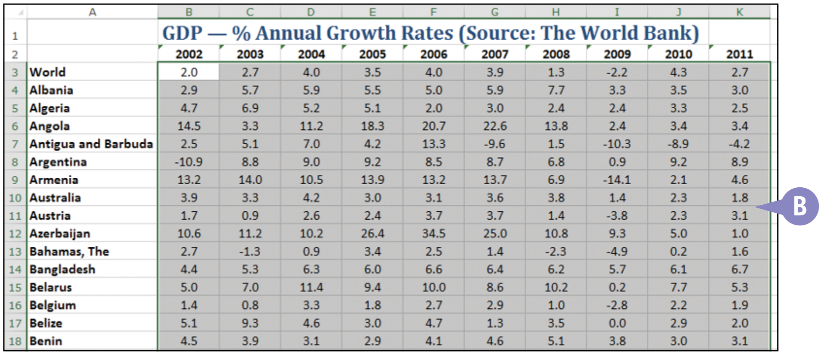
B3 | 1.98844450783358

GDP — % Annual Growth Rates (Source: The World Bank)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	2	3	4	3	4	4	1	-2	4	3
Albania	3	6	6	5	5	6	8	3	3	3
Algeria	5	7	5	5	2	3	2	2	3	2
Angola	14	3	11	18	21	23	14	2	3	3
Antigua and Barbuda	3	5	7	4	13	-10	1	-10	-9	-4
Argentina	-11	9	9	9	8	9	7	1	9	9
Armenia	13	14	10	14	13	14	7	-14	2	5
Australia	4	3	4	3	3	4	4	1	2	2
Austria	2	1	3	2	4	4	1	-4	2	3
Azerbaijan	11	11	10	26	35	25	11	9	5	1
Bahamas, The	3	-1	1	3	3	1	-2	-5	0	2
Bangladesh	4	5	6	6	7	6	6	6	6	7
Belarus	5	7	11	9	10	9	10	0	8	5
Belgium	1	1	3	2	3	3	1	-3	2	2
Belize	5	9	5	3	5	1	3	0	3	2

- **B** Excel increases the number of decimal places by one.

4. Repeat step **3** until you get the number of decimal places you want.



GDP — % Annual Growth Rates (Source: The World Bank)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0
Benin	4.5	3.9	3.1	2.9	4.1	4.6	5.1	3.8	3.0	3.1

TIP

My range currently has values that display different numbers of decimal places. What happens when I change the number of decimal places?

In this situation, Excel uses the value that has the most displayed decimal places as the basis for formatting all the values. For example, if the selected range has values that display no, one, two, or four decimal places, Excel uses the value with four decimals as the basis. If you click **Decrease Decimal**, Excel displays every value with three decimal places; if you click **Increase Decimal**, Excel displays every value with five decimal places.

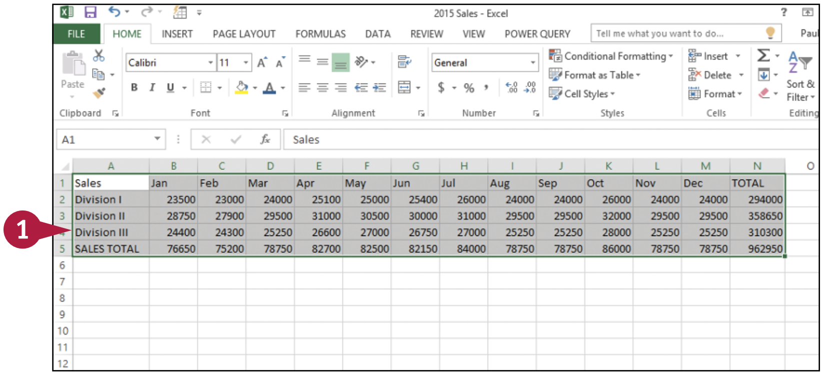
Apply an AutoFormat to a Range

You can save time when formatting your Excel worksheets by using the AutoFormat feature. This feature offers a number of predefined formatting options that you can apply to a range all at once. The formatting options include the number format, font, cell alignment, borders, patterns, row height, and column width.

The AutoFormats are designed for data in a tabular format, particularly where you have headings in the top row and left column, numeric data in the rest of the cells, and a bottom row that shows the totals for each column.

Apply an AutoFormat to a Range

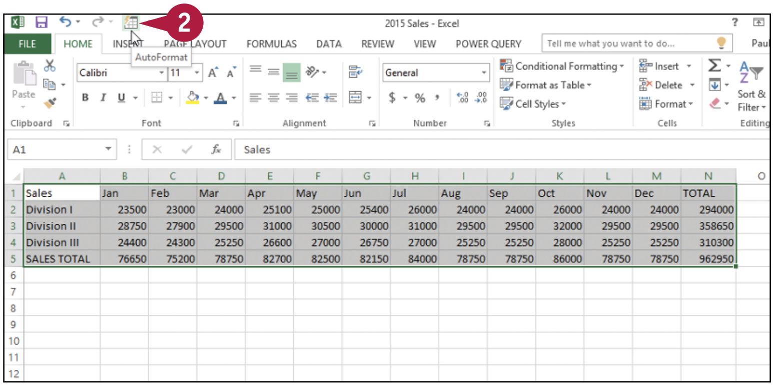
1. Select the range you want to format.


2015 Sales - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
A1
Sales
1

Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Division I	23500	23000	24000	25100	25000	25400	26000	24000	24000	26000	24000	24000	294000
Division II	28750	27900	29500	31000	30500	30000	31000	29500	29500	32000	29500	29500	358650
Division III	24400	24300	25250	26600	27000	26750	27000	25250	25250	28000	25250	25250	310300
SALES TOTAL	76650	75200	78750	82700	82500	82150	84000	78750	78750	86000	78750	78750	962950

2. Click **AutoFormat** (▦).

Note: See the second tip to learn how to add a button to the Quick Access Toolbar. In this case, you must add the AutoFormat button.

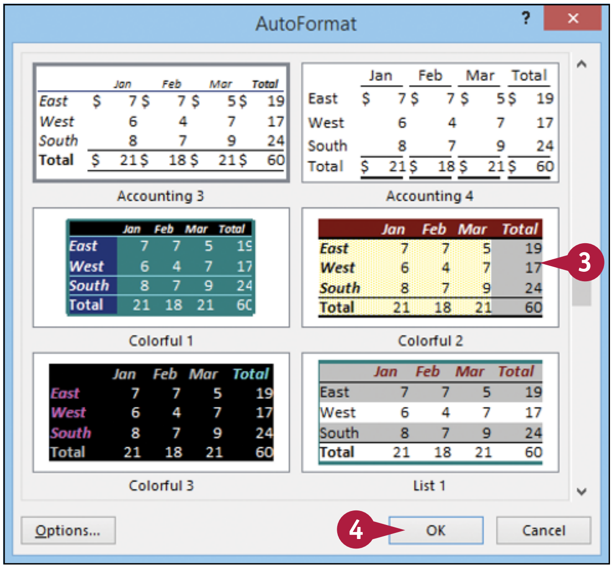

2015 Sales - Excel
2
AutoFormat
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
A1
Sales

Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Division I	23500	23000	24000	25100	25000	25400	26000	24000	24000	26000	24000	24000	294000
Division II	28750	27900	29500	31000	30500	30000	31000	29500	29500	32000	29500	29500	358650
Division III	24400	24300	25250	26600	27000	26750	27000	25250	25250	28000	25250	25250	310300
SALES TOTAL	76650	75200	78750	82700	82500	82150	84000	78750	78750	86000	78750	78750	962950

The AutoFormat dialog box appears.

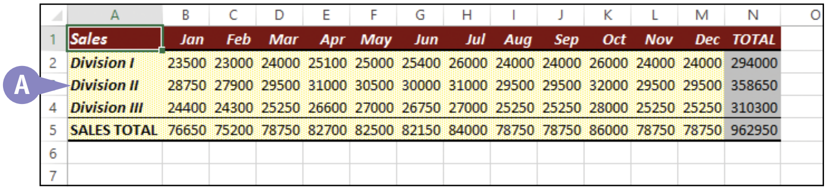
3 Click the AutoFormat you want to use.

4 Click **OK**.



A Excel applies the AutoFormat to the selected range.

Note: If you do not like or no longer need the AutoFormat you applied to the cells, you can revert them to a plain, unformatted state. Select the range and then click ▦ to display the AutoFormat dialog box. At the bottom of the format list, click **None**, and then click **OK**. Excel removes the AutoFormat from the selected range.



Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Division I	23500	23000	24000	25100	25000	25400	26000	24000	24000	26000	24000	24000	294000
Division II	28750	27900	29500	31000	30500	30000	31000	29500	29500	32000	29500	29500	358650
Division III	24400	24300	25250	26600	27000	26750	27000	25250	25250	28000	25250	25250	310300
SALES TOTAL	76650	75200	78750	82700	82500	82150	84000	78750	78750	86000	78750	78750	962950

TIPS

Is there a way to apply an AutoFormat without using some of its formatting?

Yes. Follow steps 1 to 3 to choose the AutoFormat you want to apply. Click **Options** to expand the dialog box and display the Formats to apply group. Deselect the option for each format you do not want to apply (☑ changes to ☐), and then click **OK**.

How do I add a button to the Quick Access Toolbar?

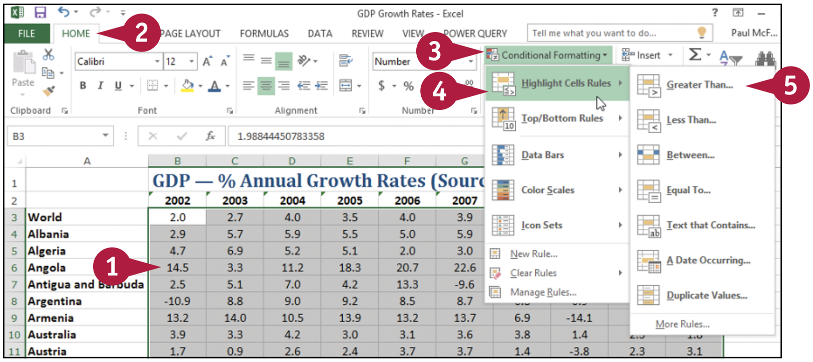
Click the **Customize Quick Access Toolbar** button (▾). If you see the command you want, click it; otherwise, click **More Commands**. Click the **Choose commands from** ▾, click the category you want to use, click the command you want to add, click **Add**, and then click **OK**.

Apply a Conditional Format to a Range

You can make a worksheet easier to analyze by applying a conditional format to a range. A *conditional format* is formatting that Excel applies only to cells that meet the condition you specify. For example, you can tell Excel to apply the formatting only if a cell's value is greater than some specified amount.

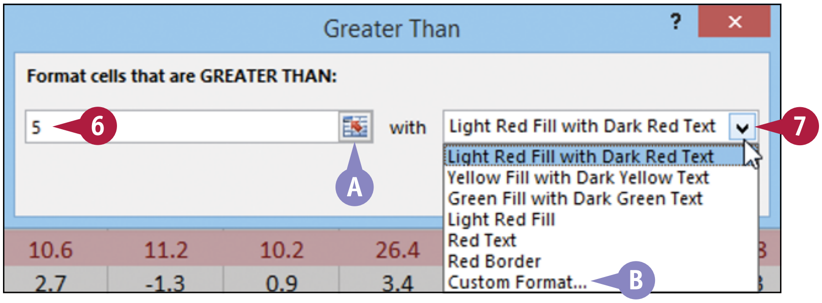
When you set up your conditional format, you can specify the font, border, and background pattern, which helps to ensure that the cells that meet your criteria stand out from the other cells in the range.

Apply a Conditional Format to a Range


GDP Growth Rates - Excel
FILE
HOME
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Conditional Formatting
Insert
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
Greater Than...
Less Than...
Between...
Equal To...
Text that Contains...
A Date Occurring...
Duplicate Values...
More Rules...
GDP — % Annual Growth Rates (Sourc
World
Albania
Algeria
Angola
Antigua and Barbuda
Argentina
Armenia
Australia
Austria
1
2
3
4
5

1. Select the range you want to work with.
2. Click the **Home** tab.
3. Click **Conditional Formatting**.
4. Click **Highlight Cells Rules**.
5. Click the operator you want to use for your condition.

An operator dialog box appears, such as the Greater Than dialog box shown here.


Greater Than
Format cells that are GREATER THAN:
5
with
Light Red Fill with Dark Red Text
Light Red Fill with Dark Red Text
Yellow Fill with Dark Yellow Text
Green Fill with Dark Green Text
Light Red Fill
Red Text
Red Border
Custom Format...
6
7
A
B

6. Type the value you want to use for your condition.

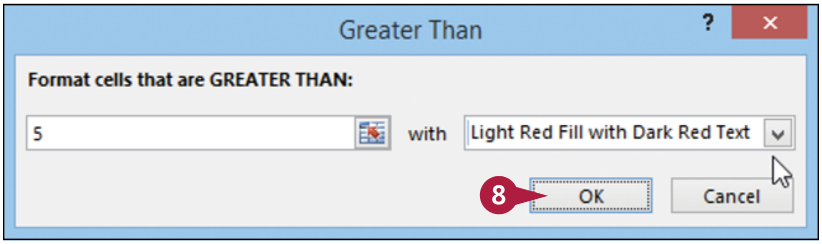
A You can also click the **Collapse Dialog** button (▦) and then click a worksheet cell.

Depending on the operator, you may need to specify two values.

7. Click the **with** ▾ and then click the formatting you want to use.

B To create your own format, click **Custom Format**.

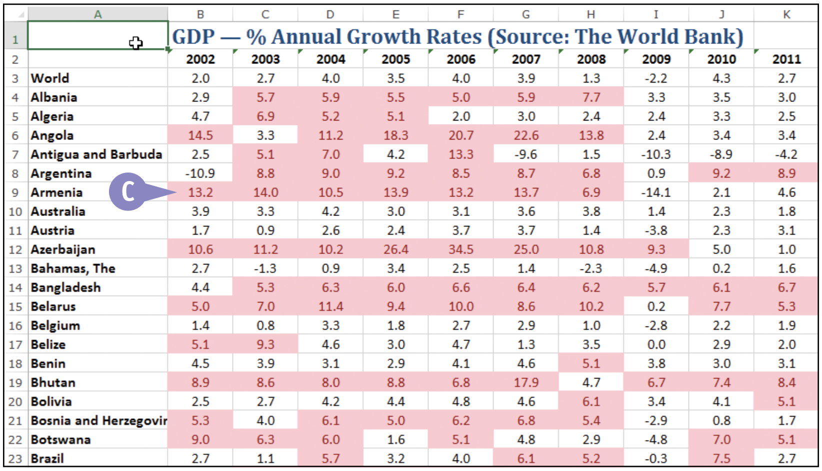
8 Click **OK**.



Format cells that are GREATER THAN:

5 with Light Red Fill with Dark Red Text

C Excel applies the formatting to cells that meet your condition.



	A	B	C	D	E	F	G	H	I	J	K
1		GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0
18	Benin	4.5	3.9	3.1	2.9	4.1	4.6	5.1	3.8	3.0	3.1
19	Bhutan	8.9	8.6	8.0	8.8	6.8	17.9	4.7	6.7	7.4	8.4
20	Bolivia	2.5	2.7	4.2	4.4	4.8	4.6	6.1	3.4	4.1	5.1
21	Bosnia and Herzegovir	5.3	4.0	6.1	5.0	6.2	6.8	5.4	-2.9	0.8	1.7
22	Botswana	9.0	6.3	6.0	1.6	5.1	4.8	2.9	-4.8	7.0	5.1
23	Brazil	2.7	1.1	5.7	3.2	4.0	6.1	5.2	-0.3	7.5	2.7

TIPS

Can I set up more than one condition for a single range?

Yes. Excel enables you to specify multiple conditional formats. For example, you could set up one condition for cells that are greater than some value, and a separate condition for cells that are less than some other value. You can apply unique formats to each condition. Follow steps 1 to 8 to configure the new condition.

How do I remove a conditional format from a range?

If you no longer require a conditional format, you can delete it. Follow steps 1 to 3 to select the range and display the Conditional Formatting menu, and then click **Manage Rules**. Excel displays the Conditional Formatting Rules Manager dialog box. Click the **Show formatting rules for** ▼ and then click **This Worksheet**. Click the conditional format you want to remove and then click **Delete Rule**. Click **OK** to return to the worksheet.

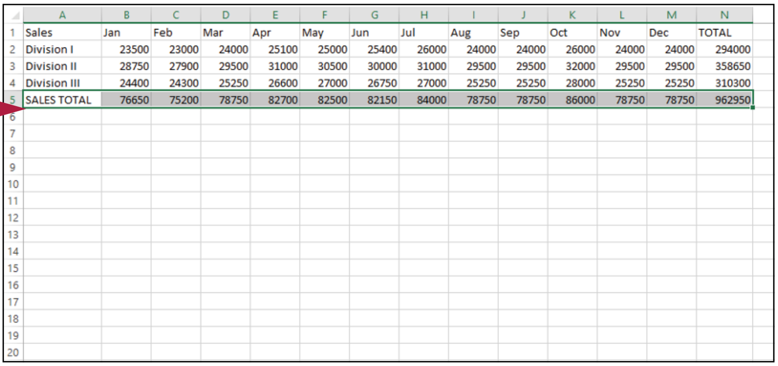
Apply a Style to a Range

You can reduce the time it takes to format your worksheets by applying the predefined Excel styles to your ranges. Excel comes with more than 20 predefined styles for different worksheet elements such as headings, numbers, calculations, and special range types such as explanatory text, worksheet notes, and warnings. Excel also offers two dozen styles associated with the current document theme.

Each style includes the number format, cell alignment, font typeface and size, border, and fill color.

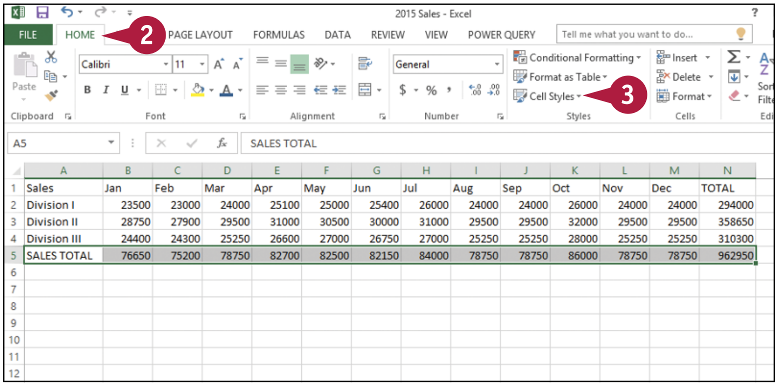
Apply a Style to a Range

1. Select the range you want to format.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2	Division I	23500	23000	24000	25100	25000	25400	26000	24000	24000	26000	24000	24000	294000
3	Division II	28750	27900	29500	31000	30500	30000	31000	29500	29500	32000	29500	29500	358650
4	Division III	24400	24300	25250	26600	27000	26750	27000	25250	25250	28000	25250	25250	310300
5	SALES TOTAL	76650	75200	78750	82700	82500	82150	84000	78750	78750	86000	78750	78750	962950

2. Click the **Home** tab.
3. Click **Cell Styles**.


2015 Sales - Excel
FILE
HOME
2
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Tell me what you want to do...
Paste
Calibri
11
General
Conditional Formatting
Format as Table
Cell Styles
3
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells

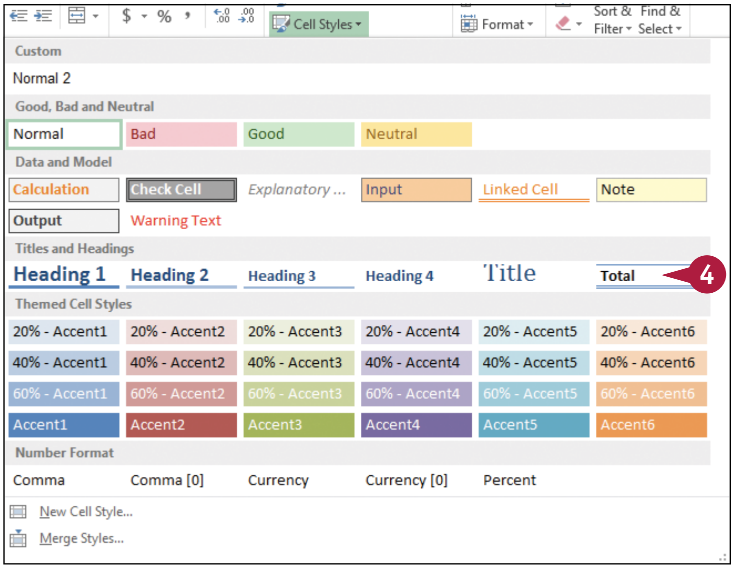
A5 | SALES TOTAL

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2	Division I	23500	23000	24000	25100	25000	25400	26000	24000	24000	26000	24000	24000	294000
3	Division II	28750	27900	29500	31000	30500	30000	31000	29500	29500	32000	29500	29500	358650
4	Division III	24400	24300	25250	26600	27000	26750	27000	25250	25250	28000	25250	25250	310300
5	SALES TOTAL	76650	75200	78750	82700	82500	82150	84000	78750	78750	86000	78750	78750	962950

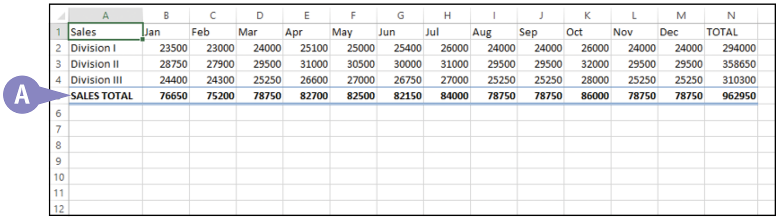
Excel displays the Cell Styles gallery.

4 Click the style you want to apply.

Note: If the style is not exactly the way you want, you can right-click the style, click **Modify**, and then click **Format** to customize the style.


Cell Styles
Format
Sort & Filter
Find & Select
Custom
Normal 2
Good, Bad and Neutral
Normal
Bad
Good
Neutral
Data and Model
Calculation
Check Cell
Explanatory ...
Input
Linked Cell
Note
Output
Warning Text
Titles and Headings
Heading 1
Heading 2
Heading 3
Heading 4
Title
Total
4
Themed Cell Styles
20% - Accent1
20% - Accent2
20% - Accent3
20% - Accent4
20% - Accent5
20% - Accent6
40% - Accent1
40% - Accent2
40% - Accent3
40% - Accent4
40% - Accent5
40% - Accent6
60% - Accent1
60% - Accent2
60% - Accent3
60% - Accent4
60% - Accent5
60% - Accent6
Accent1
Accent2
Accent3
Accent4
Accent5
Accent6
Number Format
Comma
Comma [0]
Currency
Currency [0]
Percent
New Cell Style...
Merge Styles...

A Excel applies the style to the range.



Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Division I	23500	23000	24000	25100	25000	25400	26000	24000	24000	26000	24000	24000	294000
Division II	28750	27900	29500	31000	30500	30000	31000	29500	29500	32000	29500	29500	358650
Division III	24400	24300	25250	26600	27000	26750	27000	25250	25250	28000	25250	25250	310300
SALES TOTAL	**76650**	**75200**	**78750**	**82700**	**82500**	**82150**	**84000**	**78750**	**78750**	**86000**	**78750**	**78750**	**962950**

TIPS

Are there styles I can use to format tabular data?

Yes. Excel comes with a gallery of table styles that offer formatting options that highlight the first row, apply different formats to alternating rows, and so on. Select the range that includes your data, click the **Home** tab, and then click **Format as Table**. In the gallery that appears, click the table format you want to apply.

Can I create my own style?

Yes. This is useful if you find yourself applying the same set of formatting options over and over. By saving those options as a custom style, you can apply it by following steps 1 to 4. Apply your formatting to a cell or range, and then select that cell or range. Click **Home**, click **Cell Styles**, and then click **New Cell Style**. In the Style dialog box, type a name for your style, and then click **OK**.

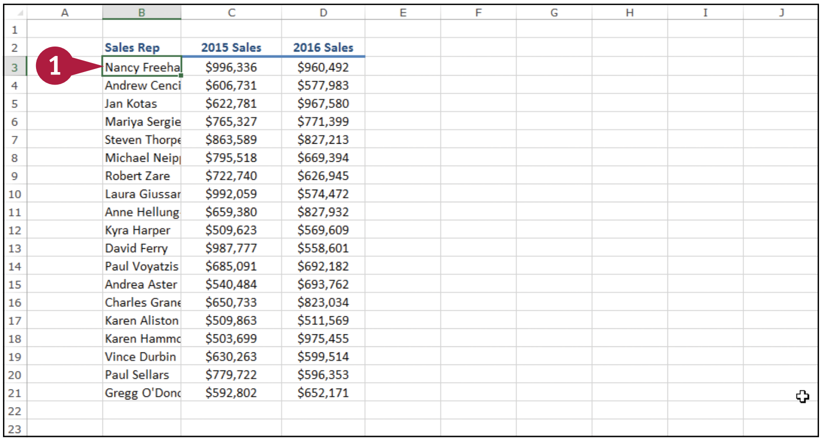
Change the Column Width

You can make your worksheets neater and more readable by adjusting the column widths to suit the data contained in each column.

For example, if you have a large number or a long line of text in a cell, Excel may display only part of the cell value. To avoid this, you can increase the width of the column. Similarly, if a column only contains a few characters in each cell, you can decrease the width to fit more columns on the screen.

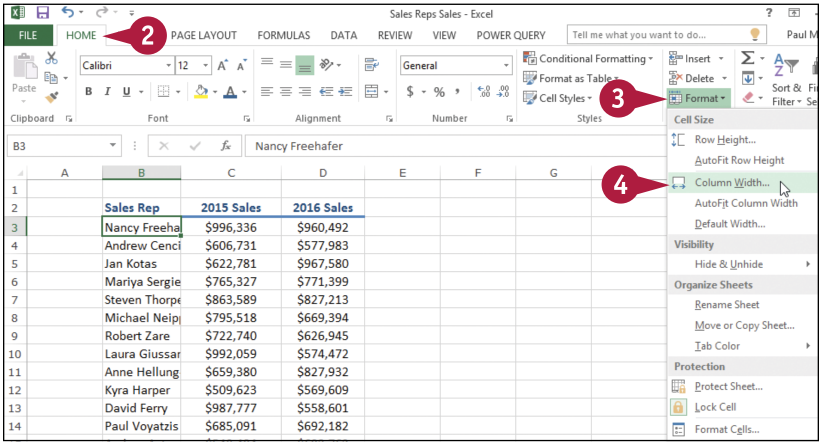
Change the Column Width

1. Click in any cell in the column you want to resize.



	A	B	C	D
1				
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freeha	$996,336	$960,492
4		Andrew Cenci	$606,731	$577,983
5		Jan Kotas	$622,781	$967,580
6		Mariya Sergie	$765,327	$771,399
7		Steven Thorpe	$863,589	$827,213
8		Michael Neip	$795,518	$669,394
9		Robert Zare	$722,740	$626,945
10		Laura Giussar	$992,059	$574,472
11		Anne Hellung	$659,380	$827,932
12		Kyra Harper	$509,623	$569,609
13		David Ferry	$987,777	$558,601
14		Paul Voyatzis	$685,091	$692,182
15		Andrea Aster	$540,484	$693,762
16		Charles Grane	$650,733	$823,034
17		Karen Aliston	$509,863	$511,569
18		Karen Hammc	$503,699	$975,455
19		Vince Durbin	$630,263	$599,514
20		Paul Sellars	$779,722	$596,353
21		Gregg O'Donc	$592,802	$652,171
22				
23				

2. Click the **Home** tab.
3. Click **Format**.
4. Click **Column Width**.


Sales Reps Sales - Excel
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Nancy Freehafer
Cell Size
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AutoFit Column Width
Default Width...
Visibility
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Organize Sheets
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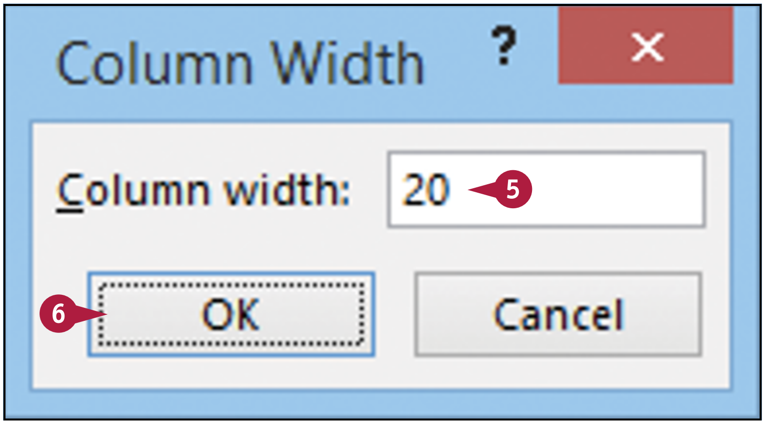
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...

	A	B	C	D
1				
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freeha	$996,336	$960,492
4		Andrew Cenci	$606,731	$577,983
5		Jan Kotas	$622,781	$967,580
6		Mariya Sergie	$765,327	$771,399
7		Steven Thorpe	$863,589	$827,213
8		Michael Neip	$795,518	$669,394
9		Robert Zare	$722,740	$626,945
10		Laura Giussar	$992,059	$574,472
11		Anne Hellung	$659,380	$827,932
12		Kyra Harper	$509,623	$569,609
13		David Ferry	$987,777	$558,601
14		Paul Voyatzis	$685,091	$692,182

The Column Width dialog box appears.

5 In the Column width text box, type the width you want to use.

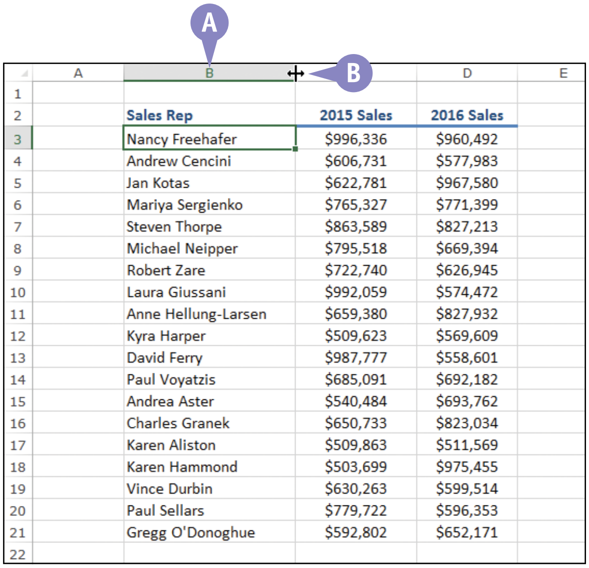
6 Click **OK**.



Column width: 20

A Excel adjusts the column width.

B You can also move ✚ over the right edge of the column heading (✚ changes to ↔) and then click and drag the edge to set the width.



	A	B		D	E
1					
2		Sales Rep	2015 Sales	2016 Sales	
3		Nancy Freehafer	$996,336	$960,492	
4		Andrew Cencini	$606,731	$577,983	
5		Jan Kotas	$622,781	$967,580	
6		Mariya Sergienko	$765,327	$771,399	
7		Steven Thorpe	$863,589	$827,213	
8		Michael Neipper	$795,518	$669,394	
9		Robert Zare	$722,740	$626,945	
10		Laura Giussani	$992,059	$574,472	
11		Anne Hellung-Larsen	$659,380	$827,932	
12		Kyra Harper	$509,623	$569,609	
13		David Ferry	$987,777	$558,601	
14		Paul Voyatzis	$685,091	$692,182	
15		Andrea Aster	$540,484	$693,762	
16		Charles Granek	$650,733	$823,034	
17		Karen Aliston	$509,863	$511,569	
18		Karen Hammond	$503,699	$975,455	
19		Vince Durbin	$630,263	$599,514	
20		Paul Sellars	$779,722	$596,353	
21		Gregg O'Donoghue	$592,802	$652,171	
22					

TIPS

Is there an easier way to adjust the column width to fit the contents of a column?

Yes. You can use the Excel AutoFit feature, which automatically adjusts the column width to fit the widest item in a column. Click any cell in the column, click **Home**, click **Format**, and then click **AutoFit Column Width**. Alternatively, move ✚ over the right edge of the column heading (✚ changes to ↔) and then double-click.

Is there a way to change all the column widths at once?

Yes. Click ◢ to select the entire worksheet, and then follow the steps in this section to set the width you prefer. If you have already adjusted some column widths and you want to change all the other widths, click **Home**, click **Format**, and then click **Default Width** to open the Standard Width dialog box. Type the new standard column width, and then click **OK**.

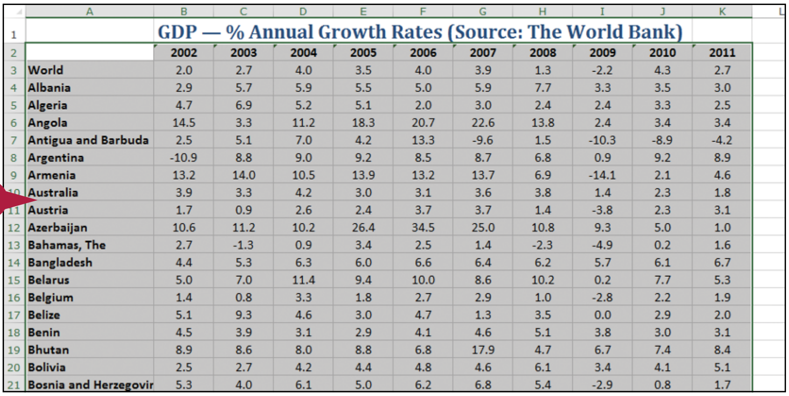
Change the Row Height

You can make your worksheet more visually appealing by increasing the row heights to create more space. This is particularly useful in worksheets that are crowded with text. Changing the row height is also useful if the current height is too small and your cell text is cut off at the bottom.

If you want to change the row height to display multiline text within a cell, you must also turn on text wrapping within the cell. See the following section, "Wrap Text Within a Cell."

Change the Row Height

① Select a range that includes at least one cell in every row you want to resize.

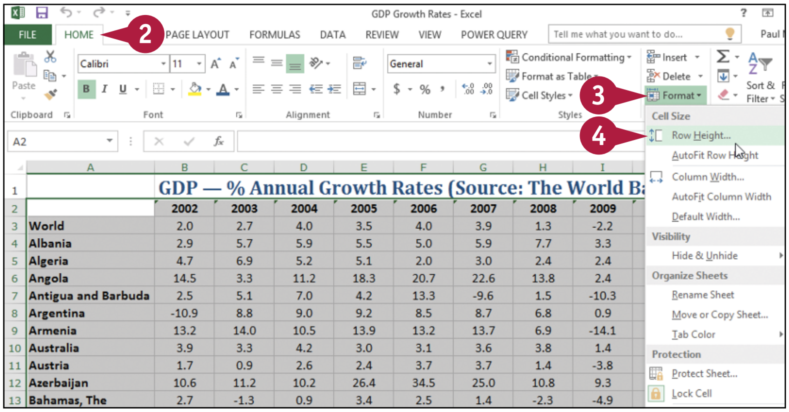


	A	B	C	D	E	F	G	H	I	J	K
1		GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0
18	Benin	4.5	3.9	3.1	2.9	4.1	4.6	5.1	3.8	3.0	3.1
19	Bhutan	8.9	8.6	8.0	8.8	6.8	17.9	4.7	6.7	7.4	8.4
20	Bolivia	2.5	2.7	4.2	4.4	4.8	4.6	6.1	3.4	4.1	5.1
21	Bosnia and Herzegovir	5.3	4.0	6.1	5.0	6.2	6.8	5.4	-2.9	0.8	1.7

② Click the **Home** tab.

③ Click **Format**.

④ Click **Row Height**.



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Column Width...
AutoFit Column Width
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Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell

	A	B	C	D	E	F	G	H	I
1		GDP — % Annual Growth Rates (Source: The World B							
2		2002	2003	2004	2005	2006	2007	2008	2009
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9

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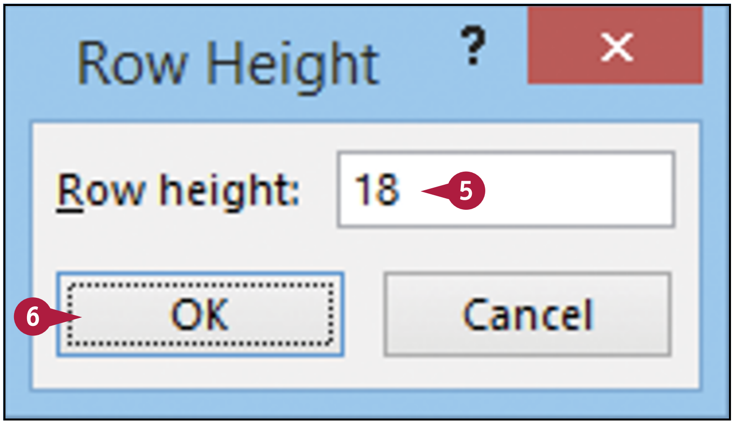
The Row Height dialog box appears.

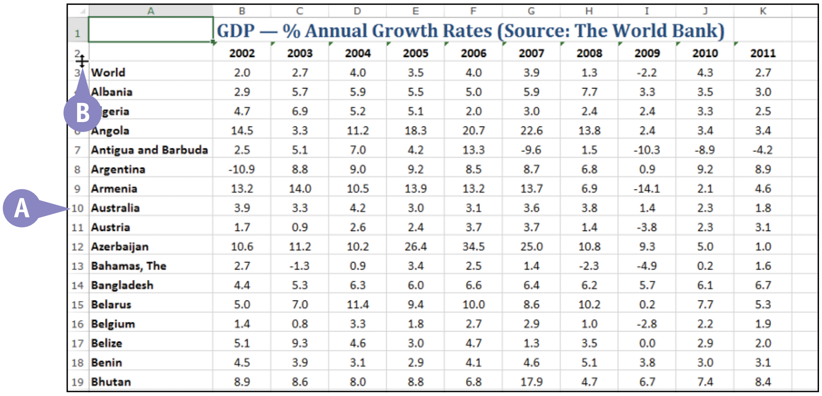
5. In the Row height text box, type the height you want to use.
6. Click **OK**.



Row height: 18

Ⓐ Excel adjusts the row heights.

Ⓑ You can also move ✥ over the bottom edge of a row heading (✥ changes to ↨) and then click and drag the bottom edge to set the height.



	A	B	C	D	E	F	G	H	I	J	K
1		GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
	geria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0
18	Benin	4.5	3.9	3.1	2.9	4.1	4.6	5.1	3.8	3.0	3.1
19	Bhutan	8.9	8.6	8.0	8.8	6.8	17.9	4.7	6.7	7.4	8.4

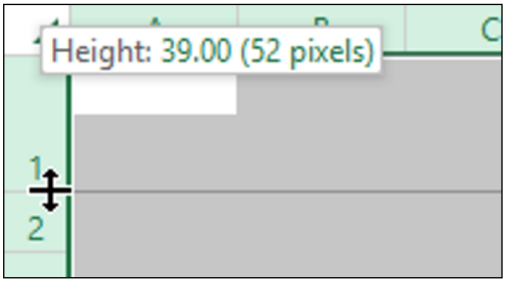
TIPS

Is there an easier way to adjust the row height to fit the contents of a row?

Yes. You can use the Excel AutoFit feature, which automatically adjusts the row height to fit the tallest item in a row. Click in any cell in the row, click **Home**, click **Format**, and then click **AutoFit Row Height**. Alternatively, move ✥ over the bottom edge of the row heading (✥ changes to ↨) and then double-click.

Is there a way to change all the row heights at once?

Yes. Click ◢ to select the entire worksheet. You can then either follow the steps in this section to set the height manually, or move ✥ over the bottom edge of any row heading (✥ changes to ↨) and then click and drag the edge to set the height of all the rows.



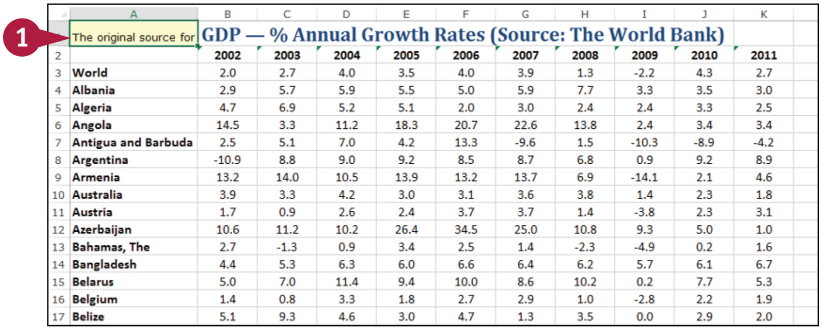
Wrap Text Within a Cell

You can make a long text entry in a cell more readable by formatting the cell to wrap the text. *Wrapping* cell text means that the text is displayed on multiple lines within the cell instead of just a single line.

If you type more text in a cell than can fit horizontally, Excel either displays the text over the next cell if it is empty or displays only part of the text if the next cell contains data. To prevent Excel from showing only truncated cell data, you can format the cell to wrap text within the cell.

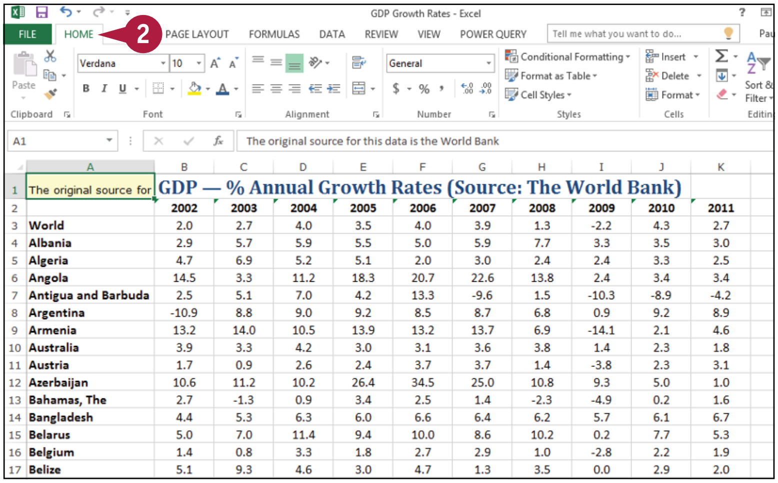
Wrap Text Within a Cell

1. Select the cell that you want to format.



	A	B	C	D	E	F	G	H	I	J	K
1	The original source for	GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0

2. Click the **Home** tab.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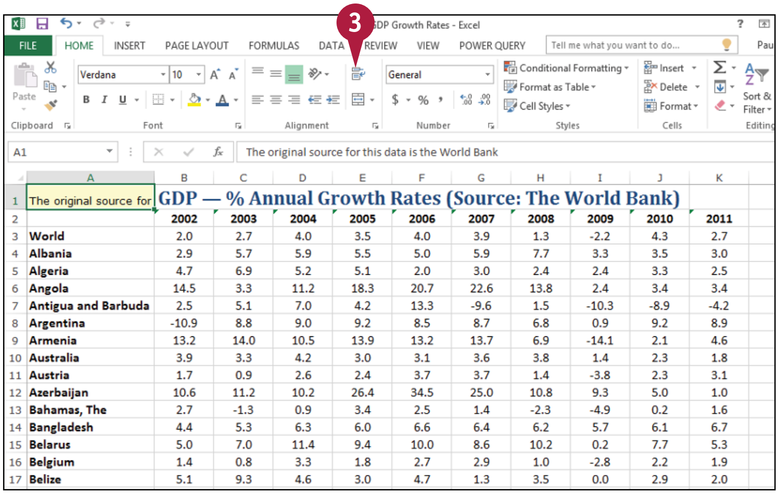
The original source for this data is the World Bank

	A	B	C	D	E	F	G	H	I	J	K
1	The original source for	GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0

③ Click **Wrap Text** (📝).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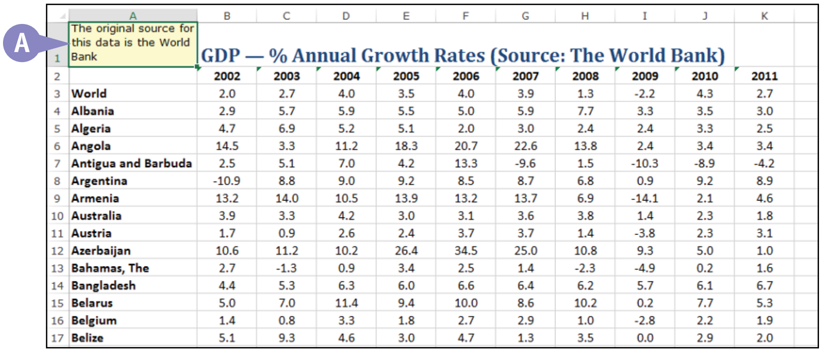
A1 | The original source for this data is the World Bank

	A	B	C	D	E	F	G	H	I	J	K
1	The original source for	GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0

Excel turns on text wrapping for the selected cell.

Ⓐ If the cell has more text than can fit horizontally, Excel wraps the text onto multiple lines and increases the row height to compensate.



	A	B	C	D	E	F	G	H	I	J	K
1	The original source for this data is the World Bank	GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9
17	Belize	5.1	9.3	4.6	3.0	4.7	1.3	3.5	0.0	2.9	2.0

TIP

My text is only slightly bigger than the cell. Is there a way to view all of the text without turning on text wrapping?

Yes. There are several things you can try. For example, you can widen the column until you see all your text; see the “Change the Column Width” section, earlier in this chapter.

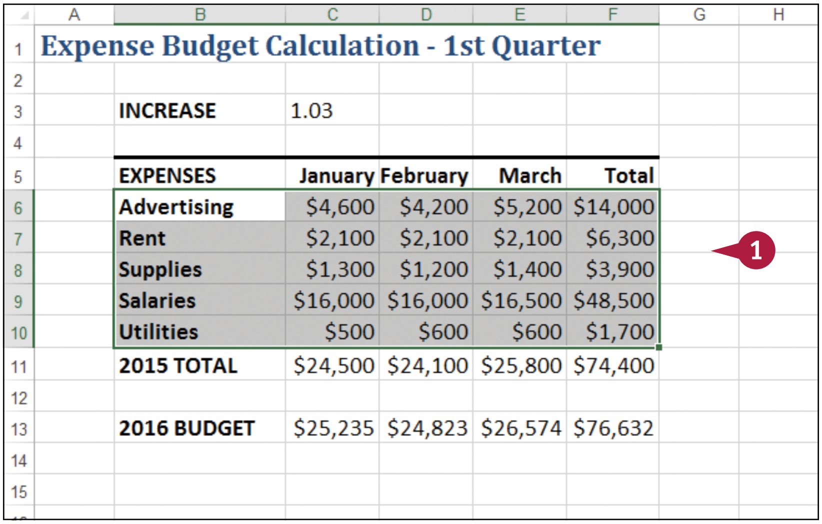
Alternatively, you can try reducing the cell font size. One way to do this is to choose a smaller value in the **Font Size** list of the Home tab’s Font group. However, an easier way is to click the Alignment group’s dialog box launcher (⇲) to open the Format Cells dialog box with the Alignment tab displayed. Select the **Shrink to fit** check box (☐ changes to ☑) and then click **OK**.

Add Borders to a Range

You can make a range stand out from the rest of your worksheet data by adding a border around the range. For example, if you have a range of cells that are used as the input values for one or more formulas, you could add a border around the input cells to make it clear the cells in that range are related to each other.

You can also use borders to make a range easier to read. For example, if your range has totals on the bottom row, you can add a double border above the totals.

Add Borders to a Range

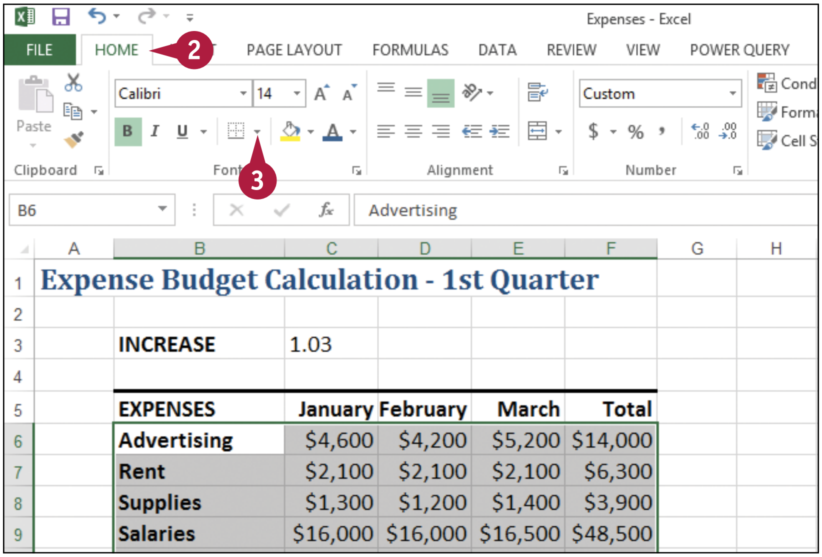


Expense Budget Calculation - 1st Quarter

INCREASE 1.03

EXPENSES	January	February	March	Total
Advertising	$4,600	$4,200	$5,200	$14,000
Rent	$2,100	$2,100	$2,100	$6,300
Supplies	$1,300	$1,200	$1,400	$3,900
Salaries	$16,000	$16,000	$16,500	$48,500
Utilities	$500	$600	$600	$1,700
2015 TOTAL	$24,500	$24,100	$25,800	$74,400
2016 BUDGET	$25,235	$24,823	$26,574	$76,632

1. Select the range that you want to format.



Expenses - Excel
FILE
HOME
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Calibri
14
Custom
Paste
Clipboard
Font
Alignment
Number
Cond
Form
Cell S
2
3

B6 Advertising

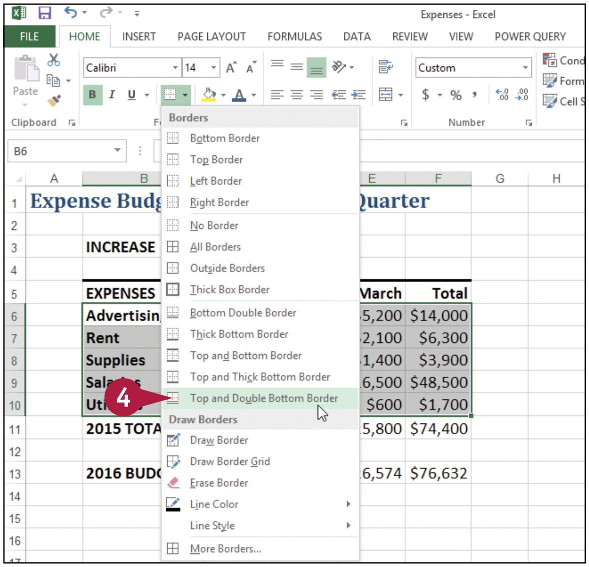
Expense Budget Calculation - 1st Quarter

INCREASE 1.03

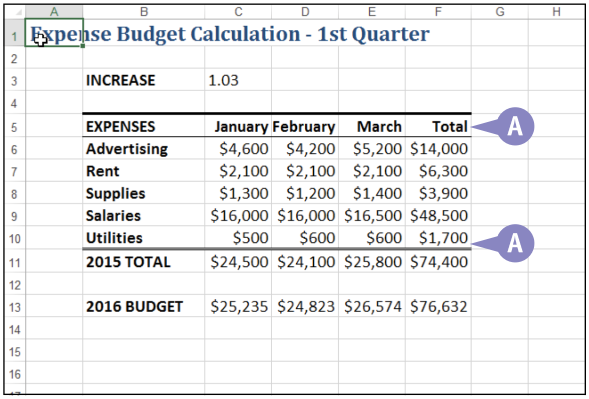
EXPENSES	January	February	March	Total
Advertising	$4,600	$4,200	$5,200	$14,000
Rent	$2,100	$2,100	$2,100	$6,300
Supplies	$1,300	$1,200	$1,400	$3,900
Salaries	$16,000	$16,000	$16,500	$48,500

2. Click the **Home** tab.
3. Click the **Borders** ▾.

④ Click the type of border you want to use.


Expenses - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
Paste
Clipboard
Calibri
14
Custom
Number
B6
Borders
Bottom Border
Top Border
Left Border
Right Border
No Border
All Borders
Outside Borders
Thick Box Border
Bottom Double Border
Thick Bottom Border
Top and Bottom Border
Top and Thick Bottom Border
Top and Double Bottom Border
Draw Borders
Draw Border
Draw Border Grid
Erase Border
Line Color
Line Style
More Borders...
4

Ⓐ Excel applies the border to the range.



Expense Budget Calculation - 1st Quarter

INCREASE 1.03

EXPENSES	January	February	March	Total
Advertising	$4,600	$4,200	$5,200	$14,000
Rent	$2,100	$2,100	$2,100	$6,300
Supplies	$1,300	$1,200	$1,400	$3,900
Salaries	$16,000	$16,000	$16,500	$48,500
Utilities	$500	$600	$600	$1,700
2015 TOTAL	$24,500	$24,100	$25,800	$74,400
2016 BUDGET	$25,235	$24,823	$26,574	$76,632

TIPS

How do I get my borders to stand out from the worksheet gridlines?

One way to make your borders stand out is to click the **Borders** ▾, click **Line Style**, and then click a thicker border style. You can also click **Line Color** and then click a color that is not a shade of gray. However, perhaps the most effective method is to turn off the worksheet gridlines. Click the **View** tab, and then in the Show group, select the **Gridlines** check box (☑ changes to ☐).

None of the border types is quite right for my worksheet. Can I create a custom border?

Yes. You can draw the border manually. Click the **Borders** ▾ and then click **Draw Border**. Use the **Line Style** and **Line Color** lists to configure your border. Click a cell edge to add a border to that edge; click and drag a range to add a border around that range. If you prefer to create a grid where the border surrounds every cell, click the **Draw Border Grid** command instead.

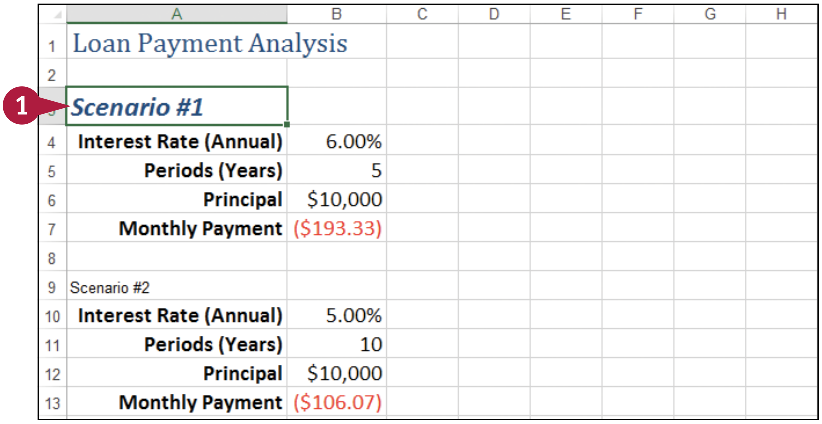
Copy Formatting from One Cell to Another

You can save yourself a great deal of time by copying existing formatting to other areas of a worksheet.

As you have seen in this chapter, although formatting cells is not difficult, it can be time-consuming to apply the font, color, alignment, number format, and other options. After you spend time formatting text or data, rather than spending time repeating the steps for other data, you can use the Format Painter tool to copy the formatting with a couple of mouse clicks.

Copy Formatting from One Cell to Another

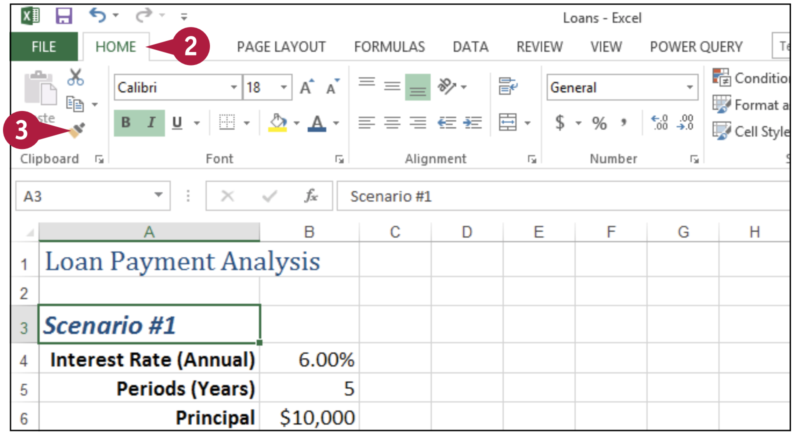
1. Select the cell that has the formatting you want to copy.



	A	B	C	D	E	F	G	H
1	Loan Payment Analysis							
2								
3	*Scenario #1*							
4	**Interest Rate (Annual)**	6.00%						
5	**Periods (Years)**	5						
6	**Principal**	$10,000						
7	**Monthly Payment**	($193.33)						
8								
9	Scenario #2							
10	**Interest Rate (Annual)**	5.00%						
11	**Periods (Years)**	10						
12	**Principal**	$10,000						
13	**Monthly Payment**	($106.07)						

2. Click the **Home** tab.
3. Click **Format Painter** (🖌).

✚ changes to ✚🖌.


Loans - Excel
FILE
HOME
2
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
POWER QUERY
3
Calibri
18
B
I
U
General
$
%
Conditio
Format a
Cell Style
Clipboard
Font
Alignment
Number

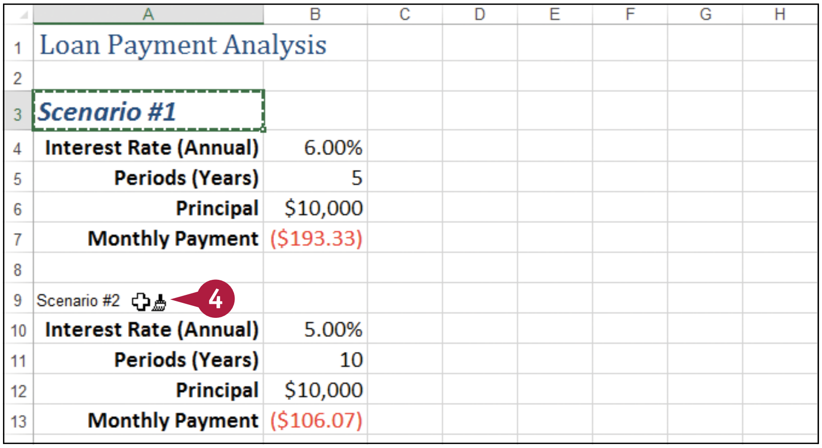
A3

Scenario #1

	A	B	C	D	E	F	G	H
1	Loan Payment Analysis							
2								
3	*Scenario #1*							
4	**Interest Rate (Annual)**	6.00%						
5	**Periods (Years)**	5						
6	**Principal**	$10,000						

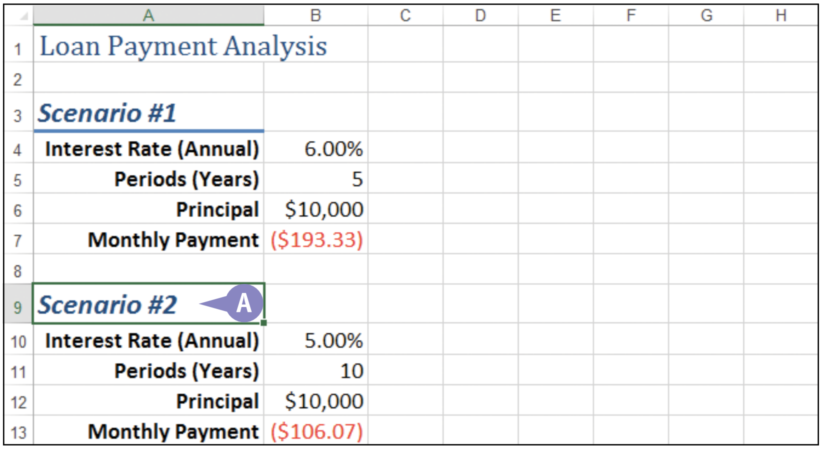
④ Click the cell to which you want to copy the formatting.

Note: If you want to apply the formatting to multiple cells, click and drag ✚🖌 over the cells.



	A	B	C	D	E	F	G	H
1	Loan Payment Analysis							
2								
3	*Scenario #1*							
4	**Interest Rate (Annual)**	6.00%						
5	**Periods (Years)**	5						
6	**Principal**	$10,000						
7	**Monthly Payment**	($193.33)						
8								
9	Scenario #2							
10	**Interest Rate (Annual)**	5.00%						
11	**Periods (Years)**	10						
12	**Principal**	$10,000						
13	**Monthly Payment**	($106.07)						

Ⓐ Excel copies the formatting to the cell.



	A	B	C	D	E	F	G	H
1	Loan Payment Analysis							
2								
3	*Scenario #1*							
4	**Interest Rate (Annual)**	6.00%						
5	**Periods (Years)**	5						
6	**Principal**	$10,000						
7	**Monthly Payment**	($193.33)						
8								
9	*Scenario #2*							
10	**Interest Rate (Annual)**	5.00%						
11	**Periods (Years)**	10						
12	**Principal**	$10,000						
13	**Monthly Payment**	($106.07)						

TIP

Is there an easy way to copy formatting to multiple cells or ranges?

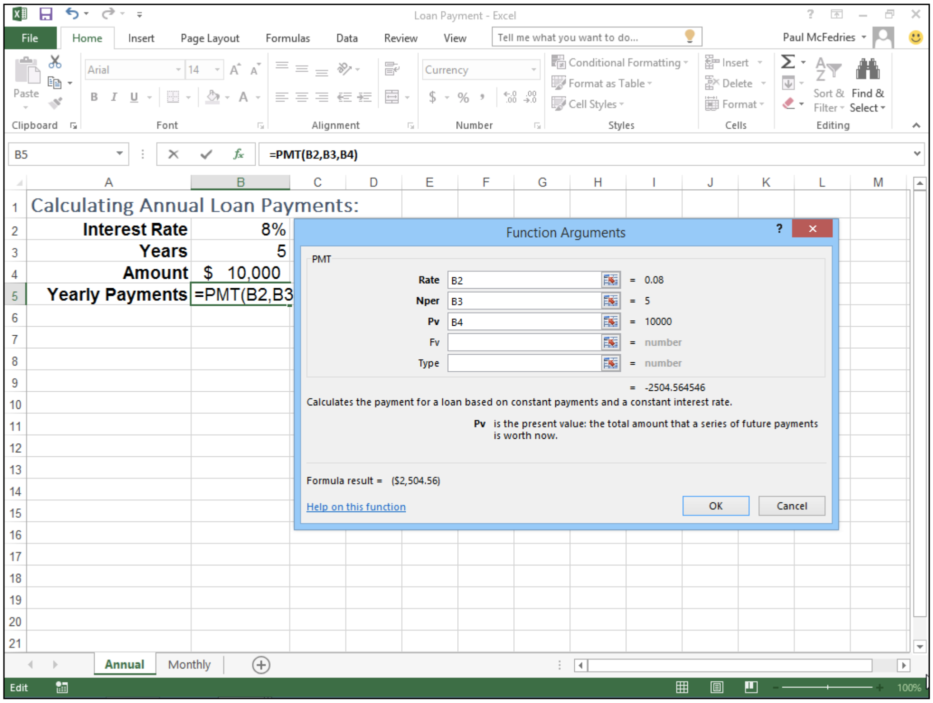
Yes. If the cells are together, you can click and drag over the cells to apply the copied formatting. If the cells or ranges are not together, Excel offers a shortcut that means you do not have to select the Format Painter multiple times to copy formatting to multiple ranges.

Click the cell that contains the formatting you want to copy, click the **Home** tab, and then double-click 🖌. Click each cell to which you want to copy the formatting, or click and drag over each range that you want to format. When you are done, click 🖌 to cancel the Format Painter command.

CHAPTER 4

Building Formulas

Are you ready to start creating powerful and useful worksheets by building your own formulas? This chapter explains formulas, shows you how to build them, and shows you how to incorporate the versatile worksheet functions in Excel into your formulas.


Loan Payment - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Paste
Clipboard
Font
Alignment
Currency
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Sort & Filter
Find & Select
Editing
Annual
Monthly
Edit
100%

B5 =PMT(B2,B3,B4)

	A	B
1	Calculating Annual Loan Payments:	
2	Interest Rate	8%
3	Years	5
4	Amount	$ 10,000
5	Yearly Payments	=PMT(B2,B3

Function Arguments

PMT

Rate B2 = 0.08

Nper B3 = 5

Pv B4 = 10000

Fv = number

Type = number

= -2504.564546

Calculates the payment for a loan based on constant payments and a constant interest rate.

Pv is the present value: the total amount that a series of future payments is worth now.

Formula result = ($2,504.56)

Help on this function

OK Cancel

Understanding Excel Formulas 86
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Understanding Excel Functions 90
Add a Function to a Formula 92
Add a Row or Column of Numbers 94
Build an AutoSum Formula 96
Add a Range Name to a Formula 98
Reference Another Worksheet Range in a Formula 100
Move or Copy a Formula 102
Switch to Absolute Cell References 104
Hide the Formula Bar or Ribbon. 106
Troubleshoot Formula Errors 108

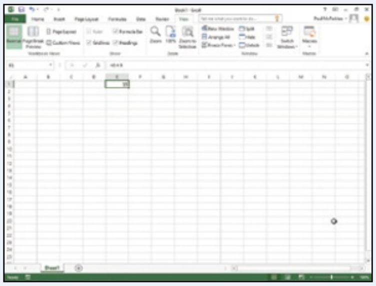
Understanding Excel Formulas

Although you can use Excel to create simple databases to store text, numbers, dates, and other data, the spreadsheets you create are also designed to analyze data and make calculations. Therefore, to get the most out of Excel, you need to understand formulas so that you can use them to analyze and perform calculations on your worksheet data.

To build accurate and useful formulas, you need to know the components of a formula, including operators and operands. You also need to understand arithmetic and comparison formulas and you need to understand the importance of precedence when building a formula.

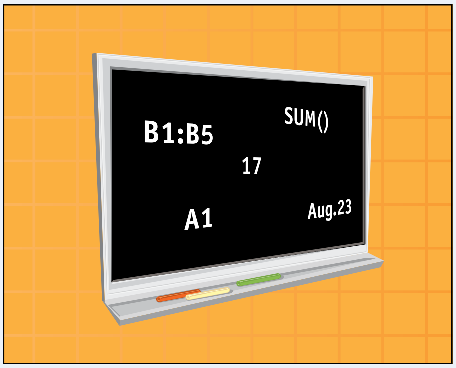
Formulas

A *formula* is a set of symbols and values that perform some kind of calculation and produce a result. All Excel formulas have the same general structure: an equal sign (=) followed by one or more operands and operators. The equal sign tells Excel to interpret everything that follows in the cell as a formula. For example, if you type **=5+8** into a cell, Excel interprets the 5+8 text as a formula, and displays the result (13) in the cell.



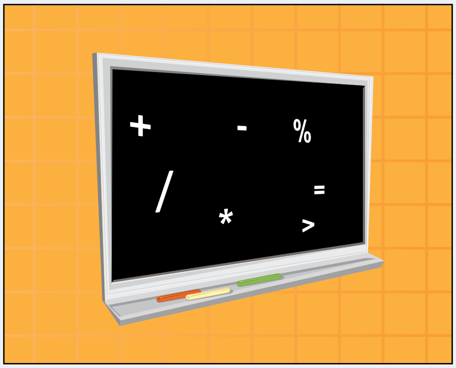
Operands

Every Excel formula includes one or more *operands*, which are the data that Excel uses in the calculation. The simplest type of operand is a constant value, which is usually a number. However, most Excel formulas include references to worksheet data, which can be a cell address (such as A1), a range address (such as B1:B5), or a range name. Finally, you can also use any of the built-in Excel functions as an operand.



Operators

In an Excel formula that contains two or more operands, each operand is separated by an *operator*, which is a symbol that combines the operands in some way, usually mathematically. Example operators include the plus sign (+) and the multiplication sign (*). For example, the formula =B1+B2 adds the values in cells B1 and B2.



Arithmetic Formulas

An arithmetic formula combines numeric operands — numeric constants, functions that return numeric results, and fields or items that contain numeric values — with mathematical operators to perform a calculation. Because Excel worksheets primarily deal with numeric data, arithmetic formulas are by far the most common formulas used in worksheet calculations.

The following table lists the seven arithmetic operators that you can use to construct arithmetic formulas:

Operator	Name	Example	Result
+	Addition	=10 + 5	15
–	Subtraction	=10 – 5	5
–	Negation	=–10	–10
*	Multiplication	=10 * 5	50
/	Division	=10 / 5	2
%	Percentage	=10%	0.1
^	Exponentiation	=10 ^ 5	100000

Comparison Formulas

A comparison formula combines numeric operands — numeric constants, functions that return numeric results, and fields or items that contain numeric values — with special operators to compare one operand with another. A comparison formula always returns a logical result. This means that if the comparison is true, then the formula returns the value 1, which is equivalent to the logical value TRUE; if the comparison is false, then the formula returns the value 0, which is equivalent to the logical value FALSE.

The following table lists the six operators that you can use to construct comparison formulas:

Operator	Name	Example	Result
=	Equal to	=10 = 5	0
<	Less than	=10 < 5	0
< =	Less than or equal to	=10 < = 5	0
>	Greater than	=10 > 5	1
> =	Greater than or equal to	=10 > = 5	1
< >	Not equal to	=10 < > 5	1

Operator Precedence

Most of your formulas include multiple operands and operators. In many cases, the order in which Excel performs the calculations is crucial. For example, consider the formula =3 + 5 ^ 2. If you calculate from left to right, the answer you get is 64 (3 + 5 equals 8, and 8 ^ 2 equals 64). However, if you perform the exponentiation first and then the addition, the result is 28 (5 ^ 2 equals 25, and 3 + 25 equals 28). Therefore, a single formula can produce multiple answers, depending on the order in which you perform the calculations.

To solve this problem, Excel evaluates a formula according to a predefined order of precedence, which is determined by the formula operators, as shown in the following table:

Operator	Operation	Precedence
( )	Parentheses	1st
–	Negation	2nd
%	Percentage	3rd
^	Exponentiation	4th
* and /	Multiplication and division	5th
+ and –	Addition and subtraction	6th
= < < = > > = < >	Comparison	7th

Build a Formula

You can add a formula to a worksheet cell using a technique similar to adding data to a cell. To ensure that Excel treats the text as a formula, be sure to begin with an equal sign (=) and then type your operands and operators.

When you add a formula to a cell, Excel displays the formula result in the cell, not the actual formula. For example, if you add the formula =C3+C4 to a cell, that cell displays the sum of the values in cells C3 and C4. To see the formula, click the cell and examine the Formula bar.

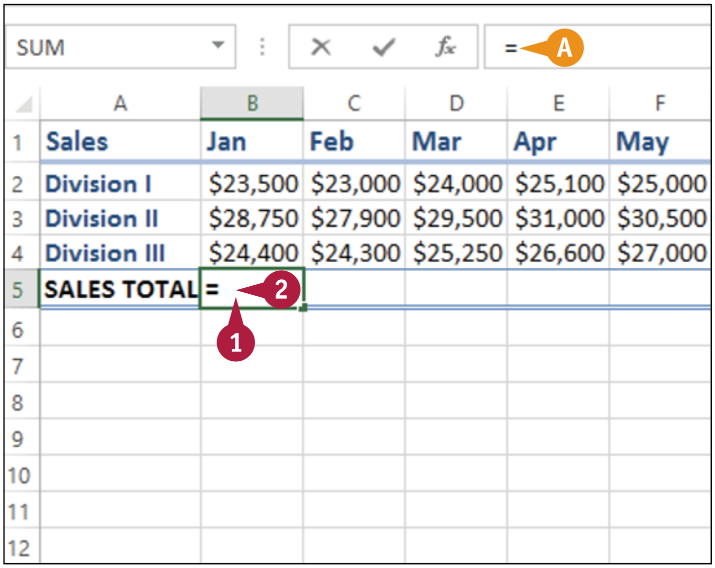
Build a Formula

① Click in the cell in which you want to build the formula.

② Type **=**.

Ⓐ Your typing also appears in the Formula bar.

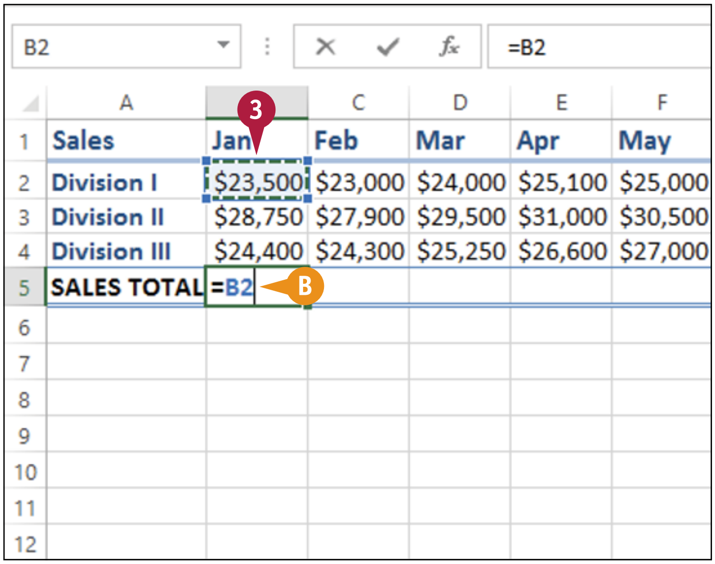
Note: You can also type the formula into the Formula bar.



	A	B	C	D	E	F
1	Sales	Jan	Feb	Mar	Apr	May
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000
5	SALES TOTAL	=				

③ Type or click an operand. For example, to reference a cell in your formula, click in the cell.

Ⓑ Excel inserts the address of the clicked cell into the formula.

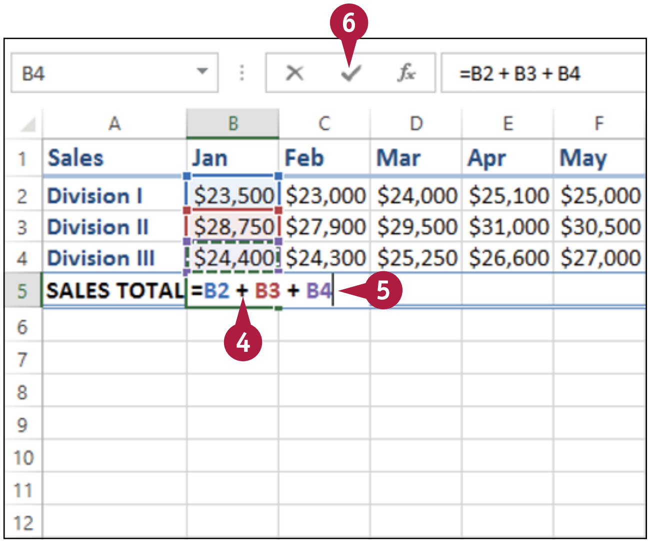


	A	B	C	D	E	F
1	Sales	Jan	Feb	Mar	Apr	May
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000
5	SALES TOTAL	=B2				

4 Type an operator.

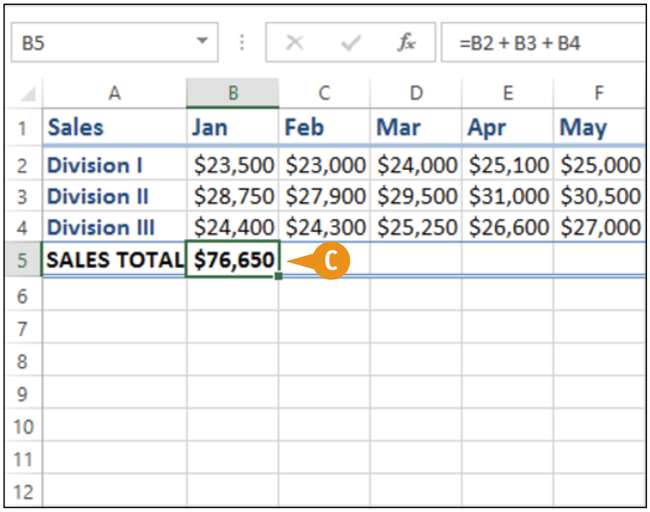
5 Repeat steps 3 and 4 to add other operands and operators to your formula.

6 Click ✓ or press Enter.



	A	B	C	D	E	F
1	Sales	Jan	Feb	Mar	Apr	May
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000
5	SALES TOTAL	=B2 + B3 + B4				
6						
7						
8						
9						
10						
11						
12						

C Excel displays the formula result in the cell.



	A	B	C	D	E	F
1	Sales	Jan	Feb	Mar	Apr	May
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000
5	SALES TOTAL	$76,650				
6						
7						
8						
9						
10						
11						
12						

TIPS

If Excel displays only the result of the formula, how do I make changes to the formula?

Excel displays the formula result in the cell, but it still keeps track of the original formula. To display the formula again, you have two choices: Click the cell and then edit the formula using the Formula bar, or double-click the cell to display the original formula in the cell and then edit the formula. In both cases, click ✓ or press Enter when you finish editing the formula.

If I have many formulas, is there an easy way to view them?

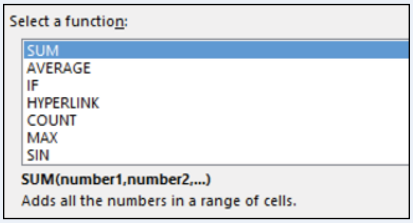
Yes. You can configure the worksheet to show the formulas instead of their results. Click **File** and then click **Options** to open the Excel Options dialog box. Click the **Advanced** tab, scroll to the **Display options for this worksheet** section, select the **Show formulas in cells instead of their calculated results** check box (☐ changes to ☑), and then click **OK.** You can also toggle between formulas and results by pressing Ctrl+‘.

Understanding Excel Functions

To build powerful and useful formulas, you often need to include one or more Excel functions as operands. To get the most out of functions and to help you build formulas quickly and easily, you need to understand a few things about functions. For example, you need to understand the advantages of using functions and you need to know the basic structure of every function. To get a sense of what is available and how you might use functions, you need to review the Excel function types.

Functions

A *function* is a predefined formula that performs a specific task. For example, the SUM function calculates the total of a list of numbers, and the PMT (payment) function calculates a loan or mortgage payment. You can use functions on their own, preceded by =, or as part of a larger formula.



Select a function:

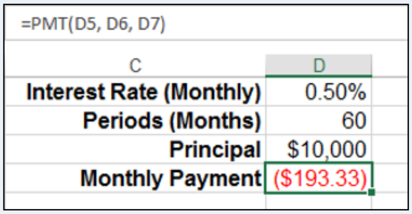
SUM
AVERAGE
IF
HYPERLINK
COUNT
MAX
SIN

SUM(number1,number2,...)

Adds all the numbers in a range of cells.

Function Advantages

Functions are designed to take you beyond the basic arithmetic and comparison formulas by offering two main advantages. First, functions make simple but cumbersome formulas easier to use. For example, calculating a loan payment requires a complex formula, but the Excel PMT function makes this easy. Second, functions enable you to include complex mathematical expressions in your worksheets that otherwise would be difficult or impossible to construct using simple arithmetic operators.

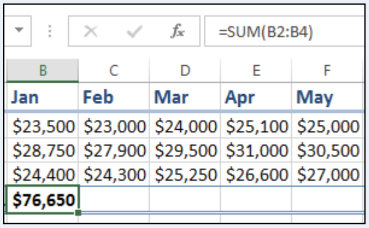


=PMT(D5, D6, D7)

C	D
Interest Rate (Monthly)	0.50%
Periods (Months)	60
Principal	$10,000
Monthly Payment	($193.33)

Function Structure

Every worksheet function has the same basic structure: NAME(Argument1, Argument2, . . .). The NAME part identifies the function. In worksheet formulas and custom PivotTable formulas, the function name always appears in uppercase letters: PMT, SUM, AVERAGE, and so on. The items that appear within the parentheses are the functions' *arguments*. The arguments are the inputs that functions use to perform calculations. For example, the function SUM(B2, B3, B4) adds the values in cells B2, B3, and B4.



=SUM(B2:B4)

B	C	D	E	F
Jan	Feb	Mar	Apr	May
$23,500	$23,000	$24,000	$25,100	$25,000
$28,750	$27,900	$29,500	$31,000	$30,500
$24,400	$24,300	$25,250	$26,600	$27,000
$76,650				

Mathematical Functions

The following table lists some common mathematical functions:

Function	**Description**
MOD(number,divisor)	Returns the remainder of a number after dividing by the divisor
PI( )	Returns the value Pi
PRODUCT(number1, number2, . . .)	Multiplies the specified numbers
RAND( )	Returns a random number between 0 and 1
RANDBETWEEN (number1,number2)	Returns a random number between the two numbers
ROUND(number,digits)	Rounds the number to a specified number of digits
SQRT(number)	Returns the positive square root of the number
SUM(number1, number2, . . .)	Adds the arguments

Statistical Functions

The following table lists some common statistical functions:

Function	Description
AVERAGE(number1,number2, . . .)	Returns the average of the arguments
COUNT(number1,number2, . . .)	Counts the numbers in the argument list
MAX(number1,number2, . . .)	Returns the maximum value of the arguments
MEDIAN(number1,number2, . . .)	Returns the median value of the arguments
MIN(number1,number2, . . .)	Returns the minimum value of the arguments
MODE(number1,number2, . . .)	Returns the most common value of the arguments
STDEV(number1,number2, . . .)	Returns the standard deviation based on a sample
STDEVP(number1,number2, . . .)	Returns the standard deviation based on an entire population

Financial Functions

Most of the Excel financial functions use the following arguments:

Argument	Description
rate	The fixed rate of interest over the term of the loan or investment
nper	The number of payments or deposit periods over the term of the loan or investment
pmt	The periodic payment or deposit
pv	The present value of the loan (the principal) or the initial deposit in an investment
fv	The future value of the loan or investment
type	The type of payment or deposit: 0 (the default) for end-of-period payments or deposits; 1 for beginning-of-period payments or deposits

The following table lists some common financial functions:

Function	Description
FV(rate,nper,pmt,pv,type)	Returns the future value of an investment or loan
IPMT(rate,per,nper,pv,fv,type)	Returns the interest payment for a specified period of a loan
NPER(rate,pmt,pv,fv,type)	Returns the number of periods for an investment or loan
PMT(rate,nper,pv,fv,type)	Returns the periodic payment for a loan or investment
PPMT(rate,per,nper,pv,fv,type)	Returns the principal payment for a specified period of a loan
PV(rate,nper,pmt,fv,type)	Returns the present value of an investment
RATE(nper,pmt,pv,fv,type,guess)	Returns the periodic interest rate for a loan or investment

Add a Function to a Formula

To get the benefit of an Excel function, you need to use it within a formula. You can use a function as the only operand in the formula, or you can include the function as part of a larger formula. To make it easy to choose the function you need and to add the appropriate arguments, Excel offers the Insert Function feature. This is a dialog box that enables you to display functions by category and then choose the function you want from a list. You then see the Function Arguments dialog box that enables you to easily see and fill in the arguments used by the function.

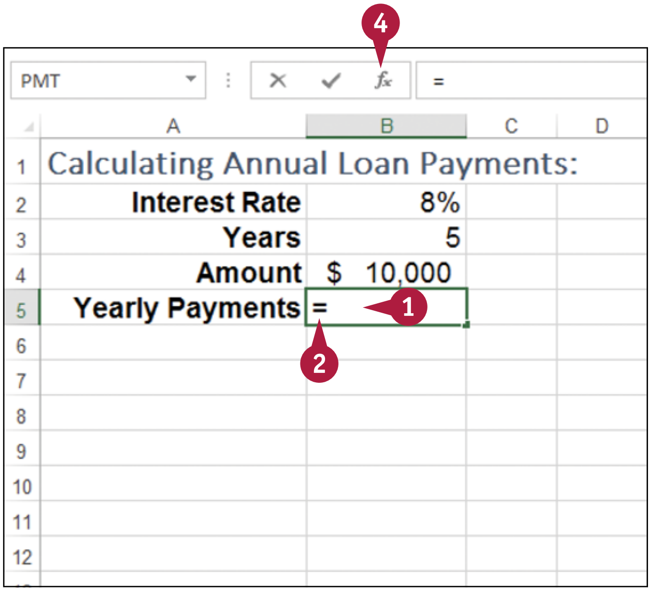
Add a Function to a Formula

① Click in the cell in which you want to build the formula.

② Type **=**.

③ Type any operands and operators you need before adding the function.

④ Click the **Insert Function** button (*fx*).



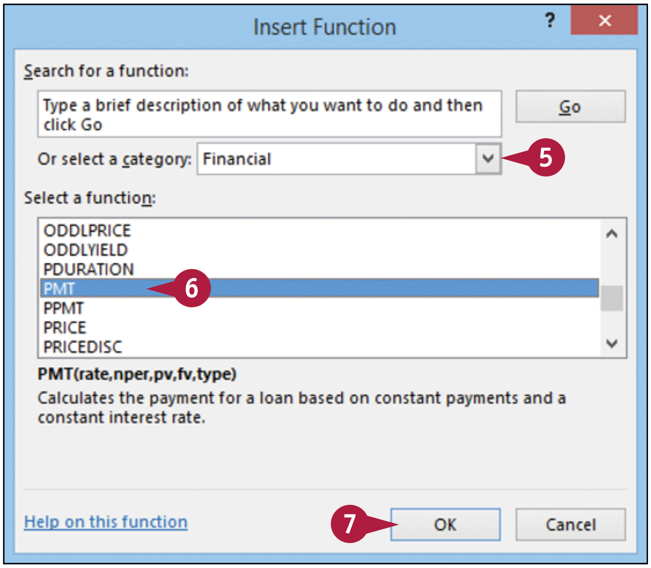
	A	B	C	D
1	Calculating Annual Loan Payments:			
2	Interest Rate	8%		
3	Years	5		
4	Amount	$ 10,000		
5	Yearly Payments	=		
6				
7				
8				
9				
10				
11				
12				

The Insert Function dialog box appears.

⑤ Click ▾ and then click the category that contains the function you want to use.

⑥ Click the function.

⑦ Click **OK**.



Search for a function:

Type a brief description of what you want to do and then click Go

Or select a category: Financial

Select a function:

- ODDLPRICE
- ODDLYIELD
- PDURATION
- PMT
- PPMT
- PRICE
- PRICEDISC

PMT(rate,nper,pv,fv,type)

Calculates the payment for a loan based on constant payments and a constant interest rate.

Help on this function

The Function Arguments dialog box appears.

8 Click inside an argument box.

9 Click the cell that contains the argument value.

You can also type the argument value.

10 Repeat steps 8 and 9 to fill as many arguments as you need.

A The function result appears here.

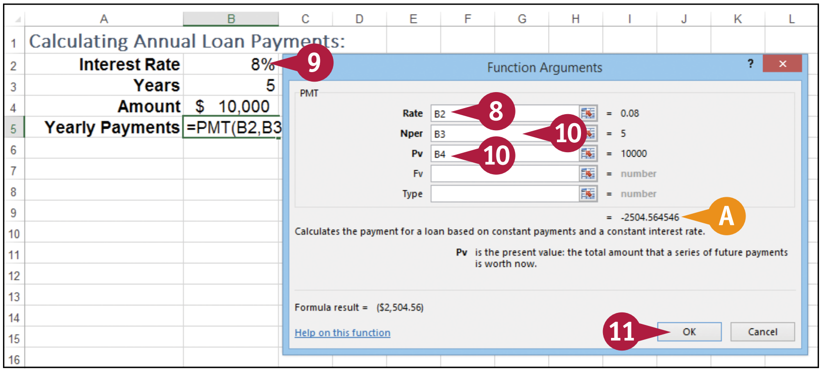
11 Click **OK**.

B Excel adds the function to the formula.

C Excel displays the formula result.

Note: In this example, the result appears in the parentheses to indicate a negative value. In loan calculations, money that you pay out is always a negative amount.

Note: If your formula requires any other operands and operators, press F2 and then type what you need to complete your formula.



Calculating Annual Loan Payments:

Interest Rate	8%
Years	5
Amount	$ 10,000
Yearly Payments	=PMT(B2,B3

Function Arguments

PMT

Rate B2 = 0.08
Nper B3 = 5
Pv B4 = 10000
Fv = number
Type = number

= -2504.564546

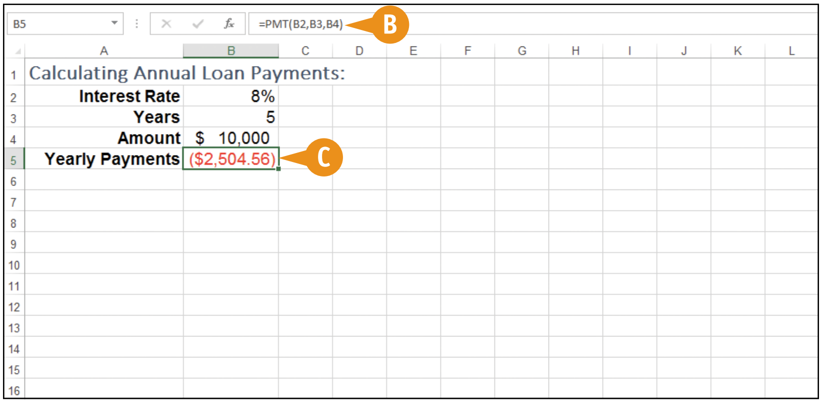
Calculates the payment for a loan based on constant payments and a constant interest rate.

Pv is the present value: the total amount that a series of future payments is worth now.

Formula result = ($2,504.56)

Help on this function

OK Cancel



B5 =PMT(B2,B3,B4)

Calculating Annual Loan Payments:

Interest Rate	8%
Years	5
Amount	$ 10,000
Yearly Payments	($2,504.56)

TIPS

Do I have to specify a value for every function argument?

Not necessarily. Some function arguments are required to obtain a result, but others are optional. In the PMT function, for example, the rate, nper, and pv arguments are required, but the fv and type arguments are optional. When the Function Arguments dialog box displays a result for the function, you know you have entered all of the required arguments.

How do I calculate a monthly financial result if I only have yearly values?

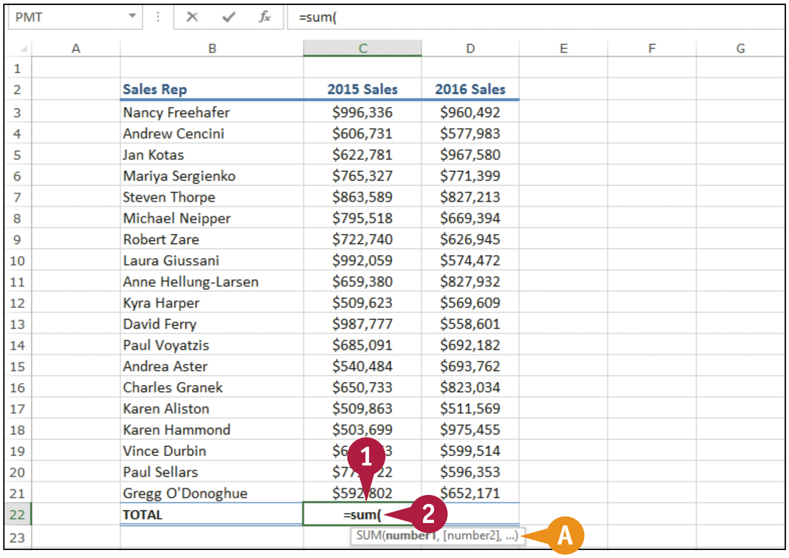
This is a common problem. For example, if your loan payment worksheet contains an annual interest rate and a loan term in years, how do you calculate the monthly payment using the PMT function? You need to convert the rate and term to monthly values. That is, you divide the annual interest rate by 12, and you multiply the term by 12. For example, if the annual rate is in cell B2, the term in years is in B3, and the loan amount is in B4, then the function PMT(B2/12, B3*12, B4) calculates the monthly payment.

Add a Row or Column of Numbers

You can quickly add worksheet numbers by building a formula that uses the Excel SUM function. When you use the SUM function in a formula, you can specify as the function's arguments a series of individual cells. For example, SUM(A1, B2, C3) calculates the total of the values in cells A1, B2, and C3.

However, you can also use the SUM function to specify just a single argument, which is a range reference to either a row or a column of numbers. For example, SUM(C3:C21) calculates the total of the values in all the cells in the range C3 to C21.

Add a Row or Column of Numbers



=sum(

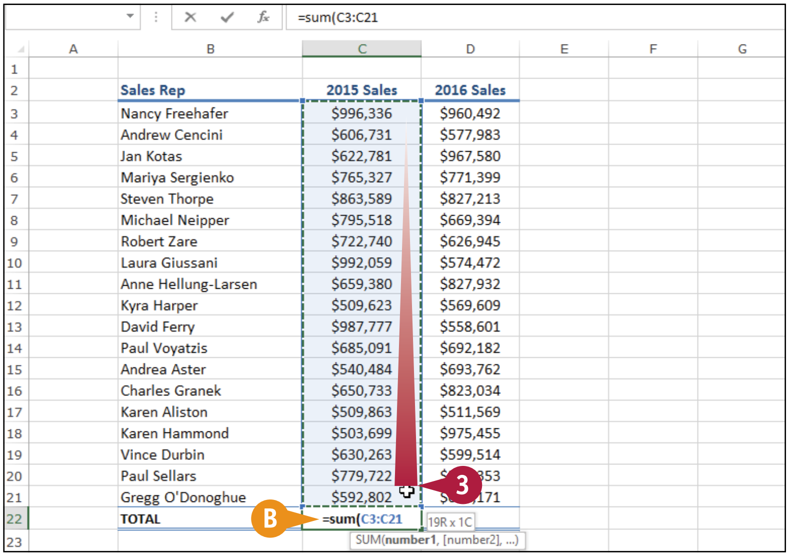
	A	B	C	D	E	F	G
1							
2		Sales Rep	2015 Sales	2016 Sales			
3		Nancy Freehafer	$996,336	$960,492			
4		Andrew Cencini	$606,731	$577,983			
5		Jan Kotas	$622,781	$967,580			
6		Mariya Sergienko	$765,327	$771,399			
7		Steven Thorpe	$863,589	$827,213			
8		Michael Neipper	$795,518	$669,394			
9		Robert Zare	$722,740	$626,945			
10		Laura Giussani	$992,059	$574,472			
11		Anne Hellung-Larsen	$659,380	$827,932			
12		Kyra Harper	$509,623	$569,609			
13		David Ferry	$987,777	$558,601			
14		Paul Voyatzis	$685,091	$692,182			
15		Andrea Aster	$540,484	$693,762			
16		Charles Granek	$650,733	$823,034			
17		Karen Aliston	$509,863	$511,569			
18		Karen Hammond	$503,699	$975,455			
19		Vince Durbin	$6 3	$599,514			
20		Paul Sellars	$77 22	$596,353			
21		Gregg O'Donoghue	$592,802	$652,171			
22		TOTAL	=sum(				
23			SUM(**number1**, [number2], ...)				

① Click in the cell where you want the sum to appear.

② Type **=sum(**.

Ⓐ When you begin a function, Excel displays a banner that shows you the function's arguments.

Note: In the function banner, bold arguments are required, and arguments that appear in square brackets are optional.



=sum(C3:C21

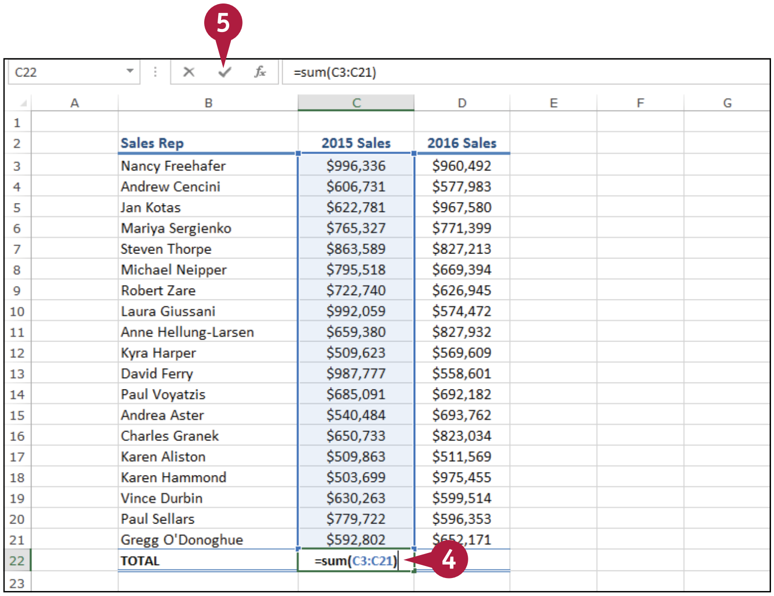
	A	B	C	D	E	F	G
1							
2		Sales Rep	2015 Sales	2016 Sales			
3		Nancy Freehafer	$996,336	$960,492			
4		Andrew Cencini	$606,731	$577,983			
5		Jan Kotas	$622,781	$967,580			
6		Mariya Sergienko	$765,327	$771,399			
7		Steven Thorpe	$863,589	$827,213			
8		Michael Neipper	$795,518	$669,394			
9		Robert Zare	$722,740	$626,945			
10		Laura Giussani	$992,059	$574,472			
11		Anne Hellung-Larsen	$659,380	$827,932			
12		Kyra Harper	$509,623	$569,609			
13		David Ferry	$987,777	$558,601			
14		Paul Voyatzis	$685,091	$692,182			
15		Andrea Aster	$540,484	$693,762			
16		Charles Granek	$650,733	$823,034			
17		Karen Aliston	$509,863	$511,569			
18		Karen Hammond	$503,699	$975,455			
19		Vince Durbin	$630,263	$599,514			
20		Paul Sellars	$779,722	$ 353			
21		Gregg O'Donoghue	$592,802	$ 171			
22		TOTAL	=sum(C3:C21	19R x 1C			
23			SUM(**number1**, [number2], ...)				

③ Use the mouse ✚ to click and drag the row or column of numbers that you want to add.

Ⓑ Excel adds a reference for the range to the formula.

4 Type **)**.

5 Click ✓ or press Enter.

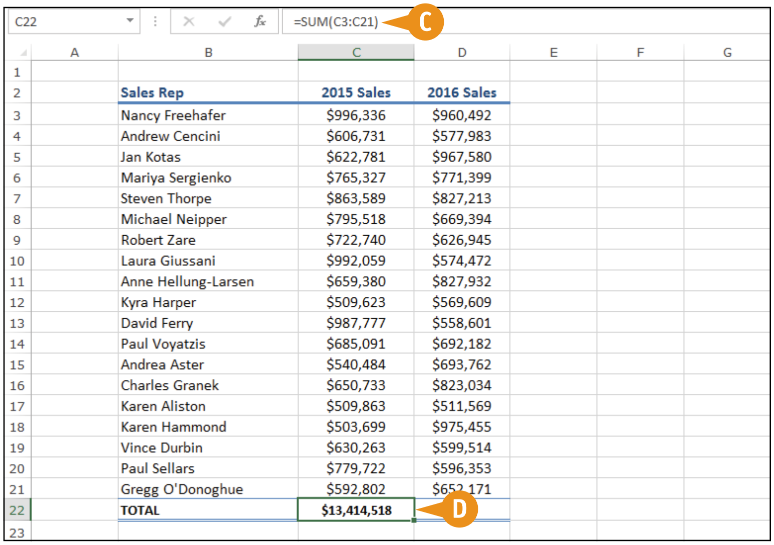


C22 =sum(C3:C21)

	A	B	C	D	E	F	G
1							
2		**Sales Rep**	**2015 Sales**	**2016 Sales**			
3		Nancy Freehafer	$996,336	$960,492			
4		Andrew Cencini	$606,731	$577,983			
5		Jan Kotas	$622,781	$967,580			
6		Mariya Sergienko	$765,327	$771,399			
7		Steven Thorpe	$863,589	$827,213			
8		Michael Neipper	$795,518	$669,394			
9		Robert Zare	$722,740	$626,945			
10		Laura Giussani	$992,059	$574,472			
11		Anne Hellung-Larsen	$659,380	$827,932			
12		Kyra Harper	$509,623	$569,609			
13		David Ferry	$987,777	$558,601			
14		Paul Voyatzis	$685,091	$692,182			
15		Andrea Aster	$540,484	$693,762			
16		Charles Granek	$650,733	$823,034			
17		Karen Aliston	$509,863	$511,569			
18		Karen Hammond	$503,699	$975,455			
19		Vince Durbin	$630,263	$599,514			
20		Paul Sellars	$779,722	$596,353			
21		Gregg O'Donoghue	$592,802	$652,171			
22		**TOTAL**	=sum(C3:C21)				
23							

C Excel displays the formula.

D Excel displays the sum in the cell.



C22 =SUM(C3:C21)

	A	B	C	D	E	F	G
1							
2		**Sales Rep**	**2015 Sales**	**2016 Sales**			
3		Nancy Freehafer	$996,336	$960,492			
4		Andrew Cencini	$606,731	$577,983			
5		Jan Kotas	$622,781	$967,580			
6		Mariya Sergienko	$765,327	$771,399			
7		Steven Thorpe	$863,589	$827,213			
8		Michael Neipper	$795,518	$669,394			
9		Robert Zare	$722,740	$626,945			
10		Laura Giussani	$992,059	$574,472			
11		Anne Hellung-Larsen	$659,380	$827,932			
12		Kyra Harper	$509,623	$569,609			
13		David Ferry	$987,777	$558,601			
14		Paul Voyatzis	$685,091	$692,182			
15		Andrea Aster	$540,484	$693,762			
16		Charles Granek	$650,733	$823,034			
17		Karen Aliston	$509,863	$511,569			
18		Karen Hammond	$503,699	$975,455			
19		Vince Durbin	$630,263	$599,514			
20		Paul Sellars	$779,722	$596,353			
21		Gregg O'Donoghue	$592,802	$652,171			
22		**TOTAL**	**$13,414,518**				
23							

TIPS

Can I use the SUM function to total rows and columns at the same time?

Yes, the SUM function works not only with simple row and column ranges, but with any rectangular range. After you type **=sum(**, use the mouse ✚ to click and drag the entire range that you want to sum.

Can I use the SUM function to total only certain values in a row or column?

Yes. The SUM function can accept multiple arguments, so you can enter as many cells or ranges as you need. After you type **=sum(**, hold down Ctrl and either click each cell that you want to include in the total, or use the mouse ✚ to click and drag each range that you want to sum.

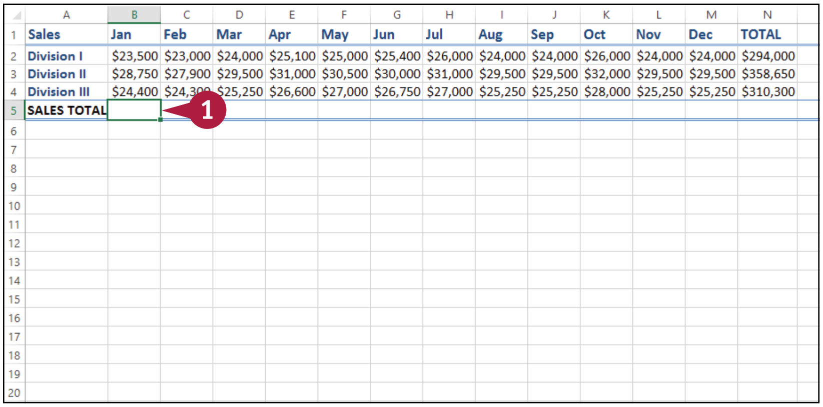
Build an AutoSum Formula

You can reduce the time it takes to build a worksheet as well as reduce the possibility of errors by using the Excel AutoSum feature. This tool adds a SUM function formula to a cell and automatically adds the function arguments based on the structure of the worksheet data. For example, if there is a column of numbers above the cell where you want the SUM function to appear, AutoSum automatically includes that column of numbers as the SUM function argument.

Build an AutoSum Formula

1. Click in the cell where you want the sum to appear.

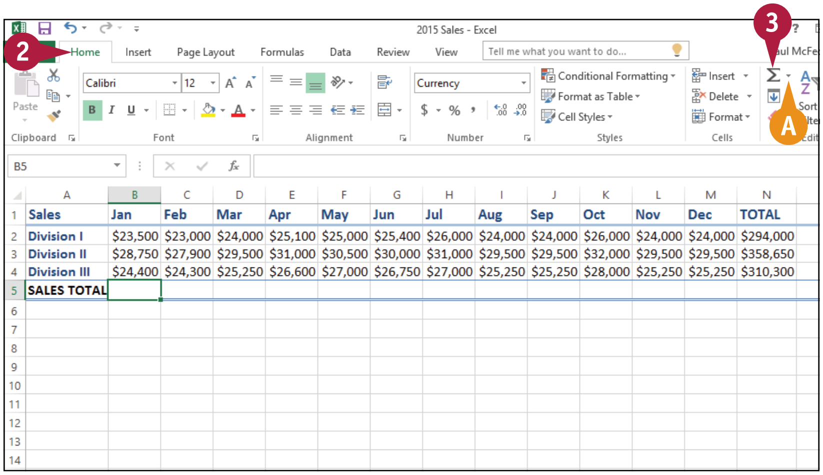
Note: For AutoSum to work, the cell you select should be below or to the right of the range you want to sum.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
5	SALES TOTAL													

2. Click the **Home** tab.
3. Click the **Sum** button (∑).

Ⓐ If you want to use a function other than SUM, click the **Sum** ▾ and then click the operation you want to use: **Average**, **Count Numbers**, **Max**, or **Min**.


2015 Sales - Excel
2
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
3
Paste
Calibri
12
Currency
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort
A
Clipboard
Font
Alignment
Number
Styles
Cells
B5

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
5	SALES TOTAL													

Ⓑ Excel adds a SUM function formula to the cell.

Note: You can also press Alt + = instead of clicking ∑.

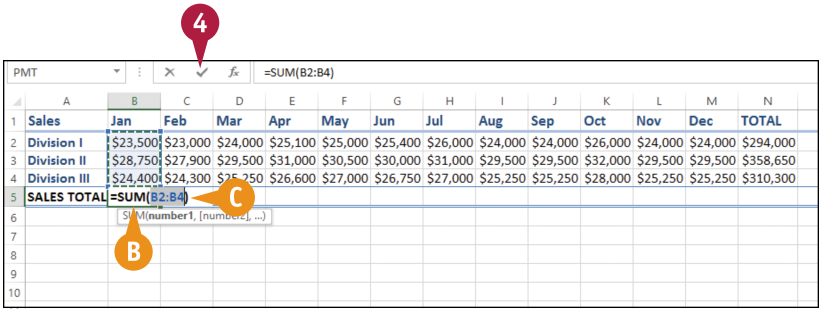
Ⓒ Excel guesses that the range above (or to the left of) the cell is the one you want to add.

If Excel guessed wrong, you can select the correct range manually.

④ Click ✓ or press Enter.

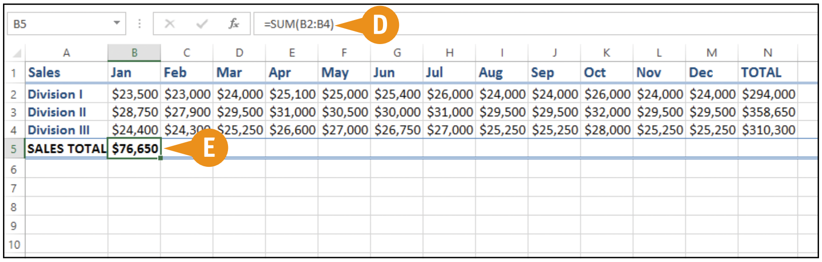
Ⓓ Excel displays the formula.

Ⓔ Excel displays the sum in the cell.



PMT =SUM(B2:B4)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
5	SALES TOTAL	=SUM(B2:B4)												



B5 =SUM(B2:B4)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000	$24,000	$294,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500	$29,500	$358,650
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250	$25,250	$310,300
5	SALES TOTAL	$76,650												

TIPS

Is there a way to see the sum of a range without adding an AutoSum formula?

Yes. You can use the Excel status bar to do this. When you select any range, Excel adds the range’s numeric values and displays the result in the middle of the status bar — for example, SUM: 76,650. By default, Excel also displays the Average and Count. If you want to see a different calculation, right-click the result in the status bar and then click the operation you want to use: Numerical Count, Maximum, or Minimum.

Is there a faster way to add an AutoSum formula?

Yes. If you know the range you want to sum, and that range is either a vertical column with a blank cell below it or a horizontal row with a blank cell to its right, select the range (including the blank cell) and then click ∑ or press Alt + =. Excel populates the blank cell with a SUM formula that totals the selected range.

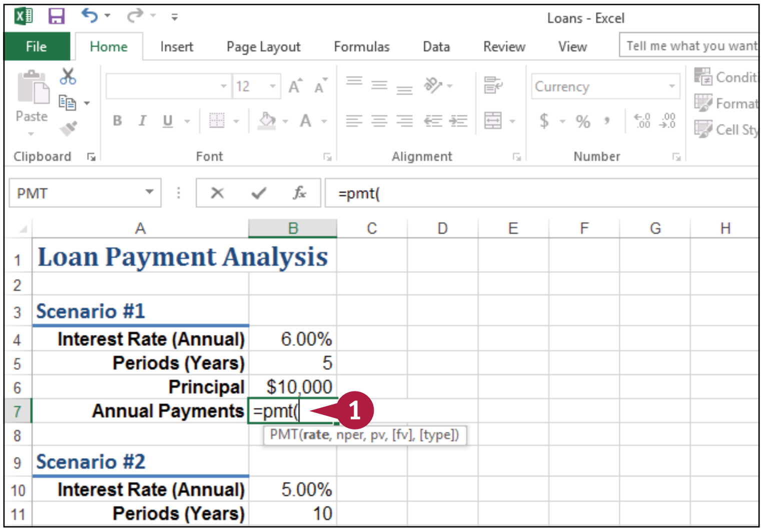
Add a Range Name to a Formula

You can make your formulas easier to build, more accurate, and easier to read by using range names as operands instead of cell and range addresses. For example, the formula =SUM(B2:B10) is difficult to decipher on its own, particularly if you cannot see the range B2:B10 to examine its values. However, if you use the formula =SUM(Expenses), instead, it becomes immediately obvious what the formula is meant to do.

See Chapter 2 to learn how to define names for ranges in Excel.

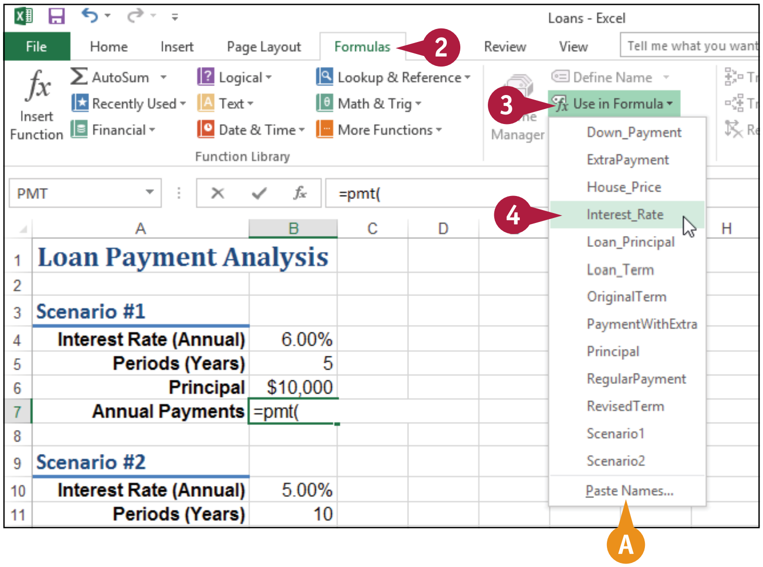
Add a Range Name to a Formula

1. Click in the cell in which you want to build the formula, type **=**, and then type any operands and operators you need before adding the range name.


Loans - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want
Paste
Clipboard
12
Font
Alignment
Currency
Number
Condit
Format
Cell Sty
PMT
fx
=pmt(
1

	A	B
1	Loan Payment Analysis	
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Annual Payments	=pmt(
8		PMT(rate, nper, pv, [fv], [type])
9	Scenario #2	
10	Interest Rate (Annual)	5.00%
11	Periods (Years)	10

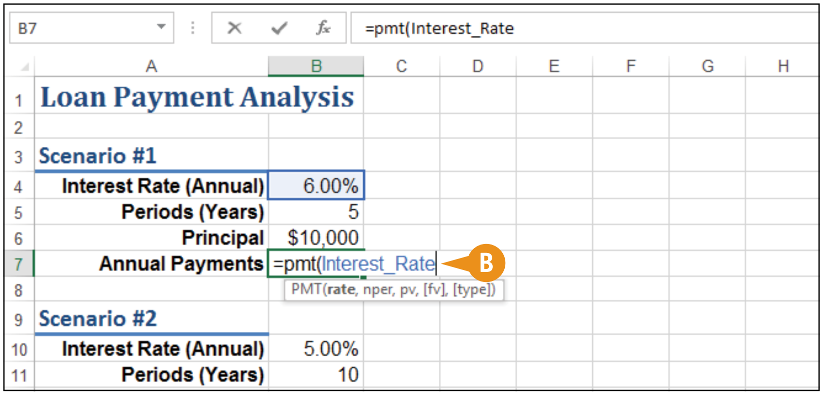
2. Click the **Formulas** tab.
3. Click **Use in Formula**.
   - A Excel displays a list of the range names in the current workbook.
4. Click the range name you want to use.


Loans - Excel
File
Home
Insert
Page Layout
Formulas
2
Review
View
Tell me what you want
fx
Insert Function
AutoSum
Recently Used
Financial
Logical
Text
Date & Time
Lookup & Reference
Math & Trig
More Functions
Function Library
Manager
Define Name
3
Use in Formula
Down_Payment
ExtraPayment
House_Price
4
Interest_Rate
Loan_Principal
Loan_Term
OriginalTerm
PaymentWithExtra
Principal
RegularPayment
RevisedTerm
Scenario1
Scenario2
Paste Names...
A
PMT
=pmt(

	A	B
1	Loan Payment Analysis	
2		
3	Scenario #1	
4	Interest Rate (Annual)	6.00%
5	Periods (Years)	5
6	Principal	$10,000
7	Annual Payments	=pmt(
8		
9	Scenario #2	
10	Interest Rate (Annual)	5.00%
11	Periods (Years)	10

B Excel inserts the range name into the formula.

5 Type any operands and operators you need to complete your formula.



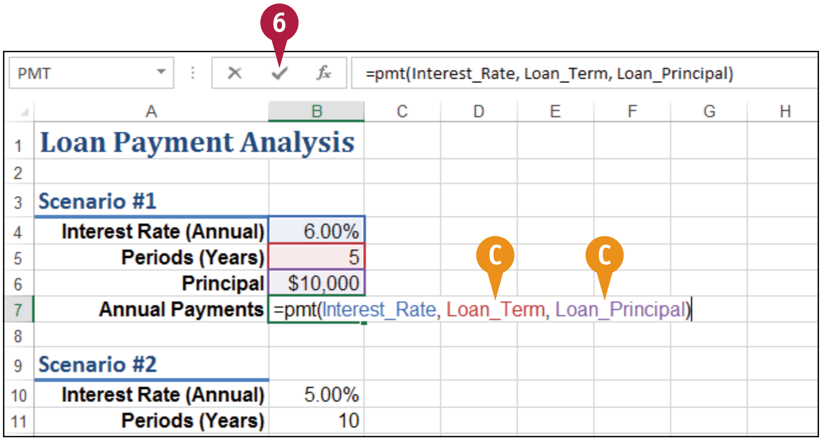
B7 =pmt(Interest_Rate

	A	B	C	D	E	F	G	H
1	Loan Payment Analysis							
2								
3	Scenario #1							
4	Interest Rate (Annual)	6.00%						
5	Periods (Years)	5						
6	Principal	$10,000						
7	Annual Payments	=pmt(Interest_Rate						
8		PMT(rate, nper, pv, [fv], [type])						
9	Scenario #2							
10	Interest Rate (Annual)	5.00%						
11	Periods (Years)	10						

C If you need to insert other range names into your formula, repeat steps **2** to **5** for each name.

6 Click ✓ or press **Enter**.

Excel calculates the formula result.



PMT =pmt(Interest_Rate, Loan_Term, Loan_Principal)

	A	B	C	D	E	F	G	H
1	Loan Payment Analysis							
2								
3	Scenario #1							
4	Interest Rate (Annual)	6.00%						
5	Periods (Years)	5						
6	Principal	$10,000						
7	Annual Payments	=pmt(Interest_Rate, Loan_Term, Loan_Principal)						
8								
9	Scenario #2							
10	Interest Rate (Annual)	5.00%						
11	Periods (Years)	10						

TIPS

If I create a range name after I build my formula, is there an easy way to convert the range reference to the range name?

Yes. Excel offers an Apply Names feature that replaces range references with their associated range names throughout a worksheet. Click the **Formulas** tab, click the **Define Name** ▾, and then click **Apply Names** to open the Apply Names dialog box. In the Apply names list, click the range name you want to use, and then click **OK**. Excel replaces the associated range references with the range name in each formula in the current worksheet.

Do I have to use the list of range names to insert range names into my formula?

No. As you build your formula, you can type the range name manually, if you know it. Alternatively, as you build your formula, click the cell or select the range that has the defined name, and Excel adds the name to your formula instead of the range address. If you want to work from a list of defined range names, click an empty area of the worksheet, click **Formulas**, click **Use in Formula**, click **Paste Names**, and then click **Paste List**.

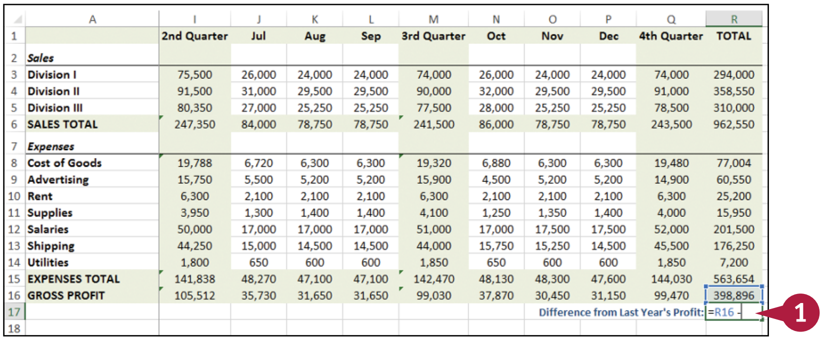
Reference Another Worksheet Range in a Formula

You can add flexibility to your formulas by adding references to ranges that reside in other worksheets. This enables you to take advantage of work you have done in other worksheets, so you do not have to waste time repeating your work in the current worksheet.

Referencing a range in another worksheet also gives you the advantage of having automatically updated information. For example, if the data in the other worksheet range changes, Excel automatically updates your formula to include the changed data when you save your work.

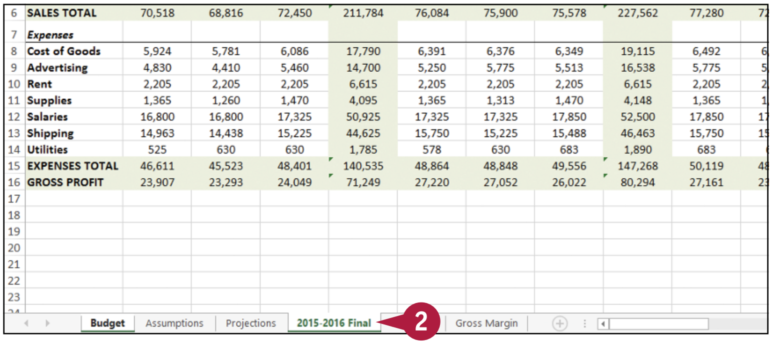
Reference Another Worksheet Range in a Formula

1. Click in the cell in which you want to build the formula, type **=**, and then type any operands and operators you need before adding the range reference.



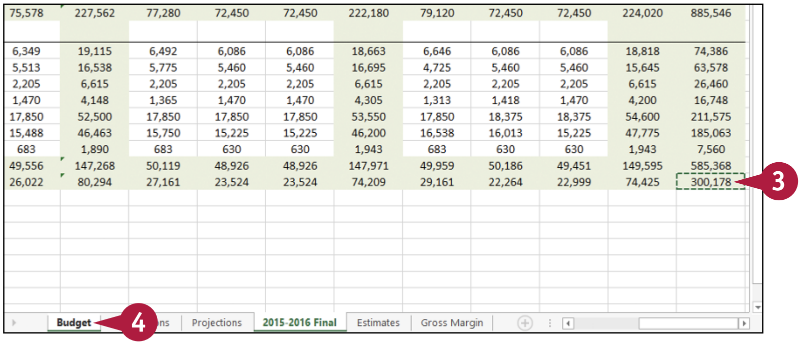
	A	I	J	K	L	M	N	O	P	Q	R
1		2nd Quarter	Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec	4th Quarter	TOTAL
2	*Sales*										
3	Division I	75,500	26,000	24,000	24,000	74,000	26,000	24,000	24,000	74,000	294,000
4	Division II	91,500	31,000	29,500	29,500	90,000	32,000	29,500	29,500	91,000	358,550
5	Division III	80,350	27,000	25,250	25,250	77,500	28,000	25,250	25,250	78,500	310,000
6	SALES TOTAL	247,350	84,000	78,750	78,750	241,500	86,000	78,750	78,750	243,500	962,550
7	*Expenses*										
8	Cost of Goods	19,788	6,720	6,300	6,300	19,320	6,880	6,300	6,300	19,480	77,004
9	Advertising	15,750	5,500	5,200	5,200	15,900	4,500	5,200	5,200	14,900	60,550
10	Rent	6,300	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	25,200
11	Supplies	3,950	1,300	1,400	1,400	4,100	1,250	1,350	1,400	4,000	15,950
12	Salaries	50,000	17,000	17,000	17,000	51,000	17,000	17,500	17,500	52,000	201,500
13	Shipping	44,250	15,000	14,500	14,500	44,000	15,750	15,250	14,500	45,500	176,250
14	Utilities	1,800	650	600	600	1,850	650	600	600	1,850	7,200
15	EXPENSES TOTAL	141,838	48,270	47,100	47,100	142,470	48,130	48,300	47,600	144,030	563,654
16	GROSS PROFIT	105,512	35,730	31,650	31,650	99,030	37,870	30,450	31,150	99,470	398,896
17										Difference from Last Year's Profit:	=R16 -
18											

2. Press Ctrl + Page down until the worksheet you want to use appears.



6	SALES TOTAL	70,518	68,816	72,450	211,784	76,084	75,900	75,578	227,562	77,280
7	*Expenses*									
8	Cost of Goods	5,924	5,781	6,086	17,790	6,391	6,376	6,349	19,115	6,492
9	Advertising	4,830	4,410	5,460	14,700	5,250	5,775	5,513	16,538	5,775
10	Rent	2,205	2,205	2,205	6,615	2,205	2,205	2,205	6,615	2,205
11	Supplies	1,365	1,260	1,470	4,095	1,365	1,313	1,470	4,148	1,365
12	Salaries	16,800	16,800	17,325	50,925	17,325	17,325	17,850	52,500	17,850
13	Shipping	14,963	14,438	15,225	44,625	15,750	15,225	15,488	46,463	15,750
14	Utilities	525	630	630	1,785	578	630	683	1,890	683
15	EXPENSES TOTAL	46,611	45,523	48,401	140,535	48,864	48,848	49,556	147,268	50,119
16	GROSS PROFIT	23,907	23,293	24,049	71,249	27,220	27,052	26,022	80,294	27,161
17										
18										
19										
20										
21										
22										
23										

3. Select the range you want to use.
4. Press Ctrl + Page up until you return to the original worksheet.

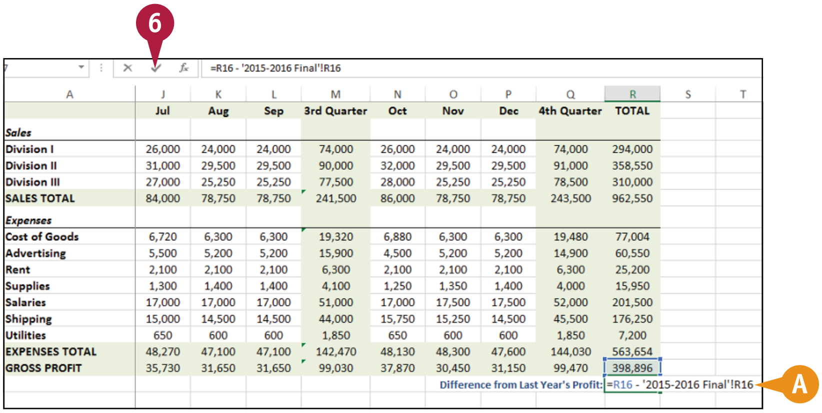


75,578	227,562	77,280	72,450	72,450	222,180	79,120	72,450	72,450	224,020	885,546
6,349	19,115	6,492	6,086	6,086	18,663	6,646	6,086	6,086	18,818	74,386
5,513	16,538	5,775	5,460	5,460	16,695	4,725	5,460	5,460	15,645	63,578
2,205	6,615	2,205	2,205	2,205	6,615	2,205	2,205	2,205	6,615	26,460
1,470	4,148	1,365	1,470	1,470	4,305	1,313	1,418	1,470	4,200	16,748
17,850	52,500	17,850	17,850	17,850	53,550	17,850	18,375	18,375	54,600	211,575
15,488	46,463	15,750	15,225	15,225	46,200	16,538	16,013	15,225	47,775	185,063
683	1,890	683	630	630	1,943	683	630	630	1,943	7,560
49,556	147,268	50,119	48,926	48,926	147,971	49,959	50,186	49,451	149,595	585,368
26,022	80,294	27,161	23,524	23,524	74,209	29,161	22,264	22,999	74,425	300,178

A. A reference to the range on the other worksheet appears in your formula.

5. Type any operands and operators you need to complete your formula.
6. Click ✓ or press Enter.

Excel calculates the formula result.



=R16 - '2015-2016 Final'!R16

A	J	K	L	M	N	O	P	Q	R	S	T
	Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec	4th Quarter	TOTAL		
Sales											
Division I	26,000	24,000	24,000	74,000	26,000	24,000	24,000	74,000	294,000		
Division II	31,000	29,500	29,500	90,000	32,000	29,500	29,500	91,000	358,550		
Division III	27,000	25,250	25,250	77,500	28,000	25,250	25,250	78,500	310,000		
SALES TOTAL	84,000	78,750	78,750	241,500	86,000	78,750	78,750	243,500	962,550		
Expenses											
Cost of Goods	6,720	6,300	6,300	19,320	6,880	6,300	6,300	19,480	77,004		
Advertising	5,500	5,200	5,200	15,900	4,500	5,200	5,200	14,900	60,550		
Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	25,200		
Supplies	1,300	1,400	1,400	4,100	1,250	1,350	1,400	4,000	15,950		
Salaries	17,000	17,000	17,000	51,000	17,000	17,500	17,500	52,000	201,500		
Shipping	15,000	14,500	14,500	44,000	15,750	15,250	14,500	45,500	176,250		
Utilities	650	600	600	1,850	650	600	600	1,850	7,200		
EXPENSES TOTAL	48,270	47,100	47,100	142,470	48,130	48,300	47,600	144,030	563,654		
GROSS PROFIT	35,730	31,650	31,650	99,030	37,870	30,450	31,150	99,470	398,896		
								Difference from Last Year's Profit:	=R16 - '2015-2016 Final'!R16		

TIPS

Can I manually reference a range in another worksheet?

Yes. Rather than selecting the other worksheet range with your mouse, you can type the range reference directly into your formula. Type the worksheet name, surrounded by single quotation marks (') if the name contains a space; type an exclamation mark (**!**); then type the cell or range address. Here is an example: **'Expenses 2013'!B2:B10**.

Can I reference a range in another workbook in my formula?

Yes. First make sure the workbook you want to reference is open. When you reach the point in your formula where you want to add the reference, click the Excel icon (X) in the Windows taskbar, and then click the other workbook to switch to it. Click the worksheet that has the range you want to reference, and then select the range. Click X and then click the original workbook to switch back to it. Excel adds the other workbook range reference to your formula.

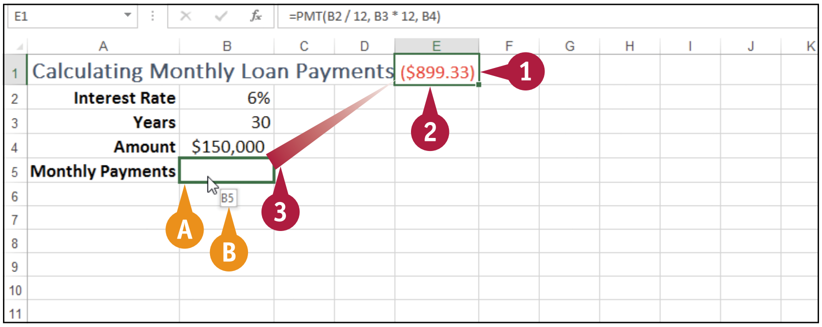
Move or Copy a Formula

You can restructure or reorganize a worksheet by moving an existing formula to a different part of the worksheet. When you move a formula, Excel preserves the formula's range references.

Excel also enables you to make a copy of a formula, which is a useful technique if you require a duplicate of the formula elsewhere or if you require a formula that is similar to an existing formula. When you copy a formula, Excel adjusts the range references to the new location.

Move or Copy a Formula

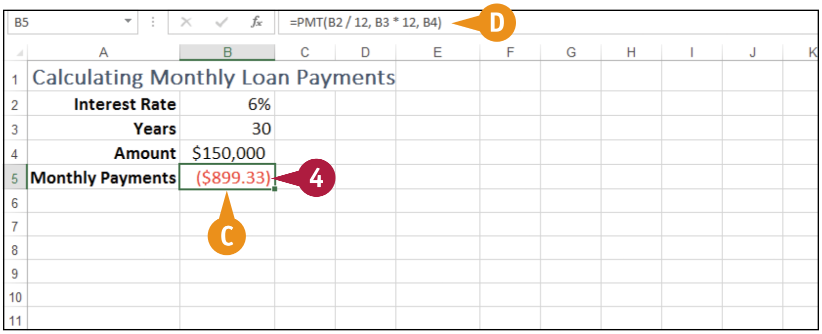
Move a Formula



E1

=PMT(B2 / 12, B3 * 12, B4)

	A	B	C	D	E
1	Calculating Monthly Loan Payments				($899.33)
2	Interest Rate	6%			
3	Years	30			
4	Amount	$150,000			
5	Monthly Payments				



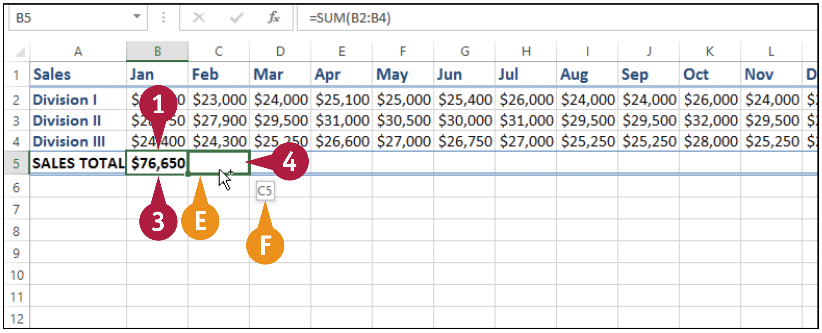
B5

=PMT(B2 / 12, B3 * 12, B4)

	A	B
1	Calculating Monthly Loan Payments	
2	Interest Rate	6%
3	Years	30
4	Amount	$150,000
5	Monthly Payments	($899.33)

1. Click the cell that contains the formula you want to move.
2. Position ✚ over any outside border of the cell (✚ changes to ✥).
3. Click and drag the cell to the new location (✥ changes to ↖).
   - A Excel displays an outline of the cell.
   - B Excel displays the address of the new location.
4. Release the mouse button.
   - C Excel moves the formula to the new location.
   - D Excel does not change the formula's range references.

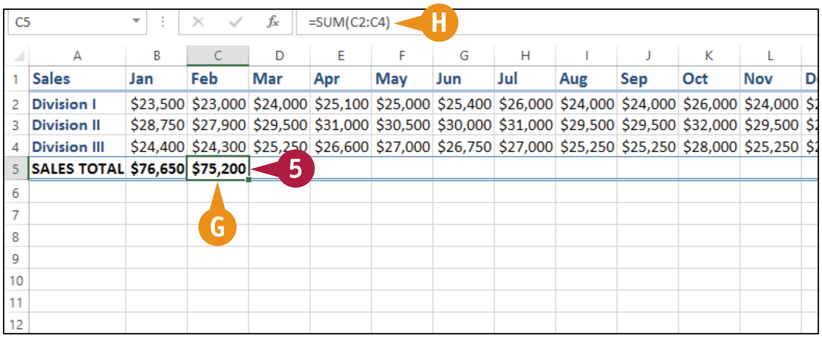
Copy a Formula



B5 =SUM(B2:B4)

	A	B	C	D	E	F	G	H	I	J	K	L
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
2	Division I	$[illegible]0	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000
3	Division II	$2[illegible]50	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250
5	SALES TOTAL	$76,650										

C5



C5 =SUM(C2:C4)

	A	B	C	D	E	F	G	H	I	J	K	L
1	Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
2	Division I	$23,500	$23,000	$24,000	$25,100	$25,000	$25,400	$26,000	$24,000	$24,000	$26,000	$24,000
3	Division II	$28,750	$27,900	$29,500	$31,000	$30,500	$30,000	$31,000	$29,500	$29,500	$32,000	$29,500
4	Division III	$24,400	$24,300	$25,250	$26,600	$27,000	$26,750	$27,000	$25,250	$25,250	$28,000	$25,250
5	SALES TOTAL	$76,650	$75,200									

① Click the cell that contains the formula you want to copy.

② Press and hold **Ctrl**.

③ Position ✚ over any outside border of the cell (✚ changes to ↖).

④ Click and drag the cell to the location where you want the copy to appear.

Ⓔ Excel displays an outline of the cell.

Ⓕ Excel displays the address of the new location.

⑤ Release the mouse button.

⑥ Release **Ctrl**.

Ⓖ Excel creates a copy of the formula in the new location.

Ⓗ Excel adjusts the range references.

Note: You can make multiple copies by dragging the bottom-right corner of the cell. Excel fills the adjacent cells with copies of the formula. See the following section, "Switch to Absolute Cell References," for an example.

TIP

Why does Excel adjust the range references when I copy a formula?

When you make a copy of a formula, Excel assumes that you want that copy to reference different ranges than in the original formula. In particular, Excel assumes that the ranges you want to use in the new formula are positioned relative to the ranges used in the original formula, and that the relative difference is equal to the number of rows and columns you dragged the cell to create the copy.

For example, suppose your original formula references cell A1, and you make a copy of the formula in the cell one column to the right. In that case, Excel also adjusts the cell reference one column to the right, so it becomes B1 in the new formula. To learn how to control this behavior, see the following section, "Switch to Absolute Cell References."

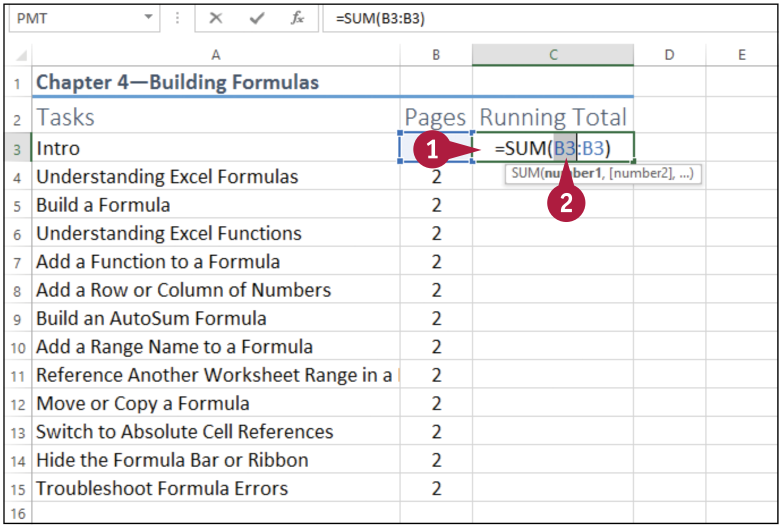
Switch to Absolute Cell References

You can make some formulas easier to copy by switching to absolute cell references. When you use a regular cell address — called a *relative cell reference* — such as A1 in a formula, Excel adjusts that reference when you copy the formula to another location. To prevent that reference from changing, you must change it to the *absolute cell reference* format: $A$1.

See the first tip at the end of this section to learn more about the difference between relative and absolute cell references.

Switch to Absolute Cell References

1. Double-click the cell that contains the formula you want to edit.
2. Select the cell reference you want to change.
3. Press F4.

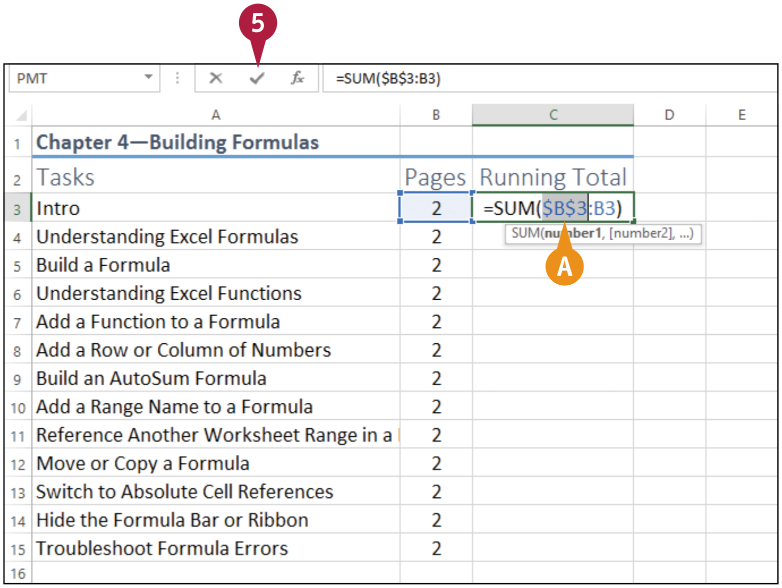


=SUM(B3:B3)

	A	B	C	D	E
1	**Chapter 4—Building Formulas**				
2	Tasks	Pages	Running Total		
3	Intro		=SUM(B3:B3)		
4	Understanding Excel Formulas	2			
5	Build a Formula	2			
6	Understanding Excel Functions	2			
7	Add a Function to a Formula	2			
8	Add a Row or Column of Numbers	2			
9	Build an AutoSum Formula	2			
10	Add a Range Name to a Formula	2			
11	Reference Another Worksheet Range in a	2			
12	Move or Copy a Formula	2			
13	Switch to Absolute Cell References	2			
14	Hide the Formula Bar or Ribbon	2			
15	Troubleshoot Formula Errors	2			
16					

- A Excel switches the address to an absolute cell reference.

4. Repeat steps 2 and 3 to switch any other cell addresses that you require in the absolute reference format.
5. Click ✓ or press Enter.



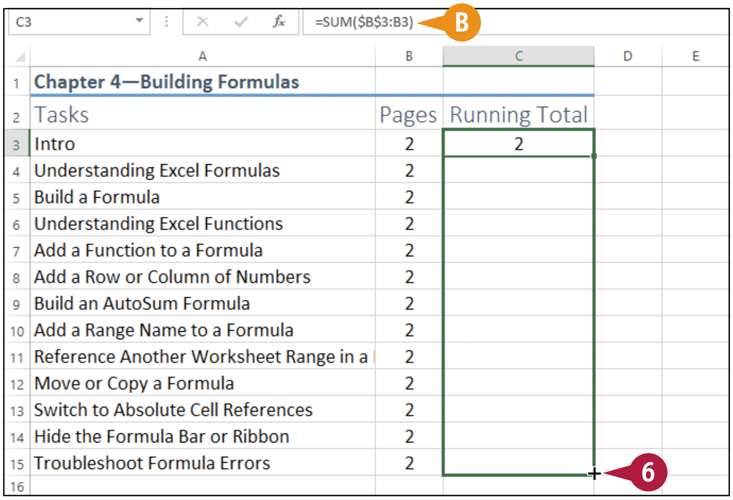
=SUM($B$3:B3)

	A	B	C	D	E
1	**Chapter 4—Building Formulas**				
2	Tasks	Pages	Running Total		
3	Intro	2	=SUM($B$3:B3)		
4	Understanding Excel Formulas	2			
5	Build a Formula	2			
6	Understanding Excel Functions	2			
7	Add a Function to a Formula	2			
8	Add a Row or Column of Numbers	2			
9	Build an AutoSum Formula	2			
10	Add a Range Name to a Formula	2			
11	Reference Another Worksheet Range in a	2			
12	Move or Copy a Formula	2			
13	Switch to Absolute Cell References	2			
14	Hide the Formula Bar or Ribbon	2			
15	Troubleshoot Formula Errors	2			
16					

B Excel adjusts the formula.

6 Copy the formula.

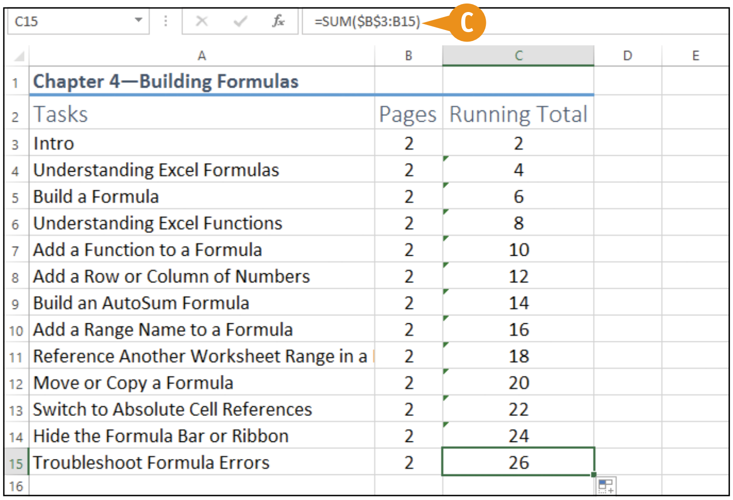
Note: See the previous section, “Move or Copy a Formula,” to learn how to copy a formula.



C3 =SUM($B$3:B3)

	A	B	C	D	E
1	Chapter 4—Building Formulas				
2	Tasks	Pages	Running Total		
3	Intro	2	2		
4	Understanding Excel Formulas	2			
5	Build a Formula	2			
6	Understanding Excel Functions	2			
7	Add a Function to a Formula	2			
8	Add a Row or Column of Numbers	2			
9	Build an AutoSum Formula	2			
10	Add a Range Name to a Formula	2			
11	Reference Another Worksheet Range in a	2			
12	Move or Copy a Formula	2			
13	Switch to Absolute Cell References	2			
14	Hide the Formula Bar or Ribbon	2			
15	Troubleshoot Formula Errors	2			
16					

C Excel preserves the absolute cell references in the copied formulas.



C15 =SUM($B$3:B15)

	A	B	C	D	E
1	Chapter 4—Building Formulas				
2	Tasks	Pages	Running Total		
3	Intro	2	2		
4	Understanding Excel Formulas	2	4		
5	Build a Formula	2	6		
6	Understanding Excel Functions	2	8		
7	Add a Function to a Formula	2	10		
8	Add a Row or Column of Numbers	2	12		
9	Build an AutoSum Formula	2	14		
10	Add a Range Name to a Formula	2	16		
11	Reference Another Worksheet Range in a	2	18		
12	Move or Copy a Formula	2	20		
13	Switch to Absolute Cell References	2	22		
14	Hide the Formula Bar or Ribbon	2	24		
15	Troubleshoot Formula Errors	2	26		
16					

TIPS

What is the difference between absolute cell references and relative cell references?

When you use a cell reference in a formula, Excel treats that reference as being relative to the formula’s cell. For example, if the formula is in cell B5 and it references cell A1, Excel effectively treats A1 as the cell four rows up and one column to the left. If you copy the formula to cell D10, then the cell four rows up and one column to the left now refers to cell C6, so in the copied formula Excel changes A1 to C6. If the original formula instead refers to $A$1, then the copied formula in cell D10 also refers to $A$1.

How do I restore a cell address back to a relative cell reference?

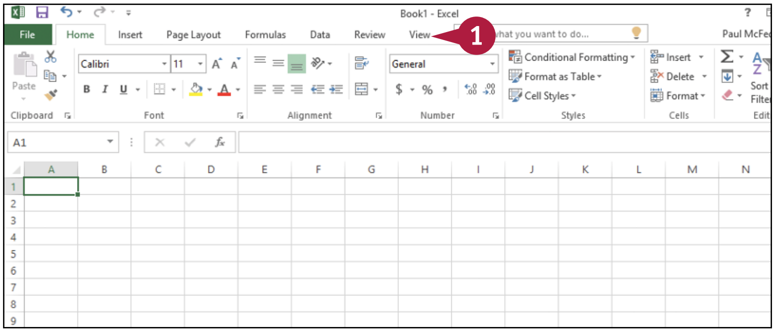
You can use the F4 keyboard technique, which actually runs the address through four different reference formats. Press F4 once to switch to the absolute cell reference format, such as $A$1. Press F4 again to switch to a mixed reference format that uses a relative column and absolute row (A$1). Press F4 a third time to switch to a mixed reference format that uses an absolute column and relative row ($A1). Finally, press F4 a fourth time to return to the relative cell reference (A1).

Hide the Formula Bar or Ribbon

You can give yourself a bit more room in the Excel window by hiding the Formula bar or Ribbon. Hiding the Formula bar is a good idea if you never use the Formula bar to enter or edit cell data and you never use Formula bar features such as the Name box, the Enter button, and the Insert Function button. After hiding the Formula bar, if you find that you need it, you can quickly restore it to the Excel window. You can also gain more worksheet room by hiding the Ribbon. When you hide the Ribbon, Excel keeps the tabs visible, so you can still access the commands.

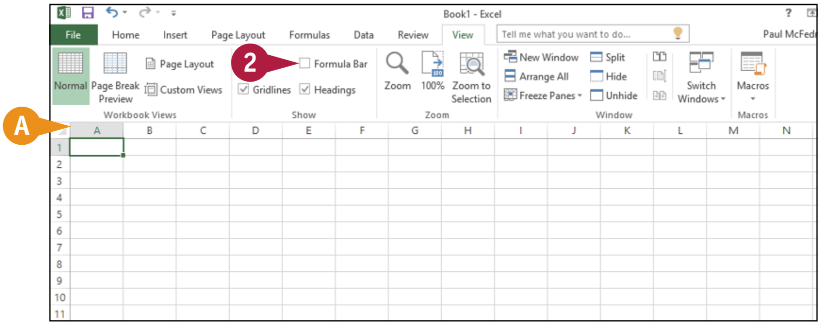
Hide the Formula Bar or Ribbon

Hide the Formula Bar



Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
1

1. Click the **View** tab.



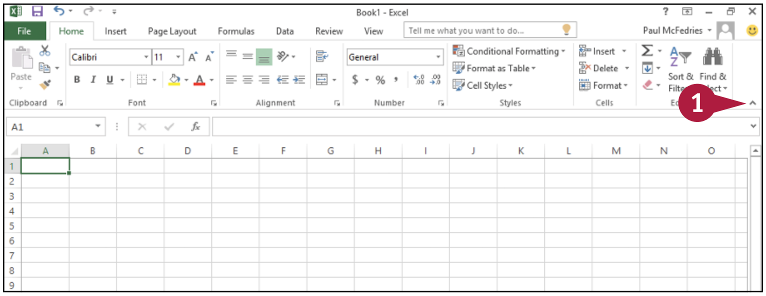
Book1 - Excel
View
2
Formula Bar
Gridlines
Headings
A

2. Click **Formula Bar** (☑ changes to ☐).

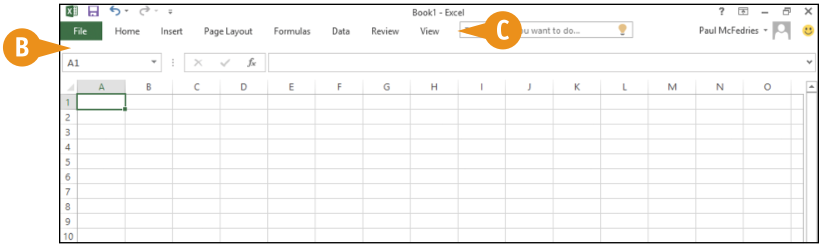
A Excel removes the Formula bar from the window.

Note: To restore the Formula bar, repeat steps **1** and **2** (☐ changes to ☑).

Hide the Ribbon


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Clipboard
Font
Alignment
Number
Styles
Cells
Conditional Formatting
Format as Table
Cell Styles
Calibri
11
General
A1
1

1. Click **Unpin the Ribbon** (⌃).


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Paul McFedries
A1
B
C

- **B** Excel hides the Ribbon.
- **C** Excel keeps the Ribbon tabs visible.

Note: To restore the Ribbon, click any tab and then click **Pin the Ribbon** (📌).

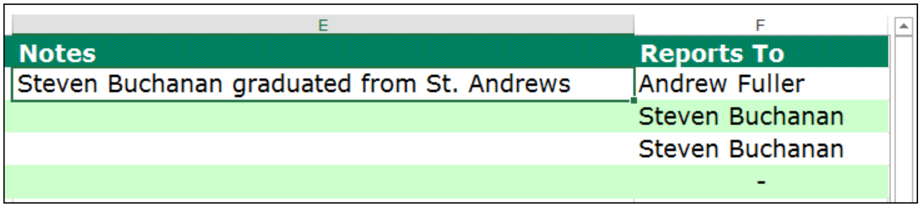
Note: You can also hide and display the Ribbon by pressing Ctrl + F1.

TIP

If I have a long entry in a cell, I only see part of the entry in the Formula bar. Can I fix that?

Yes, you can use the Expand Formula Bar feature in Excel to expand the formula to show multiple lines of data instead of just a single line. On the right side of the Formula bar, click the **Expand Formula Bar** button (⌄) or press Ctrl + Shift + U to increase the size of the Formula bar as shown here. If you still cannot see the entire cell entry, either click and drag the bottom edge of the Formula bar to expand it even further, or click ▾ and ▴ to scroll through the entry.

When you are done, click the **Collapse Formula Bar** button (⌃) or press Ctrl + Shift + U to return the Formula bar to its normal state.



E	F
Notes	Reports To
Steven Buchanan graduated from St. Andrews	Andrew Fuller
	Steven Buchanan
	Steven Buchanan
	-

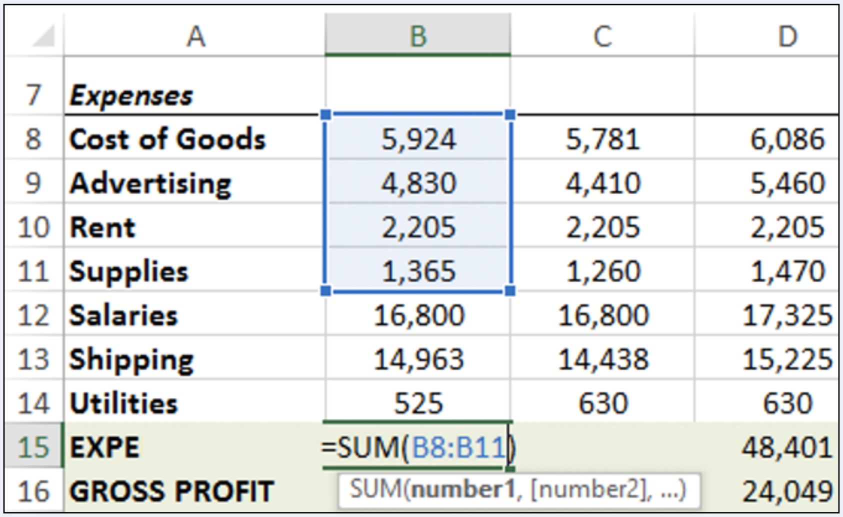
Troubleshoot Formula Errors

Despite your best efforts, a formula may return an inaccurate or erroneous result. To help you fix such problem formulas, there are a few troubleshooting techniques you can use, such as checking for incorrect range references or function arguments, confirming your data, and checking for punctuation errors such as missing colons or parentheses.

If Excel displays an error such as #DIV/0 instead of a result, then you also need to understand these error messages so that you can troubleshoot and correct the problem.

Confirm Range References

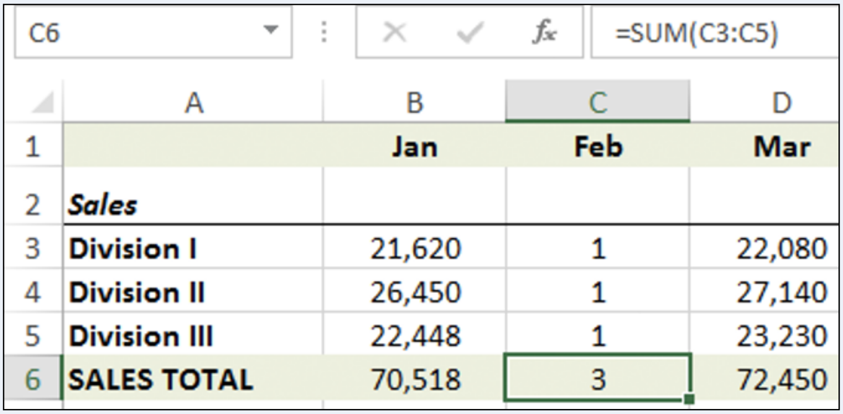
If your formula is returning an unexpected or inaccurate result, the first thing to check is your range and cell references. For example, if your data is in the range A1:A10, but your formula uses A1:A9, then the result will be inaccurate. The easiest way to check the range and cell references is to double-click the cell containing the formula. Excel highlights the range referenced by the formula, so you can see at a glance which range your formula is using.



	A	B	C	D
7	*Expenses*			
8	**Cost of Goods**	5,924	5,781	6,086
9	**Advertising**	4,830	4,410	5,460
10	**Rent**	2,205	2,205	2,205
11	**Supplies**	1,365	1,260	1,470
12	**Salaries**	16,800	16,800	17,325
13	**Shipping**	14,963	14,438	15,225
14	**Utilities**	525	630	630
15	**EXPE**	=SUM(B8:B11)		48,401
16	**GROSS PROFIT**	SUM(**number1**, [number2], ...)		24,049

Confirm Range Data

If your formula is correct but it is still producing unexpected results, the problem might lie with the data instead of the formula. Double-check your range data to make sure that it is accurate and up to date.

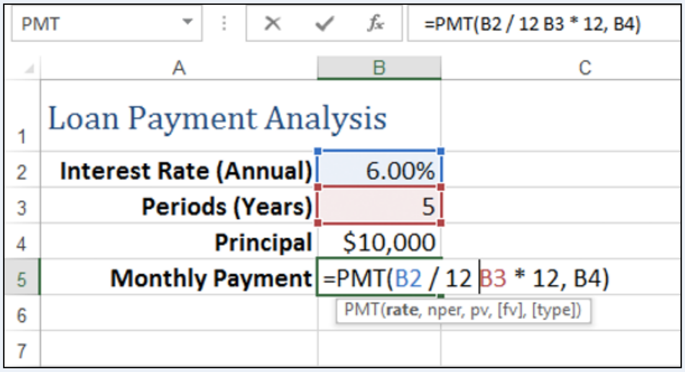


=SUM(C3:C5)

	A	B	C	D
1		**Jan**	**Feb**	**Mar**
2	*Sales*			
3	**Division I**	21,620	1	22,080
4	**Division II**	26,450	1	27,140
5	**Division III**	22,448	1	23,230
6	**SALES TOTAL**	70,518	3	72,450

Confirm Punctuation

Many formulas produce inaccurate or erroneous results because of incorrect punctuation. Look for missing colons in range references; missing or misplaced quotation marks in string data or links to other worksheets or workbooks; and missing commas in function arguments. Also check parentheses to make sure you have one closing parenthesis for each opening parenthesis, and that your parentheses are in the correct locations within the formula.

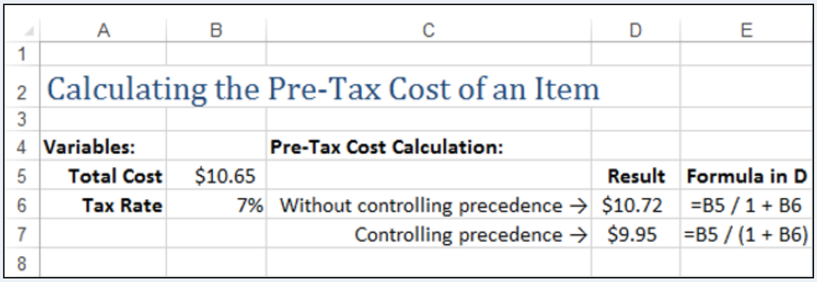


=PMT(B2 / 12 B3 * 12, B4)

	A	B	C
1	Loan Payment Analysis		
2	Interest Rate (Annual)	6.00%	
3	Periods (Years)	5	
4	Principal	$10,000	
5	Monthly Payment	=PMT(B2 / 12 B3 * 12, B4)	
6		PMT(rate, nper, pv, [fv], [type])	
7			

Confirm Operator Precedence

The order in which Excel calculates numeric formulas can make a big difference to the final result, particularly if you are mixing addition and subtraction with multiplication and division. Confirm the correct order of precedence that your formula requires; compare this with the natural order of operator precedence in Excel, as described in the "Understanding Excel Formulas" section earlier in this chapter; and then use parentheses to force the correct order if necessary.



	A	B	C	D	E
1					
2	Calculating the Pre-Tax Cost of an Item				
3					
4	Variables:		Pre-Tax Cost Calculation:		
5	Total Cost	$10.65		Result	Formula in D
6	Tax Rate	7%	Without controlling precedence →	$10.72	=B5 / 1 + B6
7			Controlling precedence →	$9.95	=B5 / (1 + B6)
8					

Understand the Excel Error Values

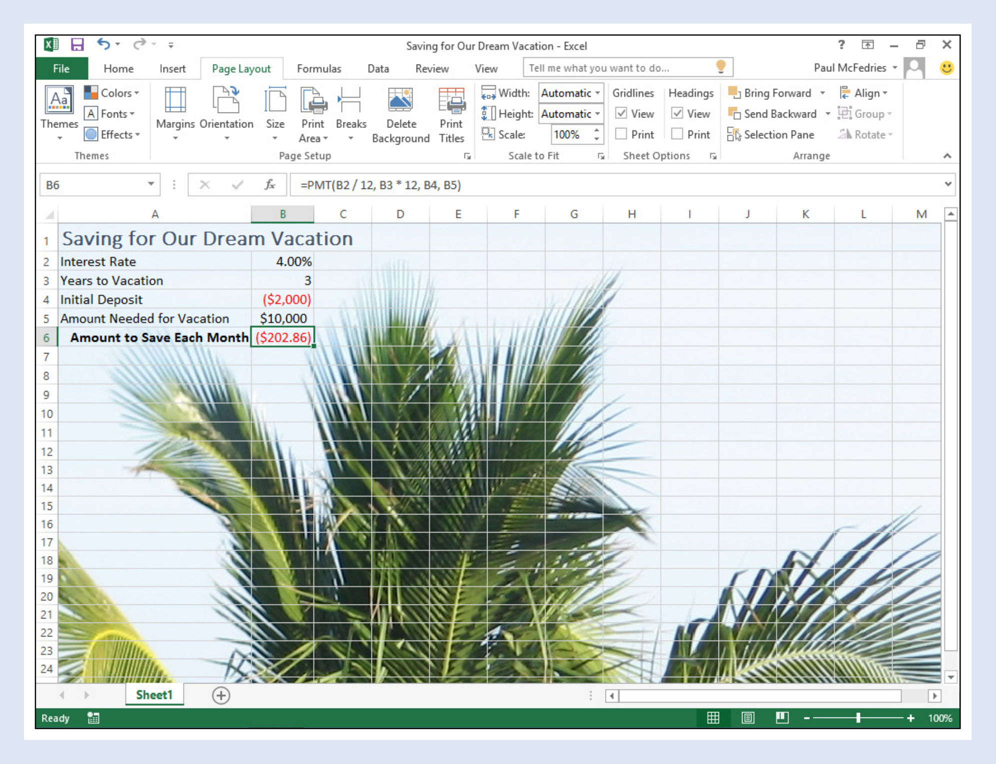
Excel may display an error value instead of a formula result. Here are descriptions of the six main error types:

Error	Description
#DIV/0	Your formula is dividing by zero. Check the divisor input cells for values that are either zero or blank.
#N/A	Your formula cannot return a legitimate result. Check that your function arguments are appropriate for each function.
#NAME?	Your formula uses a name that Excel does not recognize. Check your range names and function names.
#NUM!	Your formula uses a number inappropriately. Check the arguments for your mathematical functions to make sure they use the correct types of numbers.
#REF#	Your formula contains an invalid cell reference. This usually occurs when you delete a cell referenced by a formula. Adjust the formula to use a different cell.
#VALUE!	Your formula uses an inappropriate value in a function argument. Check your function arguments to make sure they use the correct data type.

CHAPTER 5

Manipulating Worksheets

An Excel worksheet is where you enter your headings and data and build your formulas. You will spend most of your time in Excel operating within a worksheet, so you need to know how to navigate and perform worksheet tasks such as renaming, moving, copying, and deleting.



Saving for Our Dream Vacation - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Delete Background
Print Titles
Page Setup
Width:
Automatic
Height:
Automatic
Scale:
100%
Scale to Fit
Gridlines
☑ View
☐ Print
Headings
☑ View
☐ Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Align
Group
Rotate
Arrange
B6
Sheet1
Ready
100%

=PMT(B2 / 12, B3 * 12, B4, B5)

	A	B
1	Saving for Our Dream Vacation	
2	Interest Rate	4.00%
3	Years to Vacation	3
4	Initial Deposit	($2,000)
5	Amount Needed for Vacation	$10,000
6	**Amount to Save Each Month**	($202.86)

Navigate a Worksheet 112
Rename a Worksheet 113
Create a New Worksheet 114
Move a Worksheet 116
Copy a Worksheet 118
Delete a Worksheet 120
Change the Gridline Color 122
Toggle Worksheet Gridlines On and Off 124
Toggle Worksheet Headings On and Off 125
Set the Worksheet Tab Color 126
Set the Worksheet Background 128
Zoom In on or Out of a Worksheet 130
Split a Worksheet into Two Panes 132
Hide and Unhide a Worksheet 134

Navigate a Worksheet

You can use a few keyboard techniques that make it easier to navigate data after you have entered it in a worksheet.

It is usually easiest to use your mouse to click in the next cell you want to work with. If you are using Excel on a tablet or PC that has a touchscreen, then you can tap the next cell you want to use. However, if you are entering data, then using the keyboard to navigate to the next cell is often faster because your hands do not have to leave the keyboard.

Keyboard Techniques for Navigating a Worksheet

Press	To move
←	Left one cell
→	Right one cell
↑	Up one cell
↓	Down one cell
Home	To the beginning of the current row
Page down	Down one screen
Page up	Up one screen
Alt + Page down	One screen to the right
Alt + Page up	One screen to the left
Ctrl + Home	To the top-left corner of the worksheet (cell A1)
Ctrl + End	To the bottom-right corner of the used portion of the worksheet
Ctrl + arrow keys	In the direction of the arrow to the next non-blank cell if the current cell is blank, or to the last non-blank cell if the current cell is not blank

Rename a Worksheet

You can make your Excel workbooks easier to understand and navigate by providing each worksheet with a name that reflects the contents of the sheet.

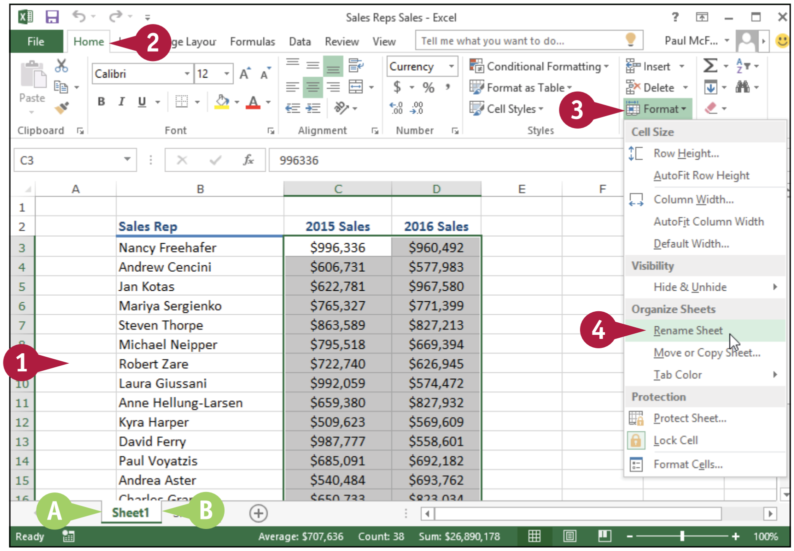
Excel provides worksheets with generic names such as Sheet1 and Sheet2, but you can change these to more descriptive names such as Sales 2013, Amortization, or Budget Data. Note, however, that although worksheet names can include any combination of letters, numbers, symbols, and spaces, they cannot be longer than 31 characters.

Rename a Worksheet

1. Display the worksheet you want to rename.
2. Click the **Home** tab.
3. Click **Format**.
4. Click **Rename Sheet**.

A. You can also double-click the worksheet's tab.

B. Excel opens the worksheet name for editing and selects the text.


Sales Reps Sales - Excel
File
Home
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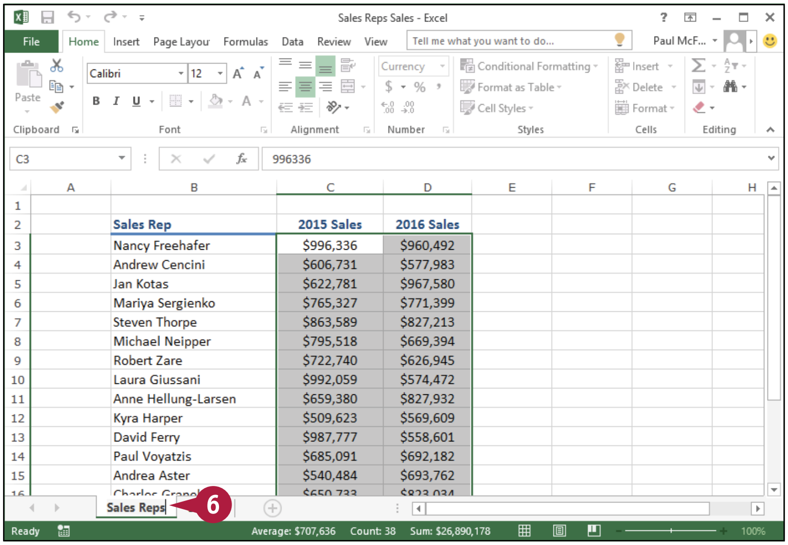
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
12
Currency
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
1
2
3
4
A
B
Sheet1
Ready
Average: $707,636
Count: 38
Sum: $26,890,178
100%

C3 | 996336

	A	B	C	D	E	F
1						
2		Sales Rep	2015 Sales	2016 Sales		
3		Nancy Freehafer	$996,336	$960,492		
4		Andrew Cencini	$606,731	$577,983		
5		Jan Kotas	$622,781	$967,580		
6		Mariya Sergienko	$765,327	$771,399		
7		Steven Thorpe	$863,589	$827,213		
8		Michael Neipper	$795,518	$669,394		
9		Robert Zare	$722,740	$626,945		
10		Laura Giussani	$992,059	$574,472		
11		Anne Hellung-Larsen	$659,380	$827,932		
12		Kyra Harper	$509,623	$569,609		
13		David Ferry	$987,777	$558,601		
14		Paul Voyatzis	$685,091	$692,182		
15		Andrea Aster	$540,484	$693,762		

5. If you want to edit the existing name, press either ← or → to deselect the text.
6. Type the new worksheet name.
7. Press Enter.

Excel assigns the new name to the worksheet.


Sales Reps Sales - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
12
Currency
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
6
Sales Reps
Ready
Average: $707,636
Count: 38
Sum: $26,890,178
100%

C3 | 996336

	A	B	C	D	E	F	G	H
1								
2		Sales Rep	2015 Sales	2016 Sales				
3		Nancy Freehafer	$996,336	$960,492				
4		Andrew Cencini	$606,731	$577,983				
5		Jan Kotas	$622,781	$967,580				
6		Mariya Sergienko	$765,327	$771,399				
7		Steven Thorpe	$863,589	$827,213				
8		Michael Neipper	$795,518	$669,394				
9		Robert Zare	$722,740	$626,945				
10		Laura Giussani	$992,059	$574,472				
11		Anne Hellung-Larsen	$659,380	$827,932				
12		Kyra Harper	$509,623	$569,609				
13		David Ferry	$987,777	$558,601				
14		Paul Voyatzis	$685,091	$692,182				
15		Andrea Aster	$540,484	$693,762				

Create a New Worksheet

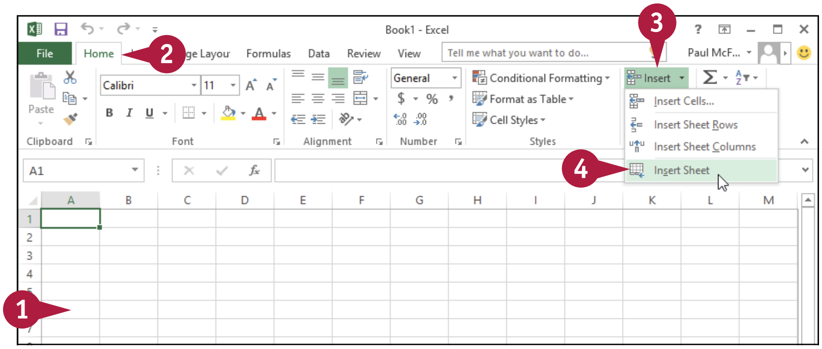
When you create a new workbook, Excel includes a single worksheet that you can use to build a spreadsheet model or store data. If you want to build a new model or store a different set of data, and this new information is related to the existing data in the workbook, you can create a new worksheet to hold the new information. Excel supports multiple worksheets in a single workbook, so you can add as many worksheets as you need for your project or model.

In most cases, you will add a blank worksheet, but Excel also comes with several predefined worksheet templates that you can use.

Create a New Worksheet

Insert a Blank Worksheet

1. Open the workbook to which you want to add the worksheet.
2. Click the **Home** tab.
3. Click the **Insert** ▼.
4. Click **Insert Sheet.**


Book1 - Excel
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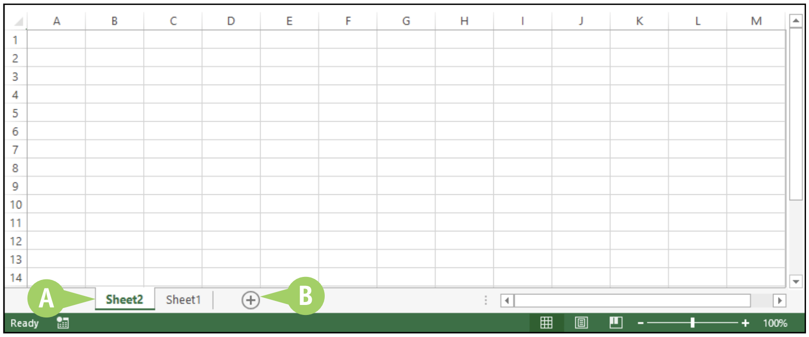
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Insert
Insert Cells...
Insert Sheet Rows
Insert Sheet Columns
Insert Sheet
Clipboard
Font
Alignment
Number
Styles
Conditional Formatting
Format as Table
Cell Styles
Calibri
11
General
A1
2
3
4
1

Ⓐ Excel inserts the worksheet.

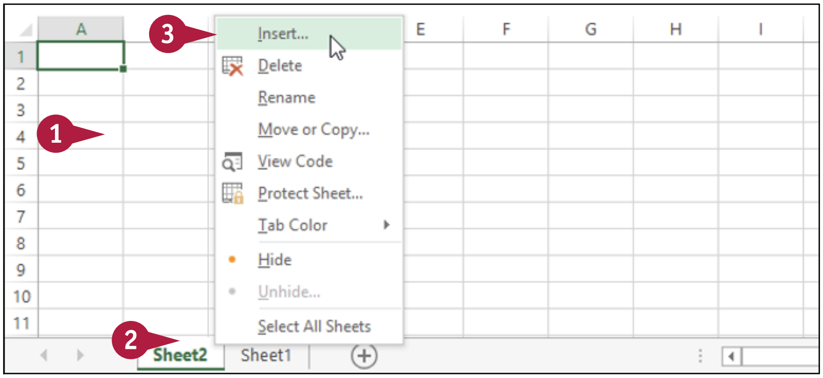
Note: You can also insert a blank worksheet by pressing Shift + F11.

Ⓑ Another way to add a blank worksheet is to click the **Insert Worksheet** button (⊕).


A
Sheet2
Sheet1
B
Ready
100%

Insert a Worksheet from a Template

1. Open the workbook to which you want to add the worksheet.
2. Right-click a worksheet tab.
3. Click **Insert**.


A
E
F
G
H
I
1
2
3
4
5
6
7
8
9
10
11
Insert...
Delete
Rename
Move or Copy...
View Code
Protect Sheet...
Tab Color
Hide
Unhide...
Select All Sheets
Sheet2
Sheet1
1
2
3

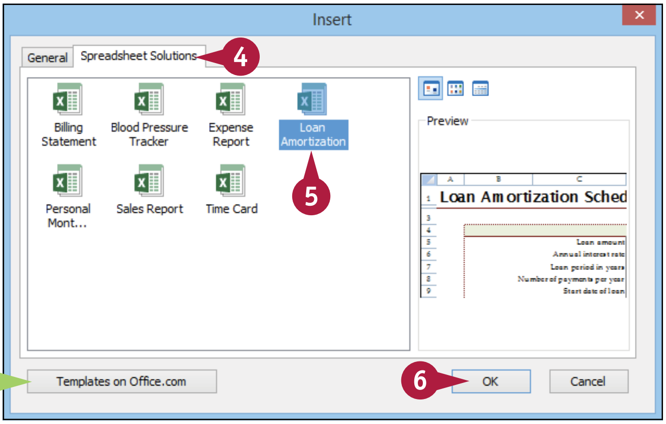
The Insert dialog box appears.

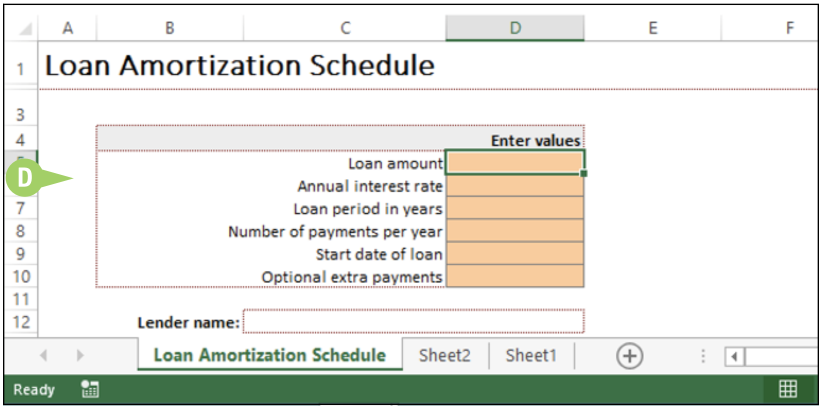
4. Click the **Spreadsheet Solutions** tab.
5. Click the type of worksheet you want to add.

Ⓒ You can also click **Templates on Office.com** to download worksheet templates from the web.

6. Click **OK**.

Ⓓ Excel inserts the worksheet.


Insert
General
Spreadsheet Solutions
Billing Statement
Blood Pressure Tracker
Expense Report
Loan Amortization
Personal Mont...
Sales Report
Time Card
Preview
Loan Amortization Sched
Templates on Office.com
OK
Cancel
4
5
6
C


A
B
C
D
E
F
Loan Amortization Schedule
Enter values
Loan amount
Annual interest rate
Loan period in years
Number of payments per year
Start date of loan
Optional extra payments
Lender name:
Loan Amortization Schedule
Sheet2
Sheet1
Ready
D

TIP

How do I navigate from one worksheet to another?

The easiest way is to click the tab of the worksheet you want to use. You can also click the following controls:

◀	Move to the previous worksheet.	Ctrl + ◀	Move to the first worksheet.
▶	Move to the next worksheet.	Ctrl + ▶	Move to the last worksheet.

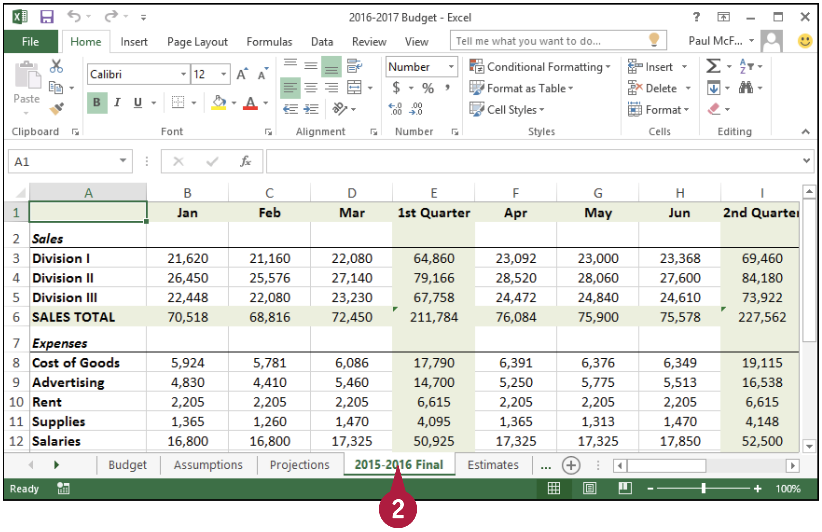
Move a Worksheet

You can organize an Excel workbook and make it easier to navigate by moving your worksheets to different positions within the workbook. You can also move a worksheet to another workbook.

When you add a new worksheet to a workbook, Excel adds the sheet to the left of the existing sheets. However, it is unlikely that you will add each new worksheet in the order you want them to appear in the workbook. For example, in a budget-related workbook, you might prefer to have all the sales-related worksheets together, all the expense-related worksheets together, and so on.

Move a Worksheet

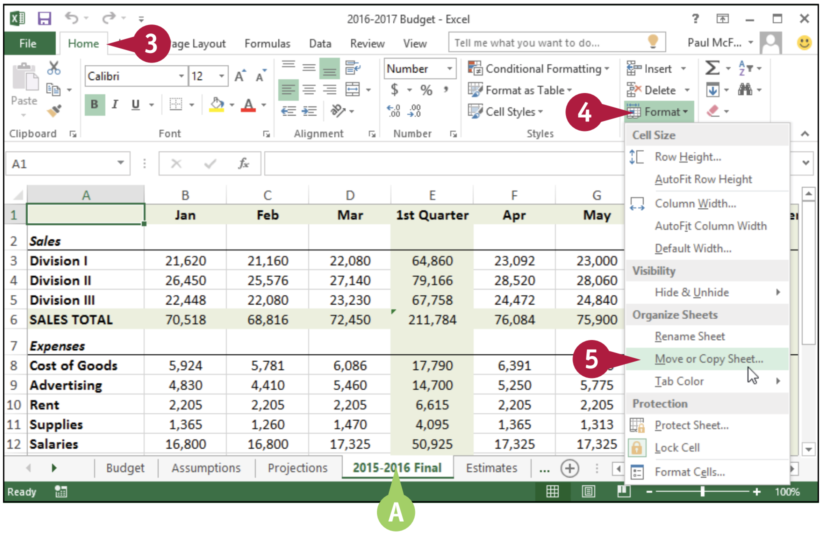
1. If you want to move the worksheet to another workbook, open that workbook and then return to the current workbook.
2. Click the tab of the worksheet you want to move.


2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
12
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
A1
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Ready
100%
2

	A	B	C	D	E	F	G	H	I
1		Jan	Feb	Mar	1st Quarter	Apr	May	Jun	2nd Quarte
2	*Sales*								
3	Division I	21,620	21,160	22,080	64,860	23,092	23,000	23,368	69,460
4	Division II	26,450	25,576	27,140	79,166	28,520	28,060	27,600	84,180
5	Division III	22,448	22,080	23,230	67,758	24,472	24,840	24,610	73,922
6	SALES TOTAL	70,518	68,816	72,450	211,784	76,084	75,900	75,578	227,562
7	*Expenses*								
8	Cost of Goods	5,924	5,781	6,086	17,790	6,391	6,376	6,349	19,115
9	Advertising	4,830	4,410	5,460	14,700	5,250	5,775	5,513	16,538
10	Rent	2,205	2,205	2,205	6,615	2,205	2,205	2,205	6,615
11	Supplies	1,365	1,260	1,470	4,095	1,365	1,313	1,470	4,148
12	Salaries	16,800	16,800	17,325	50,925	17,325	17,325	17,850	52,500

3. Click the **Home** tab.
4. Click **Format**.
5. Click **Move or Copy Sheet**.

- **A** You can also right-click the tab and then click **Move or Copy Sheet**.

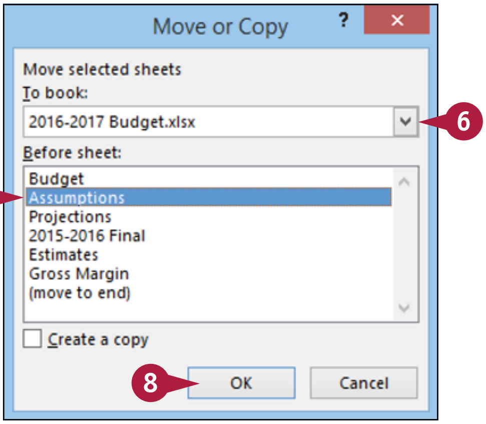

2016-2017 Budget - Excel
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
12
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
A1
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Ready
100%
3
4
5
A

	A	B	C	D	E	F	G
1		Jan	Feb	Mar	1st Quarter	Apr	May
2	*Sales*						
3	Division I	21,620	21,160	22,080	64,860	23,092	23,000
4	Division II	26,450	25,576	27,140	79,166	28,520	28,060
5	Division III	22,448	22,080	23,230	67,758	24,472	24,840
6	SALES TOTAL	70,518	68,816	72,450	211,784	76,084	75,900
7	*Expenses*						
8	Cost of Goods	5,924	5,781	6,086	17,790	6,391	
9	Advertising	4,830	4,410	5,460	14,700	5,250	5,775
10	Rent	2,205	2,205	2,205	6,615	2,205	2,205
11	Supplies	1,365	1,260	1,470	4,095	1,365	1,313
12	Salaries	16,800	16,800	17,325	50,925	17,325	17,325

The Move or Copy dialog box appears.

6. If you want to move the sheet to another workbook, click the **To book** ▼ and then click the workbook.
7. Use the **Before sheet** list to click a destination worksheet.

   When Excel moves the worksheet, it will appear to the left of the sheet you selected in step **7**.
8. Click **OK**.


Move or Copy
?
×
6
7
8
OK
Cancel

Move selected sheets

To book:

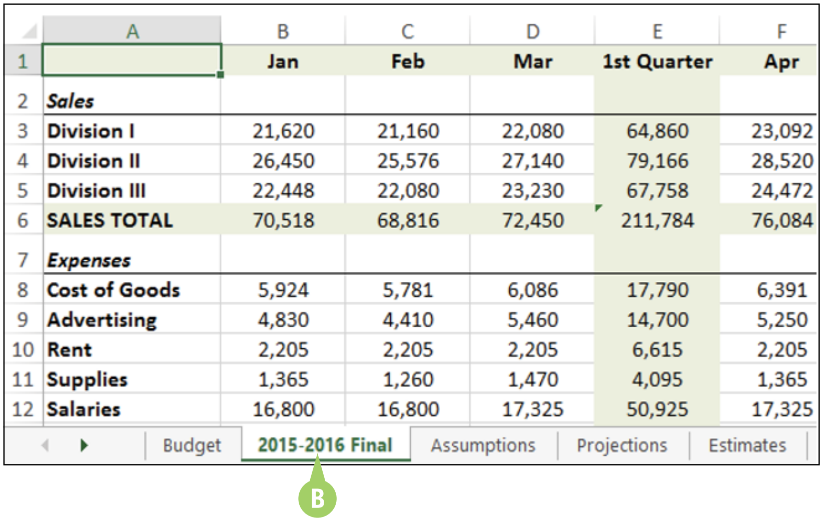
2016-2017 Budget.xlsx

Before sheet:

- Budget
- Assumptions
- Projections
- 2015-2016 Final
- Estimates
- Gross Margin
- (move to end)

☐ Create a copy

B Excel moves the worksheet.


B
Budget
2015-2016 Final
Assumptions
Projections
Estimates

	A	B	C	D	E	F
1		Jan	Feb	Mar	1st Quarter	Apr
2	*Sales*					
3	Division I	21,620	21,160	22,080	64,860	23,092
4	Division II	26,450	25,576	27,140	79,166	28,520
5	Division III	22,448	22,080	23,230	67,758	24,472
6	SALES TOTAL	70,518	68,816	72,450	211,784	76,084
7	*Expenses*					
8	Cost of Goods	5,924	5,781	6,086	17,790	6,391
9	Advertising	4,830	4,410	5,460	14,700	5,250
10	Rent	2,205	2,205	2,205	6,615	2,205
11	Supplies	1,365	1,260	1,470	4,095	1,365
12	Salaries	16,800	16,800	17,325	50,925	17,325

TIP

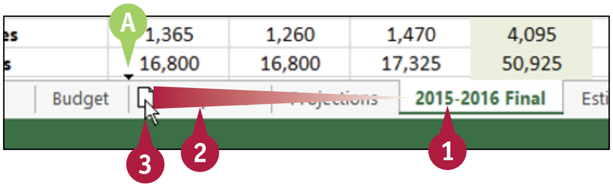
Is there an easier way to move a worksheet within the same workbook?

Yes. It is usually much easier to use your mouse to move a worksheet within the same workbook:

1. Move ↖ over the tab of the workbook you want to move.
2. Click and drag the worksheet tab left or right to the new position within the workbook (↖ changes to ⎘).

   A As you drag, an arrow shows the position of the worksheet.
3. When you have the worksheet positioned where you want it, drop the worksheet tab.

   Excel moves the worksheet.


A
es
1,365
1,260
1,470
4,095
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16,800
16,800
17,325
50,925
Budget
Projections
2015-2016 Final
Esti
3
2
1

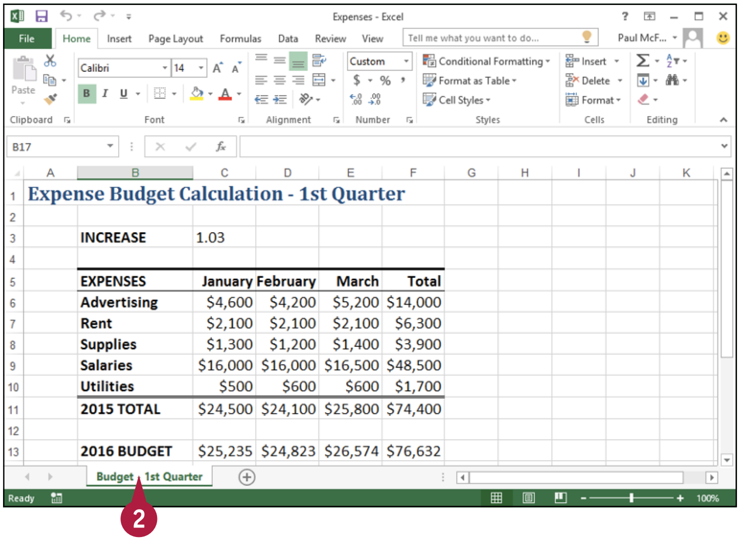
Copy a Worksheet

Excel enables you to make a copy of a worksheet, which is a useful technique if you require a new worksheet that is similar to an existing worksheet. You can copy the sheet to the same workbook or to another workbook.

One of the secrets of productivity in Excel is to not repeat work that you have already done. For example, if you have already created a worksheet and you find that you need a second sheet that is very similar, then you should not create the new worksheet from scratch. Instead, you should copy the existing worksheet and then edit the new sheet as needed.

Copy a Worksheet

1. If you want to copy the worksheet to another workbook, open that workbook and then return to the current workbook.
2. Click the tab of the worksheet you want to copy.


Expenses - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Calibri
14
Custom
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
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Alignment
Number
Styles
Cells
Editing
B17
Budget
1st Quarter
Ready
100%
2

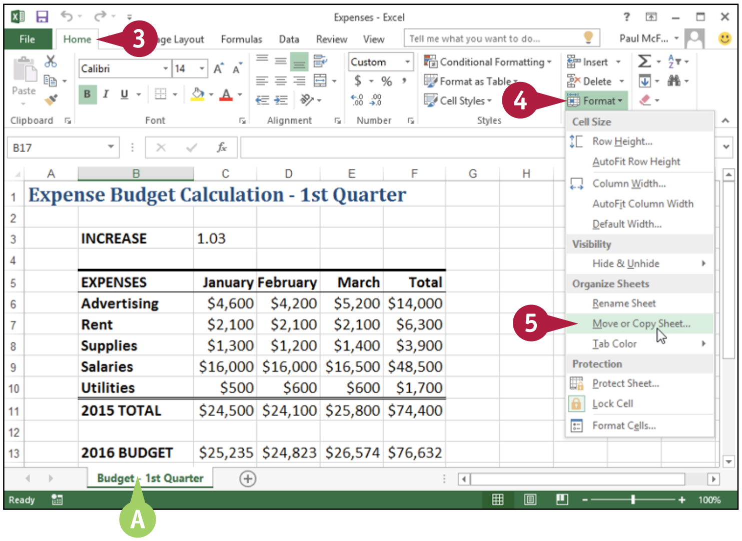
Expense Budget Calculation - 1st Quarter

INCREASE	1.03			
EXPENSES	**January**	**February**	**March**	**Total**
Advertising	$4,600	$4,200	$5,200	$14,000
Rent	$2,100	$2,100	$2,100	$6,300
Supplies	$1,300	$1,200	$1,400	$3,900
Salaries	$16,000	$16,000	$16,500	$48,500
Utilities	$500	$600	$600	$1,700
2015 TOTAL	$24,500	$24,100	$25,800	$74,400
2016 BUDGET	$25,235	$24,823	$26,574	$76,632

3. Click the **Home** tab.
4. Click **Format.**
5. Click **Move or Copy Sheet.**

Ⓐ You can also right-click the tab and then click **Move or Copy Sheet.**

The Move or Copy dialog box appears.


Expenses - Excel
File
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Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Calibri
14
Custom
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
4
Format
Clipboard
Font
Alignment
Number
Styles
B17
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
5
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Budget
1st Quarter
Ready
100%
A

Expense Budget Calculation - 1st Quarter

INCREASE	1.03			
EXPENSES	**January**	**February**	**March**	**Total**
Advertising	$4,600	$4,200	$5,200	$14,000
Rent	$2,100	$2,100	$2,100	$6,300
Supplies	$1,300	$1,200	$1,400	$3,900
Salaries	$16,000	$16,000	$16,500	$48,500
Utilities	$500	$600	$600	$1,700
2015 TOTAL	$24,500	$24,100	$25,800	$74,400
2016 BUDGET	$25,235	$24,823	$26,574	$76,632

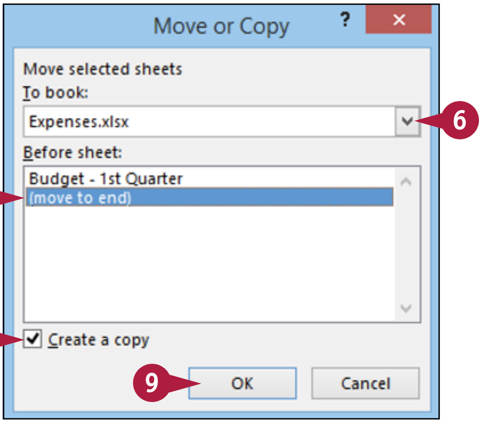
6. If you want to copy the sheet to another workbook, click the **To book** ▼ and then click the workbook.

7. Use the **Before sheet** list to click a destination worksheet.

   When Excel copies the worksheet, the copy will appear to the left of the sheet you selected in step **7**.

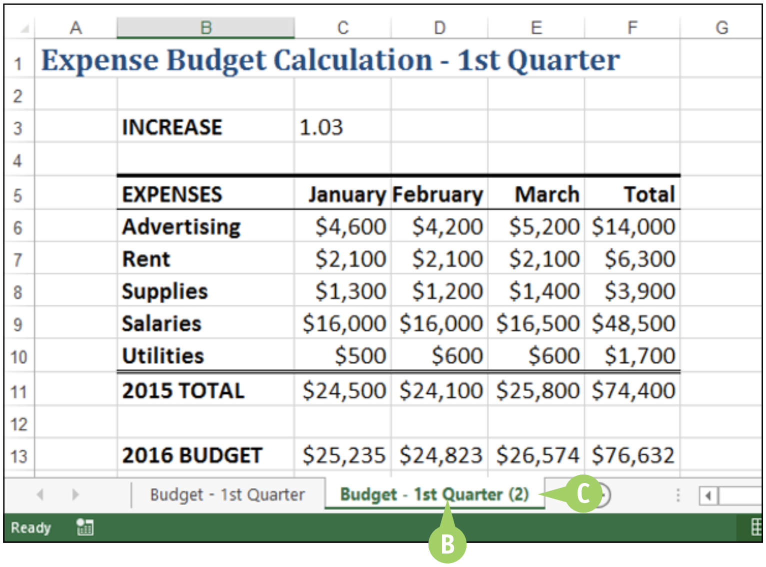
8. Select the **Create a copy** check box (☐ changes to ☑).

9. Click **OK**.


Move or Copy
?
×
Move selected sheets
To book:
Expenses.xlsx
Before sheet:
Budget - 1st Quarter
(move to end)
☑ Create a copy
OK
Cancel
6
7
8
9

- **B** Excel copies the worksheet.
- **C** Excel gives the new worksheet the same name as the original, but with (2) appended.

Note: See the "Rename a Worksheet" section earlier in this chapter to learn how to edit the name of the copied worksheet.



	A	B	C	D	E	F	G
1	Expense Budget Calculation - 1st Quarter						
2							
3		INCREASE	1.03				
4							
5		EXPENSES	January	February	March	Total	
6		Advertising	$4,600	$4,200	$5,200	$14,000	
7		Rent	$2,100	$2,100	$2,100	$6,300	
8		Supplies	$1,300	$1,200	$1,400	$3,900	
9		Salaries	$16,000	$16,000	$16,500	$48,500	
10		Utilities	$500	$600	$600	$1,700	
11		2015 TOTAL	$24,500	$24,100	$25,800	$74,400	
12							
13		2016 BUDGET	$25,235	$24,823	$26,574	$76,632	

Budget - 1st Quarter
Budget - 1st Quarter (2)
Ready
C
B

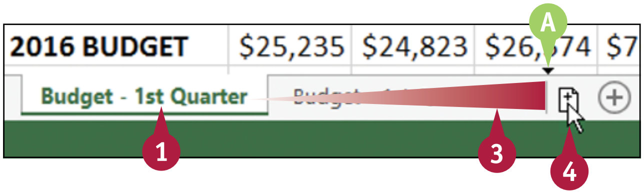
TIP

Is there an easier way to copy a worksheet within the same workbook?

Yes. It is usually much easier to use your mouse to copy a worksheet within the same workbook:

1. Move ↖ over the tab of the workbook you want to copy.
2. Hold down Ctrl.
3. Click and drag the worksheet tab left or right (↖ changes to ⎘).
   - **A** As you drag, an arrow shows the position of the worksheet.
4. When you have the worksheet positioned where you want it, drop the worksheet tab.

   Excel copies the worksheet.

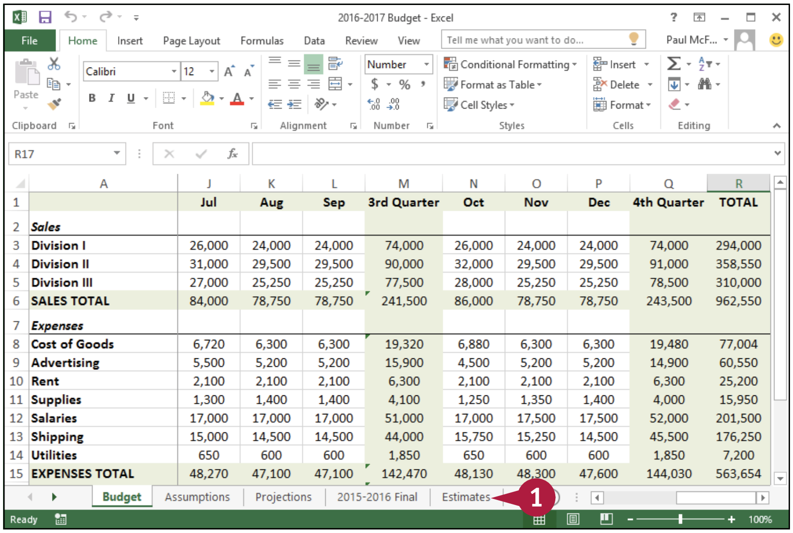

2016 BUDGET
$25,235
$24,823
$26,574
$7
Budget - 1st Quarter
A
1
3
4

Delete a Worksheet

If you have a worksheet that you no longer need, you can delete it from the workbook. This reduces the size of the workbook and makes the workbook easier to navigate.

You cannot undo a worksheet deletion, so check the worksheet contents carefully before proceeding with the deletion. To be extra safe, save the workbook before performing the worksheet deletion. If you delete the wrong sheet accidentally, close the workbook without saving your changes.

Delete a Worksheet


2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
12
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
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Clipboard
Font
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Cells
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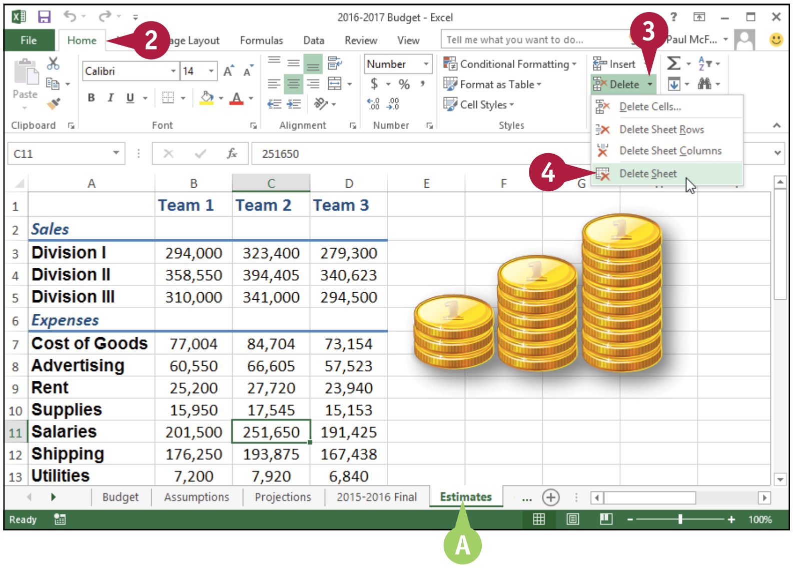
R17
Budget
Assumptions
Projections
2015-2016 Final
Estimates
1
Ready
100%

	A	J	K	L	M	N	O	P	Q	R
1		Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec	4th Quarter	TOTAL
2	*Sales*									
3	Division I	26,000	24,000	24,000	74,000	26,000	24,000	24,000	74,000	294,000
4	Division II	31,000	29,500	29,500	90,000	32,000	29,500	29,500	91,000	358,550
5	Division III	27,000	25,250	25,250	77,500	28,000	25,250	25,250	78,500	310,000
6	SALES TOTAL	84,000	78,750	78,750	241,500	86,000	78,750	78,750	243,500	962,550
7	*Expenses*									
8	Cost of Goods	6,720	6,300	6,300	19,320	6,880	6,300	6,300	19,480	77,004
9	Advertising	5,500	5,200	5,200	15,900	4,500	5,200	5,200	14,900	60,550
10	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	25,200
11	Supplies	1,300	1,400	1,400	4,100	1,250	1,350	1,400	4,000	15,950
12	Salaries	17,000	17,000	17,000	51,000	17,000	17,500	17,500	52,000	201,500
13	Shipping	15,000	14,500	14,500	44,000	15,750	15,250	14,500	45,500	176,250
14	Utilities	650	600	600	1,850	650	600	600	1,850	7,200
15	EXPENSES TOTAL	48,270	47,100	47,100	142,470	48,130	48,300	47,600	144,030	563,654

1. Click the tab of the worksheet you want to delete.


2016-2017 Budget - Excel
File
Home
2
age Layout
Formulas
Data
Review
View
Tell me what you want to do...
3
Paul McF...
Paste
Calibri
14
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Delete Cells...
Delete Sheet Rows
Delete Sheet Columns
4
Delete Sheet
Clipboard
Font
Alignment
Number
Styles
C11
251650
Budget
Assumptions
Projections
2015-2016 Final
Estimates
A
Ready
100%

	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840

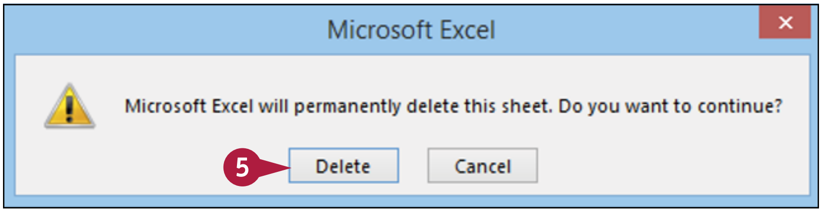
2. Click the **Home** tab.
3. Click the **Delete** ▼.
4. Click **Delete Sheet**.

A You can also right-click the tab and then click **Delete Sheet**.

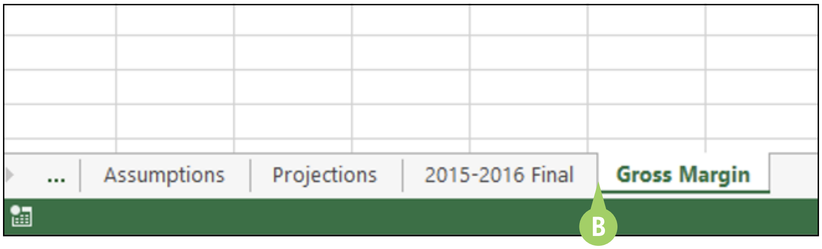
If the worksheet contains data, Excel asks you to confirm that you want to delete the worksheet.

5 Click **Delete**.

B Excel removes the worksheet.



Microsoft Excel will permanently delete this sheet. Do you want to continue?



TIP

I have several worksheets that I need to delete. Do I have to delete them individually?

No. You can select all the sheets you want to remove and then run the deletion. To select multiple worksheets, click the tab of one of the worksheets, hold down Ctrl, and then click the tabs of the other worksheets.

If your workbook has many worksheets and you want to delete most of them, an easy way to select the sheets is to right-click any worksheet tab and then click **Select All Sheets**. Hold down Ctrl, and then click the tabs of the worksheets that you do not want to delete.

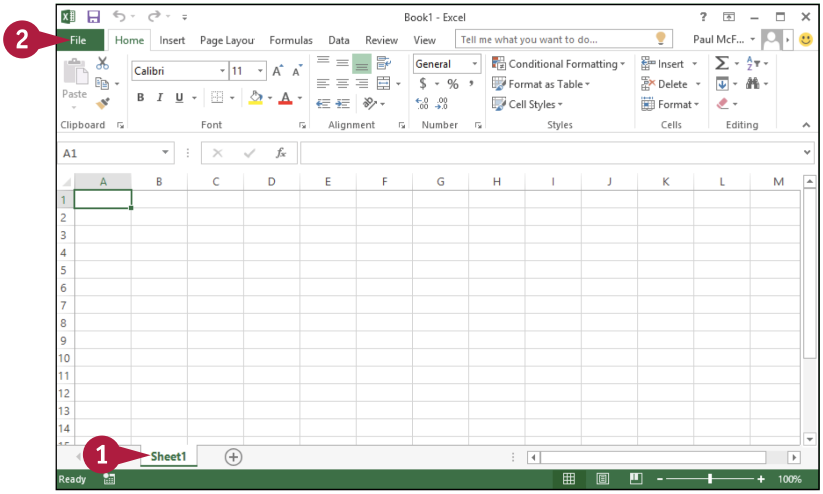
After you have selected your worksheets, follow steps 3 to 5 to delete all the selected worksheets at once.

Change the Gridline Color

You can add some visual interest to your worksheet by changing the color that Excel uses to display the gridlines. The default color is black, but Excel offers a palette of 56 colors that you can choose from.

Changing the gridline color also has practical value because it enables you to differentiate between the gridlines and the borders that you add to a range or a table. See Chapter 3 to learn how to add borders to your worksheet ranges.

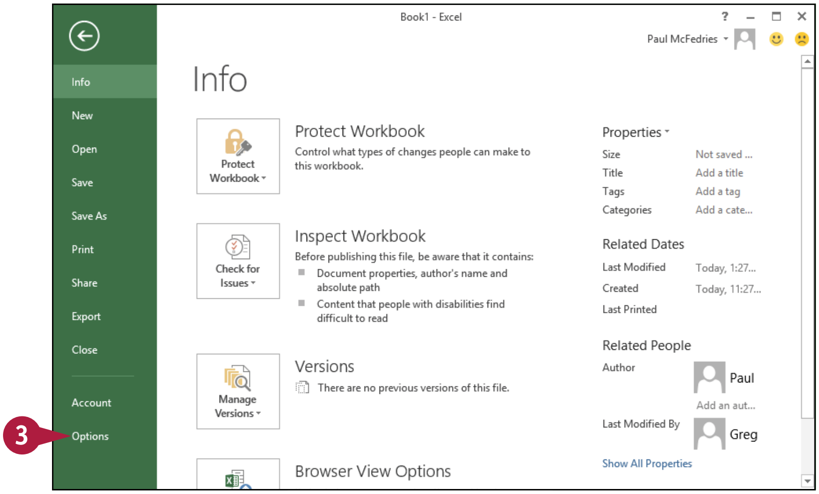
Change the Gridline Color



Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Clipboard
Calibri
11
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Editing
A1
Sheet1
Ready
100%
2
1

① Click the tab of the worksheet you want to customize.

② Click the **File** tab.



Book1 - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Info
Protect Workbook
Protect Workbook
Control what types of changes people can make to this workbook.
Check for Issues
Inspect Workbook
Before publishing this file, be aware that it contains:
Document properties, author's name and absolute path
Content that people with disabilities find difficult to read
Manage Versions
Versions
There are no previous versions of this file.
Browser View Options
Properties
Size
Not saved ...
Title
Add a title
Tags
Add a tag
Categories
Add a cate...
Related Dates
Last Modified
Today, 1:27...
Created
Today, 11:27...
Last Printed
Related People
Author
Paul
Add an aut...
Last Modified By
Greg
Show All Properties
3

③ Click **Options**.

The Excel Options dialog box appears.

4 Click **Advanced**.

5 Scroll down to the **Display options for this worksheet** section.

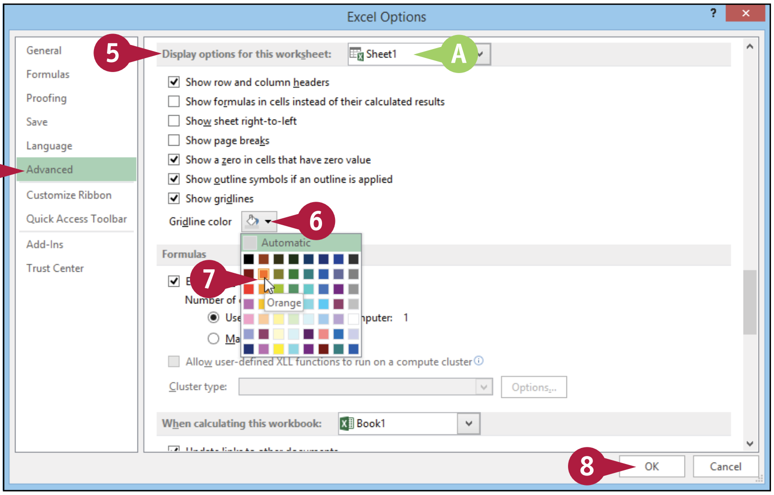
A The worksheet you selected in step 1 appears here.

6 Click the **Gridline color** ▾.

7 Click the color you want to use.

8 Click **OK**.

B Excel displays the gridlines using the color you selected.


Excel Options
General
Formulas
Proofing
Save
Language
Advanced
Customize Ribbon
Quick Access Toolbar
Add-Ins
Trust Center
5
A
4
6
7
8
Automatic
Orange
Formulas
Options...
OK
Cancel

Display options for this worksheet: Sheet1

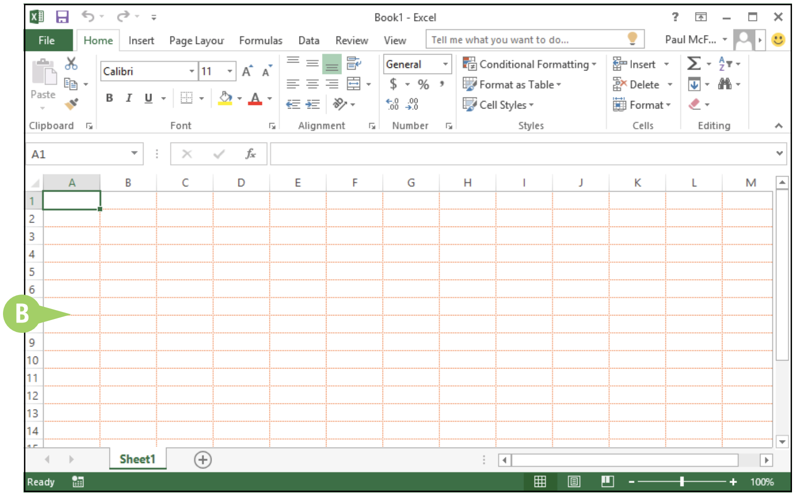
☑ Show row and column headers
☐ Show formulas in cells instead of their calculated results
☐ Show sheet right-to-left
☐ Show page breaks
☑ Show a zero in cells that have zero value
☑ Show outline symbols if an outline is applied
☑ Show gridlines

Gridline color

☐ Allow user-defined XLL functions to run on a compute cluster

Cluster type:

When calculating this workbook: Book1


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
11
General
Conditional Formatting
Format as Table
Cell Styles
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Format
Clipboard
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Number
Styles
Cells
Editing
A1
A
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C
D
E
F
G
H
I
J
K
L
M
B
Sheet1
Ready
100%

TIP

Can I change the gridline color for all the sheets in my workbook?

Yes. One method would be to follow the steps in this section for each worksheet in your workbook. However, an easier method is to first select all the sheets in the workbook. To do this, right-click any worksheet tab and then click **Select All Sheets**.

You can now follow steps 2 to 8 to apply the new gridline color to all your worksheets. Once you have done that, right-click any worksheet tab and then click **Ungroup Sheets** to collapse the grouping.

Toggle Worksheet Gridlines On and Off

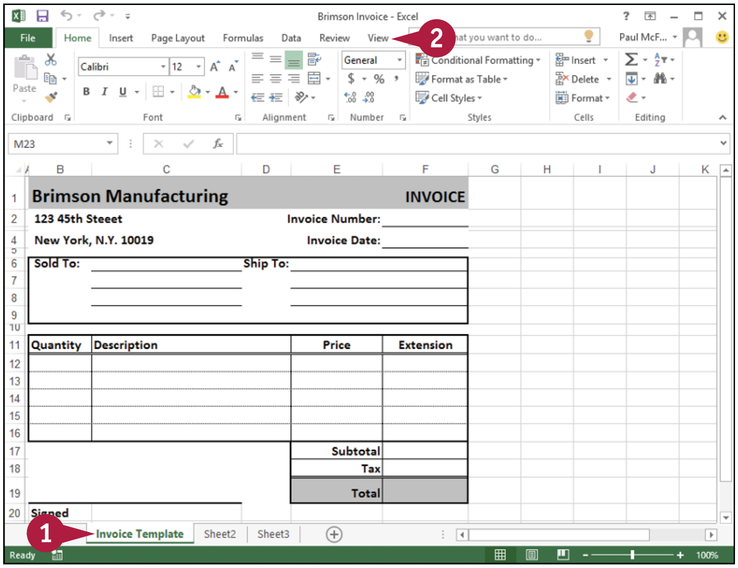
You can make your worksheet look cleaner and make the worksheet text easier to read by turning off the sheet gridlines. When you do this, Excel displays the worksheet with a plain white background, which often makes the worksheet easier to read. This is particularly true on a worksheet where you have added numerous borders to your ranges, as described in Chapter 3.

If you find you have trouble selecting ranges with the gridlines turned off, you can easily turn them back on again.

Toggle Worksheet Gridlines On and Off

Turn Gridlines Off

1. Click the tab of the worksheet you want to work with.
2. Click the **View** tab.

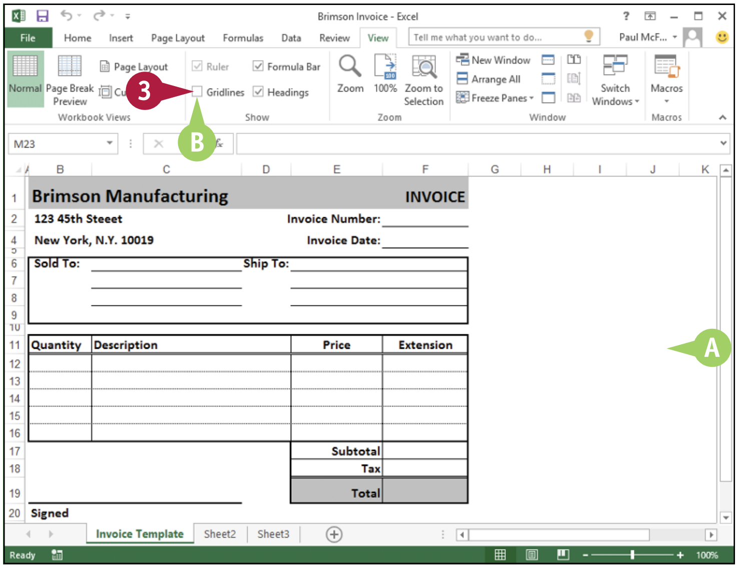

Brimson Invoice - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
2
Paul McF...
Paste
Calibri
12
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
M23
Brimson Manufacturing
INVOICE
123 45th Steeet
Invoice Number:
New York, N.Y. 10019
Invoice Date:
Sold To:
Ship To:
Quantity
Description
Price
Extension
Subtotal
Tax
Total
Signed
1
Invoice Template
Sheet2
Sheet3
Ready
100%

3. Click **Gridlines** (☑ changes to ☐).

- A Excel turns off the gridline display.

Turn Gridlines On

- B To turn the gridlines back on, click **Gridlines** (☐ changes to ☑).


Brimson Invoice - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Normal
Page Break Preview
Page Layout
Custom Views
Ruler
Formula Bar
Gridlines
Headings
3
B
Zoom
100%
Zoom to Selection
New Window
Arrange All
Freeze Panes
Switch Windows
Macros
Workbook Views
Show
Zoom
Window
Macros
M23
Brimson Manufacturing
INVOICE
123 45th Steeet
Invoice Number:
New York, N.Y. 10019
Invoice Date:
Sold To:
Ship To:
Quantity
Description
Price
Extension
Subtotal
Tax
Total
Signed
A
Invoice Template
Sheet2
Sheet3
Ready
100%

Toggle Worksheet Headings On and Off

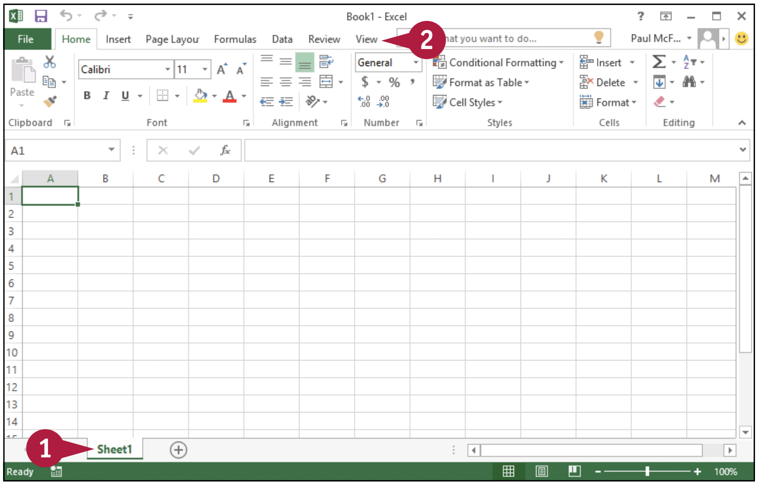
You can give yourself a bit more room to work by turning off the worksheet's row headings — the numbers 1, 2, and so on to the left of the worksheet — and column headings — the letters A, B, and so on above the worksheet.

If you find you have trouble reading your worksheet or building formulas with the headings turned off, you can easily turn them back on again.

Toggle Worksheet Headings On and Off

Turn Headings Off

1. Click the tab of the worksheet you want to work with.
2. Click the **View** tab.

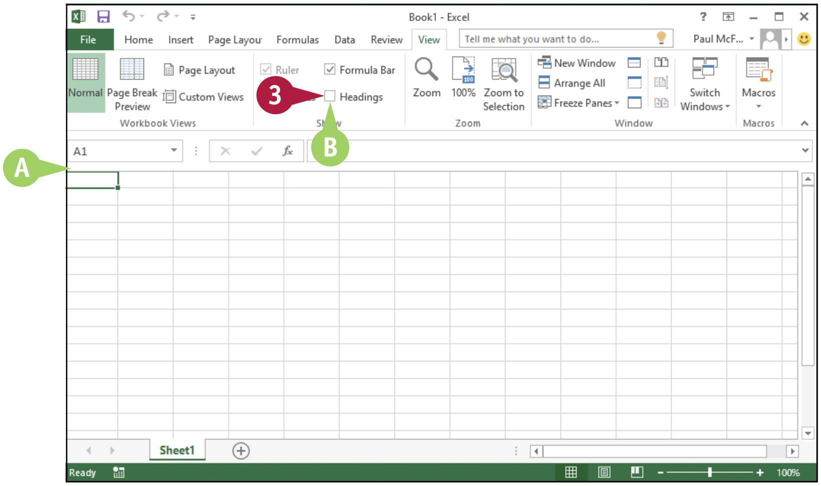

Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
2
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
Conditional Formatting
Format as Table
Cell Styles
A1
1
Sheet1
Ready
100%

3. Click **Headings** (☑ changes to ☐).

A Excel turns off the headings.

Turn Headings On

B To turn the headings back on, click **Headings** (☐ changes to ☑).

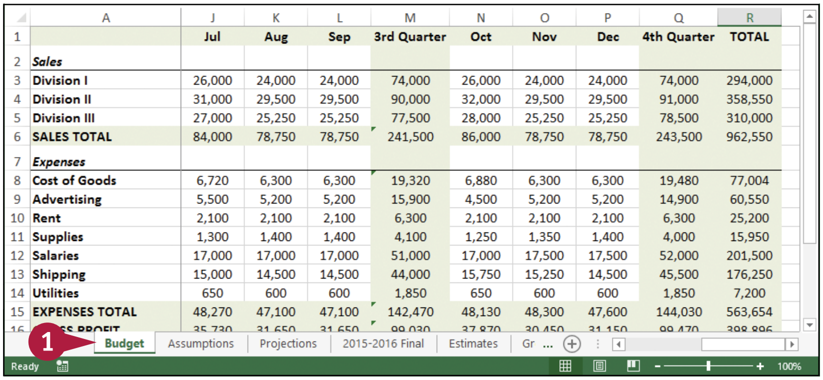

Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Normal
Page Break Preview
Page Layout
Custom Views
Workbook Views
Ruler
Formula Bar
Headings
Show
3
B
A
Zoom
100%
Zoom to Selection
New Window
Arrange All
Freeze Panes
Switch Windows
Window
Macros
A1
Sheet1
Ready
100%

Set the Worksheet Tab Color

You can make a workbook easier to navigate by color-coding the worksheet tabs. For example, if you have a workbook with sheets associated with several projects, you could apply a different tab color for each project. Similarly, you could format the tabs of incomplete worksheets with one color, and completed worksheets with another color.

Excel offers 10 standard colors as well as 60 colors associated with the current workbook theme. You can also apply a custom color if none of the standard or theme colors suits your needs.

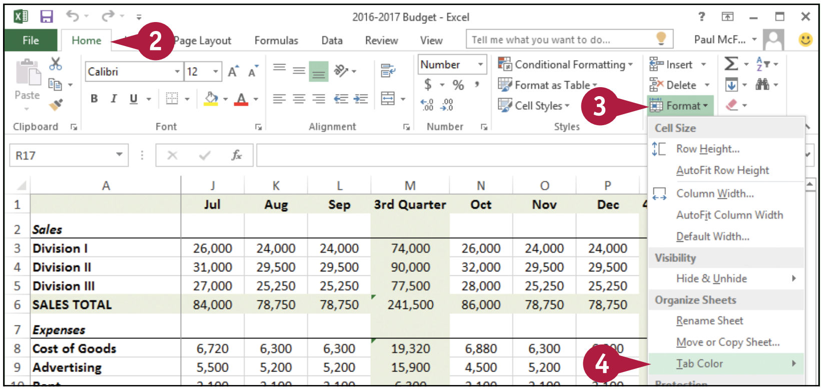
Set the Worksheet Tab Color



	A	J	K	L	M	N	O	P	Q	R
1		Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec	4th Quarter	TOTAL
2	*Sales*									
3	Division I	26,000	24,000	24,000	74,000	26,000	24,000	24,000	74,000	294,000
4	Division II	31,000	29,500	29,500	90,000	32,000	29,500	29,500	91,000	358,550
5	Division III	27,000	25,250	25,250	77,500	28,000	25,250	25,250	78,500	310,000
6	SALES TOTAL	84,000	78,750	78,750	241,500	86,000	78,750	78,750	243,500	962,550
7	*Expenses*									
8	Cost of Goods	6,720	6,300	6,300	19,320	6,880	6,300	6,300	19,480	77,004
9	Advertising	5,500	5,200	5,200	15,900	4,500	5,200	5,200	14,900	60,550
10	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	25,200
11	Supplies	1,300	1,400	1,400	4,100	1,250	1,350	1,400	4,000	15,950
12	Salaries	17,000	17,000	17,000	51,000	17,000	17,500	17,500	52,000	201,500
13	Shipping	15,000	14,500	14,500	44,000	15,750	15,250	14,500	45,500	176,250
14	Utilities	650	600	600	1,850	650	600	600	1,850	7,200
15	EXPENSES TOTAL	48,270	47,100	47,100	142,470	48,130	48,300	47,600	144,030	563,654

1
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Gr ...
Ready
100%

1. Click the tab of the worksheet you want to format.



	A	J	K	L	M	N	O	P
1		Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec
2	*Sales*							
3	Division I	26,000	24,000	24,000	74,000	26,000	24,000	24,000
4	Division II	31,000	29,500	29,500	90,000	32,000	29,500	29,500
5	Division III	27,000	25,250	25,250	77,500	28,000	25,250	25,250
6	SALES TOTAL	84,000	78,750	78,750	241,500	86,000	78,750	78,750
7	*Expenses*							
8	Cost of Goods	6,720	6,300	6,300	19,320	6,880	6,300	[illegible]
9	Advertising	5,500	5,200	5,200	15,900	4,500	5,200	

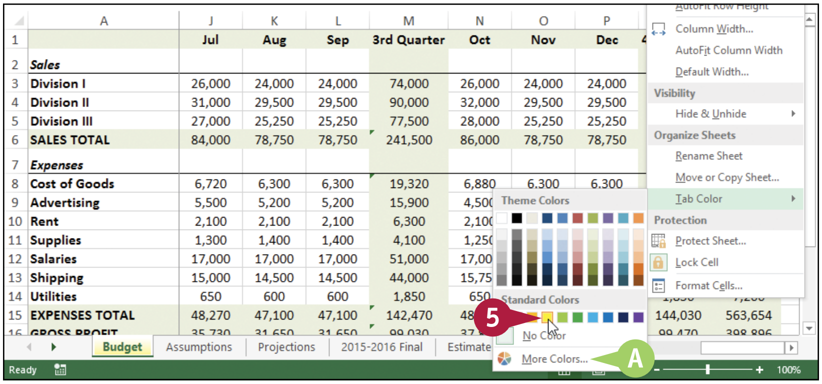
2016-2017 Budget - Excel
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
12
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
R17
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
2
3
4

2. Click the **Home** tab.
3. Click **Format**.
4. Click **Tab Color**.

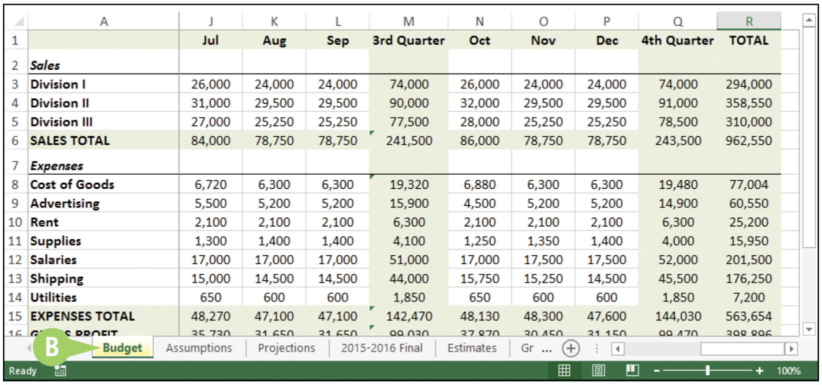
Excel displays the Tab Color palette.

5 Click the color you want to use for the current tab.

A To apply a custom color, click **More Colors** and then use the Colors dialog box to choose the color you want.


A
J
K
L
M
N
O
P
Jul
Aug
Sep
3rd Quarter
Oct
Nov
Dec
Sales
Division I
Division II
Division III
SALES TOTAL
Expenses
Cost of Goods
Advertising
Rent
Supplies
Salaries
Shipping
Utilities
EXPENSES TOTAL
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Theme Colors
Standard Colors
No Color
More Colors...
5
A
Budget
Assumptions
Projections
2015-2016 Final
Estimate
Ready
100%

B Excel applies the color to the tab.



	A	J	K	L	M	N	O	P	Q	R
1		Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec	4th Quarter	TOTAL
2	*Sales*									
3	Division I	26,000	24,000	24,000	74,000	26,000	24,000	24,000	74,000	294,000
4	Division II	31,000	29,500	29,500	90,000	32,000	29,500	29,500	91,000	358,550
5	Division III	27,000	25,250	25,250	77,500	28,000	25,250	25,250	78,500	310,000
6	SALES TOTAL	84,000	78,750	78,750	241,500	86,000	78,750	78,750	243,500	962,550
7	*Expenses*									
8	Cost of Goods	6,720	6,300	6,300	19,320	6,880	6,300	6,300	19,480	77,004
9	Advertising	5,500	5,200	5,200	15,900	4,500	5,200	5,200	14,900	60,550
10	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	25,200
11	Supplies	1,300	1,400	1,400	4,100	1,250	1,350	1,400	4,000	15,950
12	Salaries	17,000	17,000	17,000	51,000	17,000	17,500	17,500	52,000	201,500
13	Shipping	15,000	14,500	14,500	44,000	15,750	15,250	14,500	45,500	176,250
14	Utilities	650	600	600	1,850	650	600	600	1,850	7,200
15	EXPENSES TOTAL	48,270	47,100	47,100	142,470	48,130	48,300	47,600	144,030	563,654

B
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Gr ...
Ready
100%

Note: You can also right-click the tab, click **Tab Color**, and then click the color you want to apply.

Note: The tab color appears very faintly when the tab is selected, but the color appears quite strongly when any other tab is selected.

TIPS

If I want to apply the same color to several worksheets, do I have to format them individually?

No. You can select all the sheets you want to format and then apply the tab color. To select multiple worksheets, click the tab of one of the worksheets, hold down Ctrl, and then click the tabs of the other worksheets. After you have selected your worksheets, follow steps 2 to 5 to apply the tab color to all the selected worksheets at once.

How do I remove a tab color?

If you no longer require a worksheet to have a colored tab, you can remove the color. Follow steps 1 to 4 to select the worksheet and display the Tab Color palette, and then click **No Color**. Excel removes the color from the worksheet's tab.

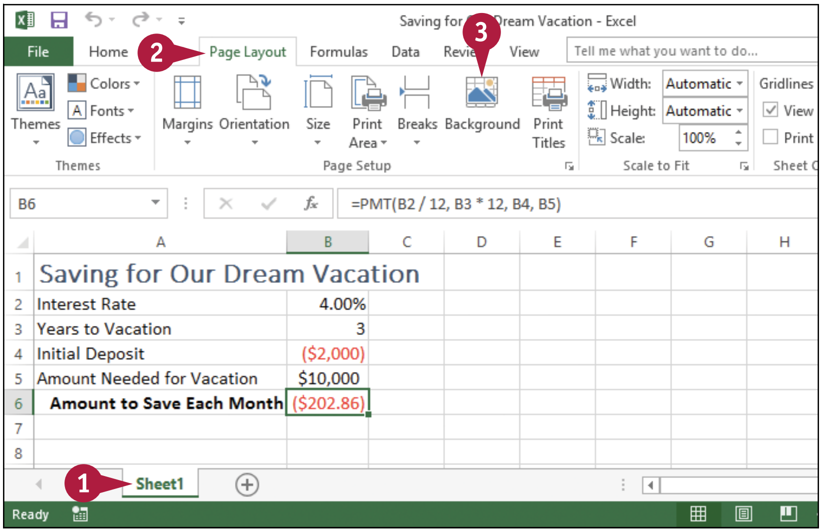
Set the Worksheet Background

You can add visual interest to a worksheet by replacing the standard white sheet background with a photo, drawing, or other image. For example, a worksheet that tracks the amount needed for a future vacation could show a photo from the proposed destination as the background.

When choosing the image you want to use as the background, be sure to select a picture that will not make the worksheet text difficult to read. For example, if your sheet text is a dark color, choose a light-colored image as the background.

Set the Worksheet Background

1. Click the tab of the worksheet you want to customize.
2. Click the **Page Layout** tab.
3. Click **Background** (🖼).

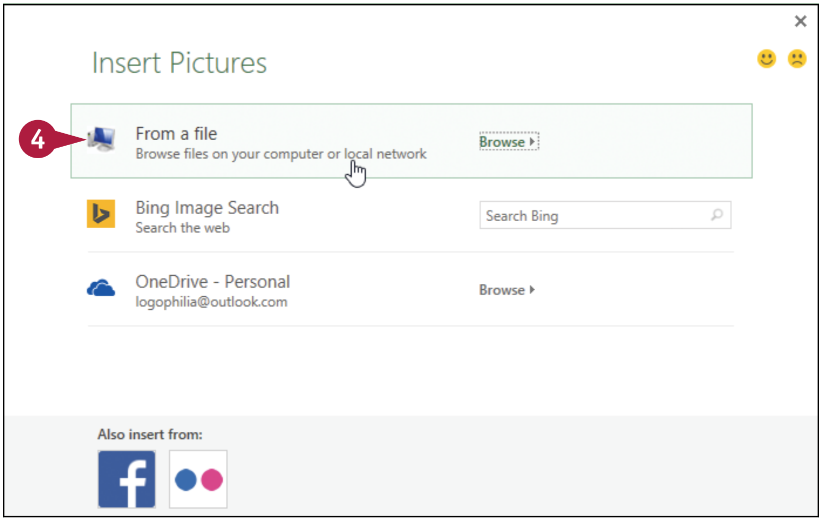

Saving for Dream Vacation - Excel
File
Home
Page Layout
Formulas
Data
Revie
View
Tell me what you want to do...
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Gridlines
View
Print
Themes
Page Setup
Scale to Fit
Sheet O
Sheet1
Ready
1
2
3

B6 =PMT(B2 / 12, B3 * 12, B4, B5)

	A	B
1	Saving for Our Dream Vacation	
2	Interest Rate	4.00%
3	Years to Vacation	3
4	Initial Deposit	($2,000)
5	Amount Needed for Vacation	$10,000
6	**Amount to Save Each Month**	($202.86)
7		
8		

The Insert Pictures dialog box appears.

4. Click **From a file.**

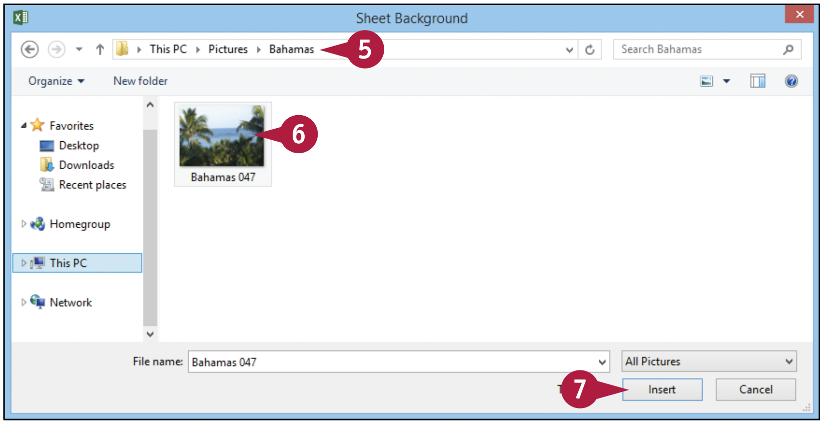

Insert Pictures
From a file
Browse files on your computer or local network
Browse ▸
Bing Image Search
Search the web
Search Bing
OneDrive - Personal
logophilia@outlook.com
Browse ▸
Also insert from:
4

The Sheet Background dialog box appears.

5 Select the location of the image you want to use.

6 Click the image.

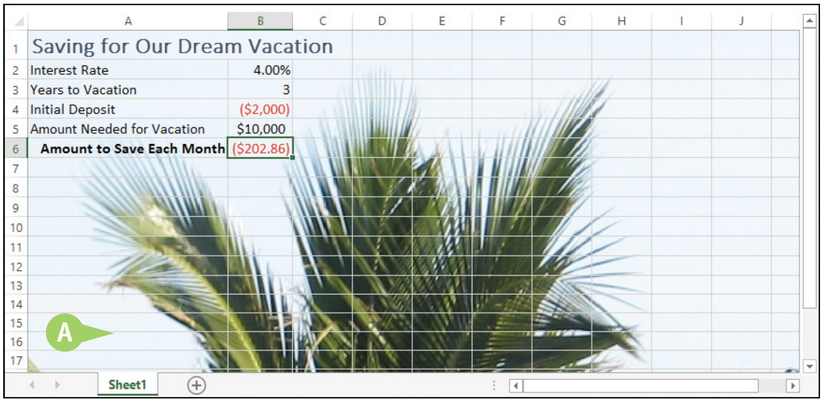
7 Click **Insert**.


Sheet Background
This PC › Pictures › Bahamas
5
Search Bahamas
Organize ▾
New folder
Favorites
Desktop
Downloads
Recent places
Homegroup
This PC
Network
Bahamas 047
6
7
Insert
Cancel

File name: Bahamas 047

All Pictures

A Excel formats the worksheet background with the image you selected.



	A	B
1	Saving for Our Dream Vacation	
2	Interest Rate	4.00%
3	Years to Vacation	3
4	Initial Deposit	($2,000)
5	Amount Needed for Vacation	$10,000
6	**Amount to Save Each Month**	($202.86)

TIPS

How do I apply a background color instead of a background image?

Excel does not have a command that changes the background color of the entire worksheet. Instead, you must first select all the cells in the worksheet by clicking **Select All** (◢). Click the **Home** tab, click the **Fill Color** ▾, and then click the color you want to use. Excel applies the color to the background of every cell.

How do I remove the background image from the worksheet?

If you find that having the background image makes it difficult to read the worksheet text, then you should remove the background. Click the tab of the worksheet, click **Page Layout**, and then click **Delete Background** (🖼). Excel removes the background image from the worksheet.

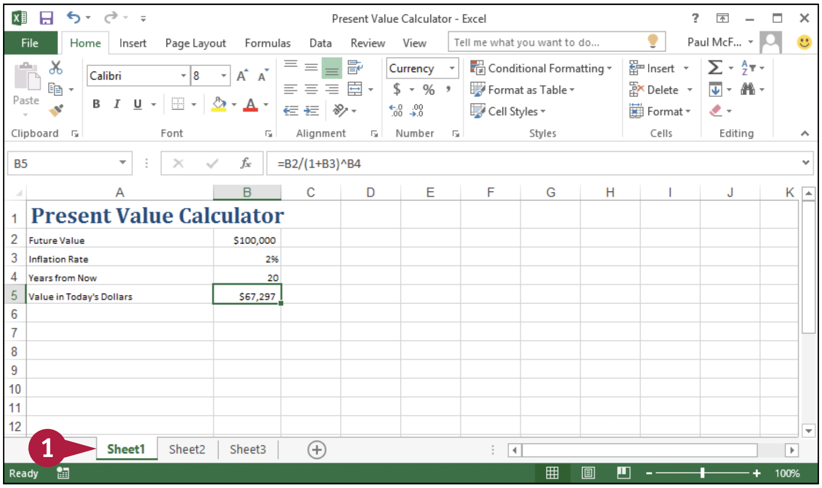
Zoom In on or Out of a Worksheet

You can get a closer look at a portion of a worksheet by zooming in on that range. When you zoom in on a range, Excel increases the magnification of the range, which makes it easier to see the range data, particularly when the worksheet font is quite small.

On the other hand, if you want to get a sense of the overall structure of a worksheet, you can also zoom out. When you zoom out, Excel decreases the magnification, so you see more of the worksheet.

Zoom In on or Out of a Worksheet

1. Click the tab of the worksheet you want to zoom.

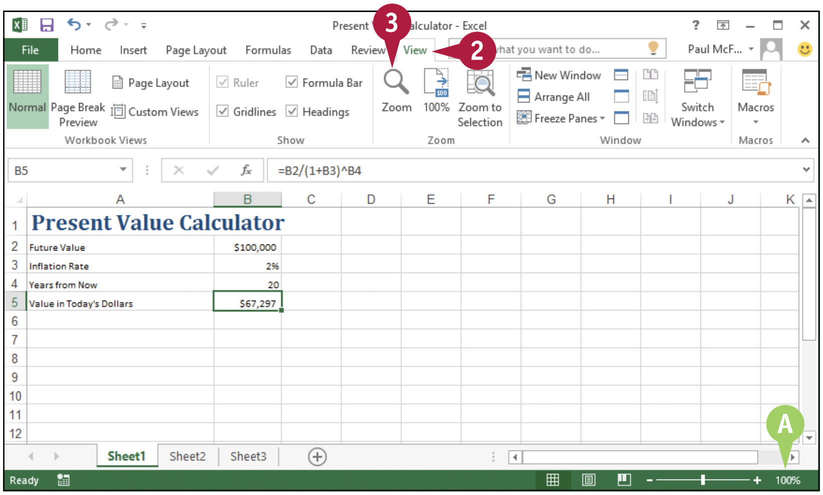


Present Value Calculator - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Clipboard
Calibri
8
Font
Alignment
Currency
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Editing
B5
=B2/(1+B3)^B4
1
Sheet1
Sheet2
Sheet3
Ready
100%

	A	B
1	Present Value Calculator	
2	Future Value	$100,000
3	Inflation Rate	2%
4	Years from Now	20
5	Value in Today's Dollars	$67,297

2. Click the **View** tab.
3. Click **Zoom** (🔍).

A You can also run the Zoom command by clicking the zoom level in the status bar.



Present Value Calculator - Excel
3
2
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Normal
Page Break Preview
Page Layout
Custom Views
Workbook Views
Ruler
Formula Bar
Gridlines
Headings
Show
Zoom
100%
Zoom to Selection
Zoom
New Window
Arrange All
Freeze Panes
Switch Windows
Window
Macros
B5
=B2/(1+B3)^B4
A
Sheet1
Sheet2
Sheet3
Ready
100%

	A	B
1	Present Value Calculator	
2	Future Value	$100,000
3	Inflation Rate	2%
4	Years from Now	20
5	Value in Today's Dollars	$67,297

The Zoom dialog box appears.

4 Click the magnification level you want to use (○ changes to ●).

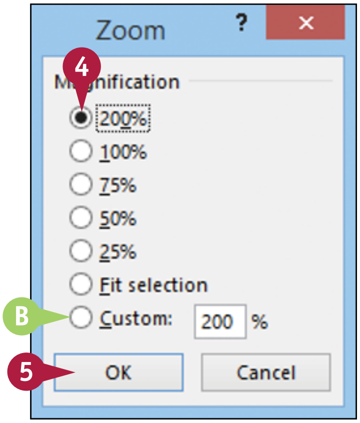
B You can also click **Custom** (○ changes to ●) and then type a magnification level in the text box.

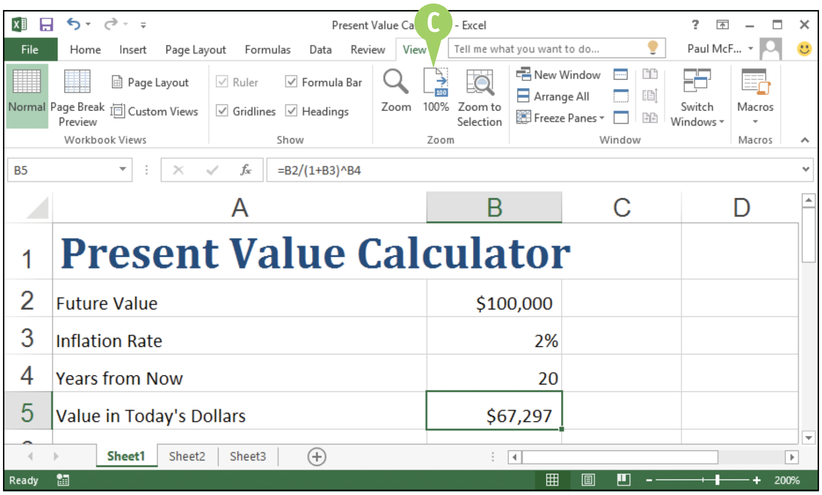
Note: Select a magnification level above 100% to zoom in on the worksheet; select a level under 100% to zoom out of the worksheet.

5 Click **OK**.

Excel changes the magnification level and redisplays the worksheet.

C You can click **100%** (📄) to return to the normal zoom level.


Zoom
?
✕
Magnification
4
● 200%
○ 100%
○ 75%
○ 50%
○ 25%
○ Fit selection
B
○ Custom: 200 %
5
OK
Cancel


Present Value Ca... - Excel
C
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Normal
Page Break Preview
Page Layout
Custom Views
Workbook Views
Ruler
Formula Bar
Gridlines
Headings
Show
Zoom
100%
Zoom to Selection
Zoom
New Window
Arrange All
Freeze Panes
Switch Windows
Window
Macros
Macros
Sheet1
Sheet2
Sheet3
Ready
200%

B5 =B2/(1+B3)^B4

	A	B
1	Present Value Calculator	
2	Future Value	$100,000
3	Inflation Rate	2%
4	Years from Now	20
5	Value in Today's Dollars	$67,297

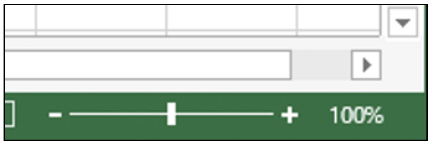
TIPS

How can I zoom in on a particular range?

Excel offers the Zoom to Selection feature that enables you to quickly and easily zoom in on a range. First, select the range that you want to magnify. Click the **View** tab and then click **Zoom to Selection** (🔍). Excel magnifies the selected range to fill the entire Excel window.

Is there an easier way to zoom in and out of a worksheet?

Yes, you can use the Zoom slider, which appears on the far-right side of the Excel status bar. Drag the slider (▮) to the right to zoom in on the worksheet, or drag (▮) to the left to zoom out. You can also click the **Zoom In** (+) or **Zoom Out** (−) button to change the magnification.



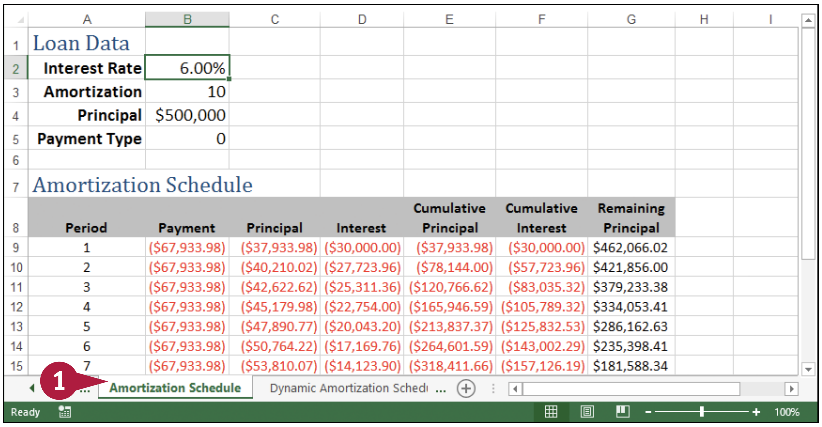
Split a Worksheet into Two Panes

You can make it easier to examine your worksheet data by splitting the worksheet into two scrollable panes that each show different parts of the worksheet. This is useful if you have cell headings at the top of the worksheet that you want to keep in view as you scroll down the worksheet.

Splitting a worksheet into two panes is also useful if you want to keep some data or a formula result in view while you scroll to another part of the worksheet.

Split a Worksheet into Two Panes

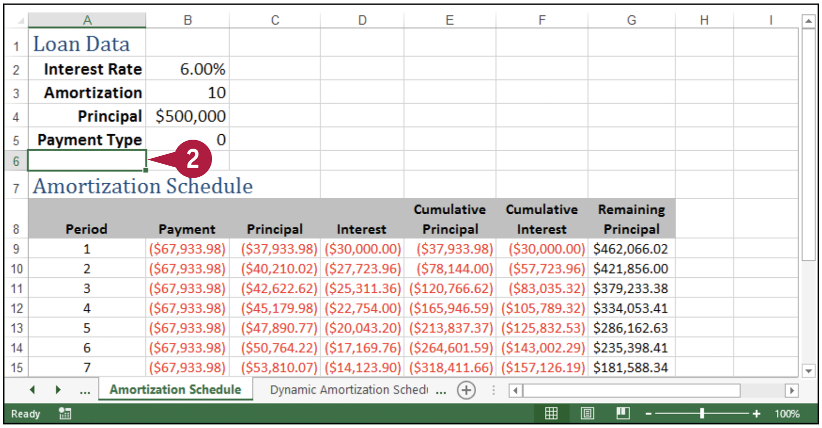
① Click the tab of the worksheet you want to split.



	A	B	C	D	E	F	G
1	Loan Data						
2	Interest Rate	6.00%					
3	Amortization	10					
4	Principal	$500,000					
5	Payment Type	0					
6							
7	Amortization Schedule						
8	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34

② Select a cell in column A that is below the point where you want the split to occur.

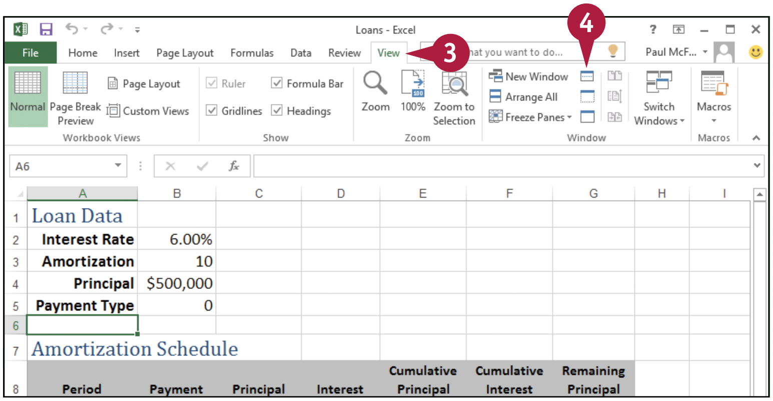
For example, if you want to place the first five rows in the top pane, select cell A6.



	A	B	C	D	E	F	G
1	Loan Data						
2	Interest Rate	6.00%					
3	Amortization	10					
4	Principal	$500,000					
5	Payment Type	0					
6							
7	Amortization Schedule						
8	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34

3 Click the **View** tab.

4 Click **Split** (▭).


Loans - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
3
4
hat you want to do...
Paul McF...
Normal
Page Break Preview
Page Layout
Custom Views
Workbook Views
Ruler
Formula Bar
Gridlines
Headings
Show
Zoom
100%
Zoom to Selection
Zoom
New Window
Arrange All
Freeze Panes
Window
Switch Windows
Macros
Macros
A6
fx

Loan Data

Interest Rate	6.00%
Amortization	10
Principal	$500,000
Payment Type	0

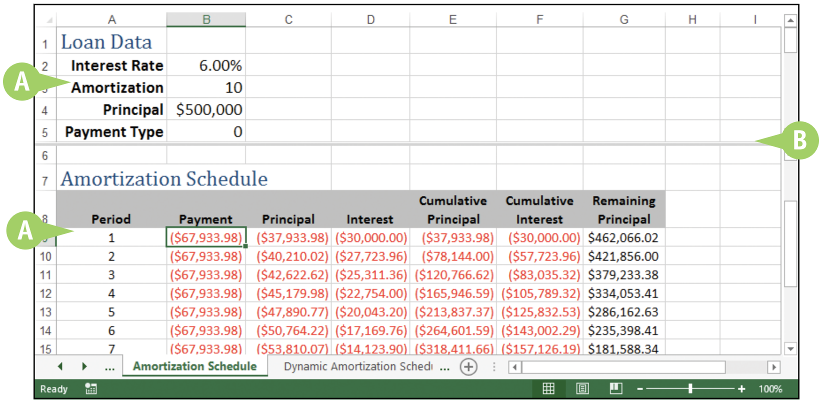
Amortization Schedule

Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal

A Excel splits the worksheet into two horizontal panes at the selected cell.

B You can adjust the size of the panes by clicking and dragging the split bar up or down.

To remove the split, either click ▭ again, or double-click the split bar.


A
A
B
Amortization Schedule
Dynamic Amortization Schedi ...
Ready
100%

Loan Data

Interest Rate	6.00%
Amortization	10
Principal	$500,000
Payment Type	0

Amortization Schedule

Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02
2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00
3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38
4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41
5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63
6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41
7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34

TIPS

Can I split a worksheet into two vertical panes?

Yes. To do this, you must first select a cell in the top row of the worksheet. Specifically, select the top cell in the column to the right of where you want the split to occur. For example, if you want to show only column A in the left pane, select cell B1. When you click ▭, Excel splits the worksheet into two vertical panes.

Can I split a worksheet into four panes?

Yes. This is useful if you have three or four worksheet areas that you want to examine separately. To perform a four-way split, first select the cell where you want the split to occur. Note that this cell must not be in either row 1 or column A. When you click ▭, Excel splits the worksheet into four panes. The cell you selected becomes the upper-left cell in the bottom-right pane.

Hide and Unhide a Worksheet

You can hide a worksheet so that it no longer appears in the workbook. This is useful if you need to show the workbook to other people, but the workbook contains a worksheet with sensitive or private data that you do not want others to see. You might also want to hide a worksheet if it contains unfinished work that is not ready for others to view.

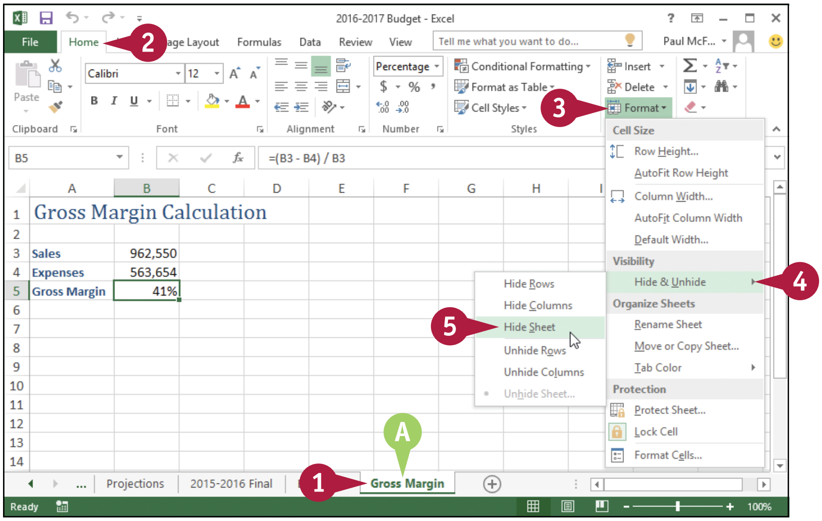
To learn how to protect a workbook so that other people cannot unhide a worksheet, see Chapter 14.

Hide and Unhide a Worksheet

Hide a Worksheet

1. Click the tab of the worksheet you want to hide.
2. Click the **Home** tab.
3. Click **Format**.
4. Click **Hide & Unhide**.
5. Click **Hide Sheet**.

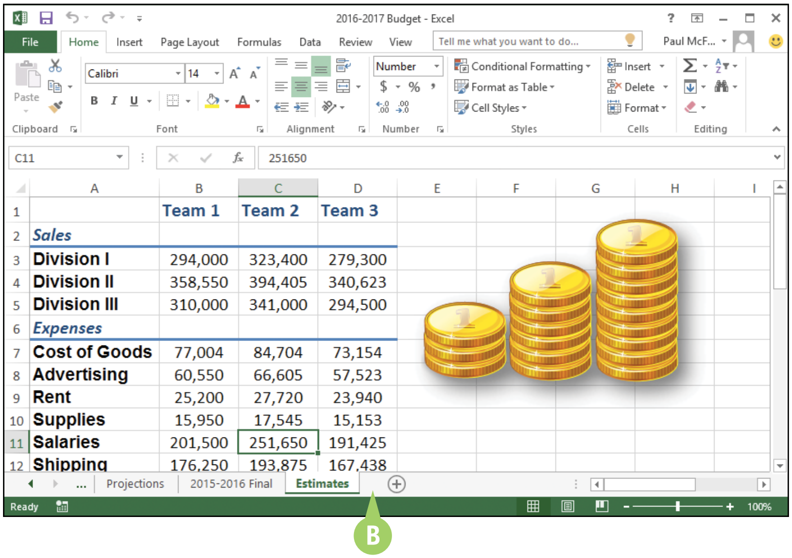
A. You can also right-click the worksheet tab and then click **Hide Sheet**.


2016-2017 Budget - Excel
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Calibri
12
Percentage
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Hide Rows
Hide Columns
Hide Sheet
Unhide Rows
Unhide Columns
Unhide Sheet...
Projections
2015-2016 Final
Gross Margin
Ready
100%
1
2
3
4
5
A

B5 =(B3 - B4) / B3

	A	B
1	Gross Margin Calculation	
2		
3	Sales	962,550
4	Expenses	563,654
5	Gross Margin	41%

B. Excel temporarily removes the worksheet from the workbook.


2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Calibri
14
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
Projections
2015-2016 Final
Estimates
Ready
100%
B

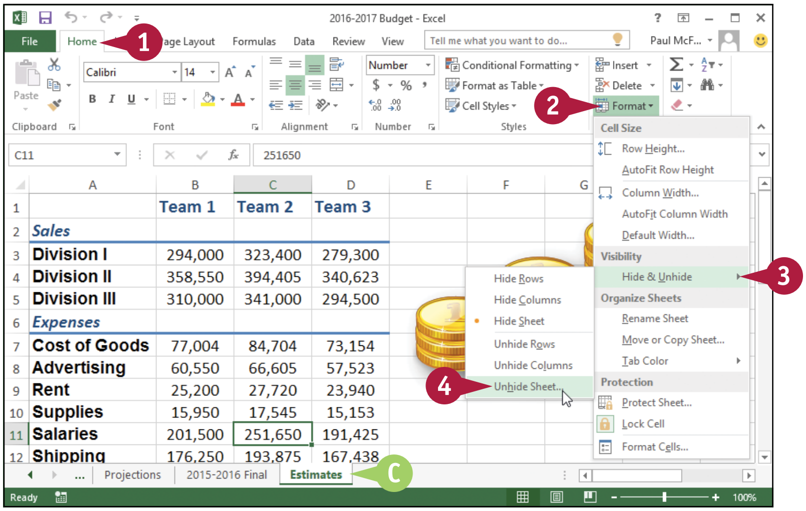
C11 251650

	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438

Unhide a Worksheet

1. Click the **Home** tab.
2. Click **Format**.
3. Click **Hide & Unhide**.
4. Click **Unhide Sheet**.

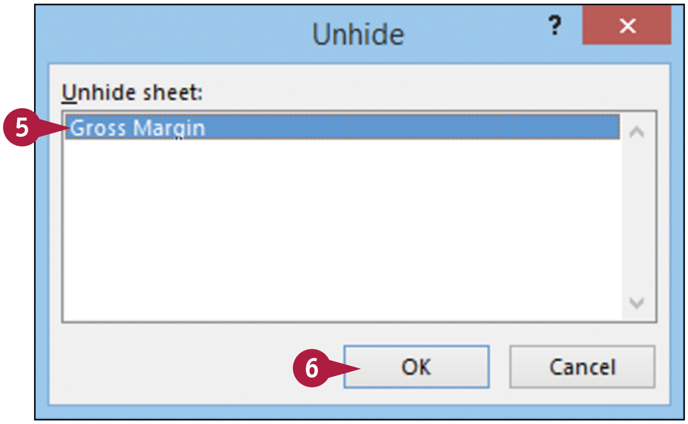
C You can also right-click any worksheet tab and then click **Unhide Sheet**.


2016-2017 Budget - Excel
File
Home
1
age Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Calibri
14
Number
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
2
Clipboard
Font
Alignment
Number
Styles
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
3
Organize Sheets
Rename Sheet
Move or Copy Sheet...
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Hide Rows
Hide Columns
Hide Sheet
Unhide Rows
Unhide Columns
Unhide Sheet...
4
C11
251650
Projections
2015-2016 Final
Estimates
C
Ready
100%

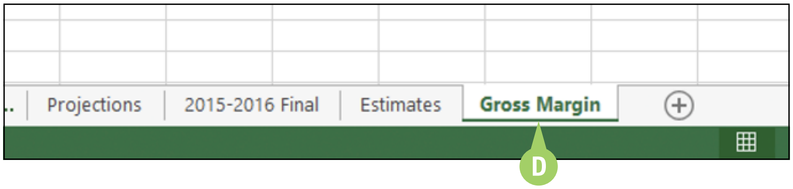
	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438

The Unhide dialog box appears.

5. Click the worksheet you want to restore.
6. Click **OK**.


Unhide
?
Unhide sheet:
5
Gross Margin
6
OK
Cancel

D Excel returns the worksheet to the workbook.


Projections
2015-2016 Final
Estimates
Gross Margin
D

TIP

I have several worksheets that I need to hide. Do I have to hide them individually?

No. You can select all the sheets you want to work with and then hide them. To select multiple worksheets, click the tab of one of the worksheets, hold down Ctrl, and then click the tabs of the other worksheets.

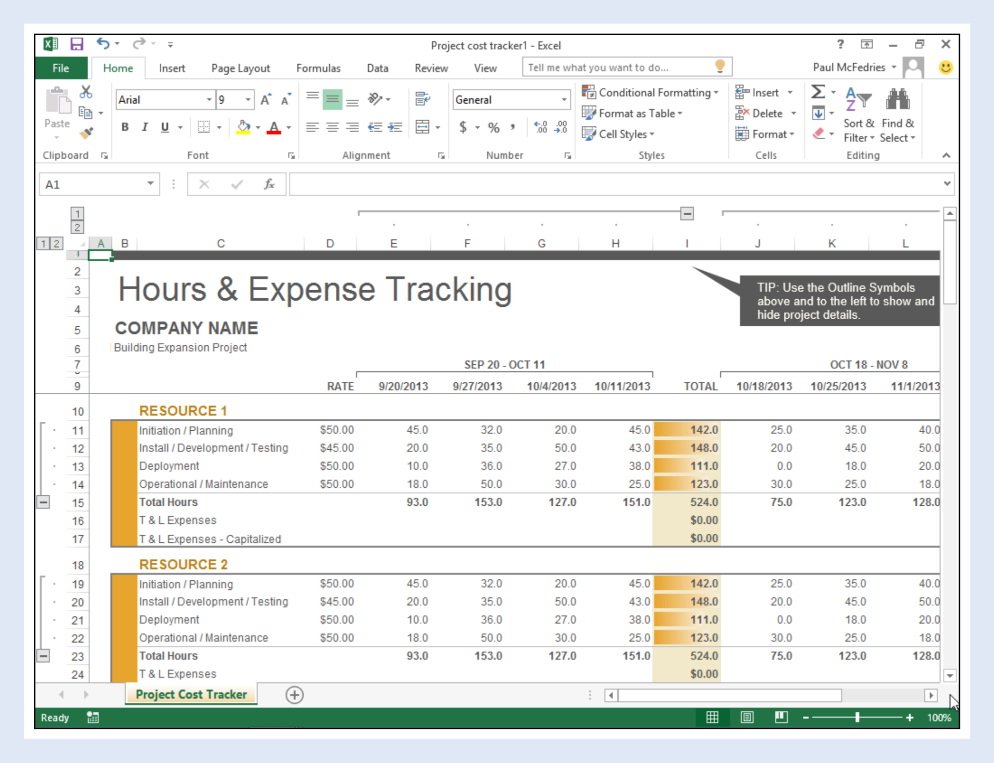
If your workbook has many worksheets and you want to hide most of them, an easy way to select the sheets is to right-click any worksheet tab and then click **Select All Sheets**. Hold down Ctrl, and then click the tabs of the worksheets that you do not want to hide.

After you have selected your worksheets, follow steps **3** to **5** to hide all the selected worksheets at once.

CHAPTER 6

Dealing with Workbooks

Everything you do in Excel takes place within a *workbook*, which is the standard Excel file. This chapter shows you how to get more out of workbooks by creating new files; saving, opening, and closing files; checking spelling; and more.


Project cost tracker1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Paste
Arial
9
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
A1
Project Cost Tracker
Ready
100%

Hours & Expense Tracking

COMPANY NAME

Building Expansion Project

TIP: Use the Outline Symbols above and to the left to show and hide project details.

	RATE	9/20/2013	9/27/2013	10/4/2013	10/11/2013	TOTAL	10/18/2013	10/25/2013	11/1/2013
		SEP 20 - OCT 11					OCT 18 - NOV 8		
RESOURCE 1									
Initiation / Planning	$50.00	45.0	32.0	20.0	45.0	142.0	25.0	35.0	40.0
Install / Development / Testing	$45.00	20.0	35.0	50.0	43.0	148.0	20.0	45.0	50.0
Deployment	$50.00	10.0	36.0	27.0	38.0	111.0	0.0	18.0	20.0
Operational / Maintenance	$50.00	18.0	50.0	30.0	25.0	123.0	30.0	25.0	18.0
Total Hours		93.0	153.0	127.0	151.0	524.0	75.0	123.0	128.0
T & L Expenses						$0.00			
T & L Expenses - Capitalized						$0.00			
RESOURCE 2									
Initiation / Planning	$50.00	45.0	32.0	20.0	45.0	142.0	25.0	35.0	40.0
Install / Development / Testing	$45.00	20.0	35.0	50.0	43.0	148.0	20.0	45.0	50.0
Deployment	$50.00	10.0	36.0	27.0	38.0	111.0	0.0	18.0	20.0
Operational / Maintenance	$50.00	18.0	50.0	30.0	25.0	123.0	30.0	25.0	18.0
Total Hours		93.0	153.0	127.0	151.0	524.0	75.0	123.0	128.0
T & L Expenses						$0.00			

www.allitebooks.com

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Create a New Workbook from a Template 140
Save a Workbook. 142
Open a Workbook 143
Arrange Workbook Windows 144
Find Text in a Workbook 146
Replace Text in a Workbook 148
Check Spelling and Grammar 150

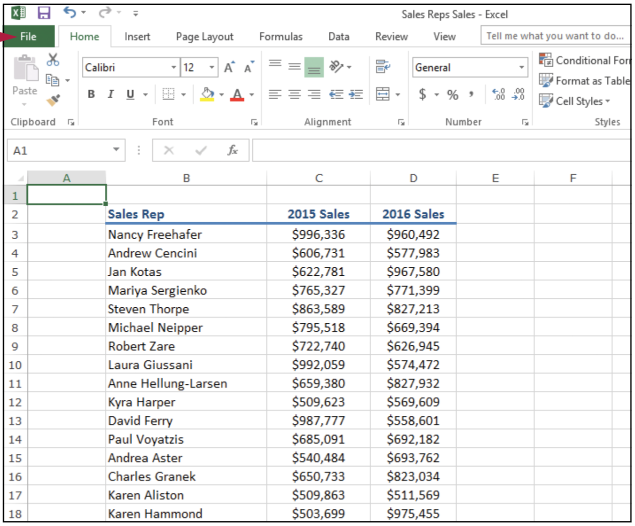
Create a New Blank Workbook

To perform new work in Excel, you need to first create a new, blank Excel workbook. When you launch Excel, it prompts you to create a new workbook and you can click Blank Workbook to start with a blank file that contains a single empty worksheet. However, for subsequent files you must use the File tab to create a new blank workbook.

If you prefer to create a workbook based on one of the Excel templates, see the following section, “Create a New Workbook from a Template.”

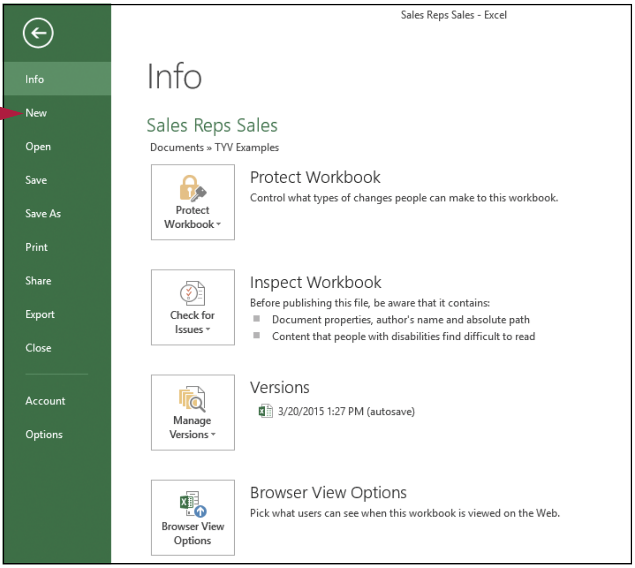
Create a New Blank Workbook

① Click the **File** tab.


Sales Reps Sales - Excel
1
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paste
Calibri
12
General
Conditional Formatting
Format as Table
Cell Styles
Clipboard
Font
Alignment
Number
Styles
A1
A
B
C
D
E
F

	A	B	C	D
1				
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freehafer	$996,336	$960,492
4		Andrew Cencini	$606,731	$577,983
5		Jan Kotas	$622,781	$967,580
6		Mariya Sergienko	$765,327	$771,399
7		Steven Thorpe	$863,589	$827,213
8		Michael Neipper	$795,518	$669,394
9		Robert Zare	$722,740	$626,945
10		Laura Giussani	$992,059	$574,472
11		Anne Hellung-Larsen	$659,380	$827,932
12		Kyra Harper	$509,623	$569,609
13		David Ferry	$987,777	$558,601
14		Paul Voyatzis	$685,091	$692,182
15		Andrea Aster	$540,484	$693,762
16		Charles Granek	$650,733	$823,034
17		Karen Aliston	$509,863	$511,569
18		Karen Hammond	$503,699	$975,455

② Click **New**.


Sales Reps Sales - Excel
2
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Protect Workbook
Check for Issues
Manage Versions
Browser View Options

Info

Sales Reps Sales

Documents » TYV Examples

Protect Workbook

Control what types of changes people can make to this workbook.

Inspect Workbook

Before publishing this file, be aware that it contains:

- Document properties, author's name and absolute path
- Content that people with disabilities find difficult to read

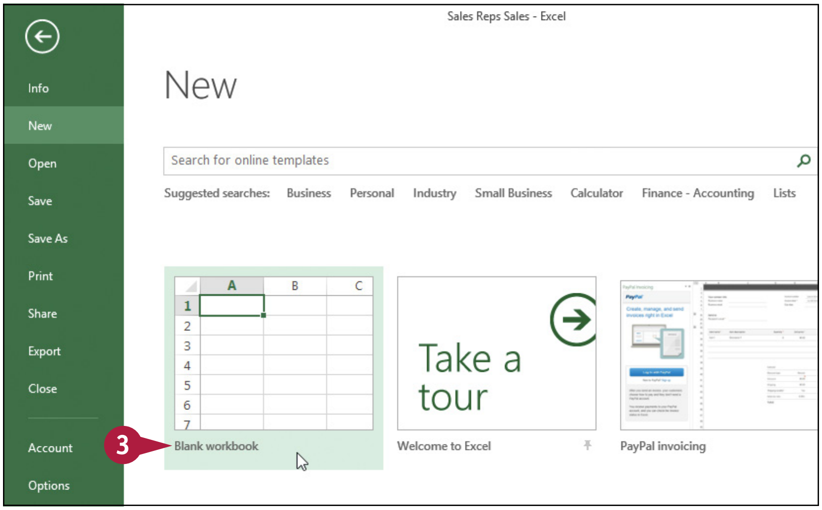
Versions

3/20/2015 1:27 PM (autosave)

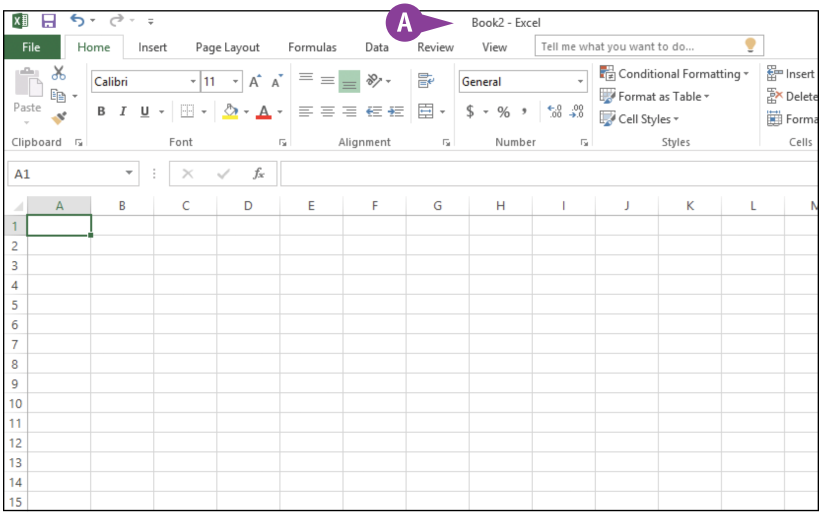
Browser View Options

Pick what users can see when this workbook is viewed on the Web.

3 Click **Blank Workbook**.


Sales Reps Sales - Excel
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
New
Search for online templates
Suggested searches: Business Personal Industry Small Business Calculator Finance - Accounting Lists
Blank workbook
Take a tour
Welcome to Excel
PayPal invoicing
3

A Excel creates the blank workbook and displays it in the Excel window.


Book2 - Excel
A
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paste
Clipboard
Calibri
11
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
A1

TIPS

Is there a faster method I can use to create a new workbook?

Yes. Excel offers a keyboard shortcut for faster workbook creation. From the keyboard, press Ctrl + N.

When I start Excel and then open an existing workbook, Excel often removes the new, blank workbook that it opened automatically. How can I prevent this?

Excel assumes that you want to use a fresh workbook when you start the program, so it prompts you to create a new workbook. However, if you do not make any changes to the blank workbook and then open an existing file, Excel assumes you do not want to use the new workbook, so it closes it. To prevent this from happening, make a change to the blank workbook before opening another file.

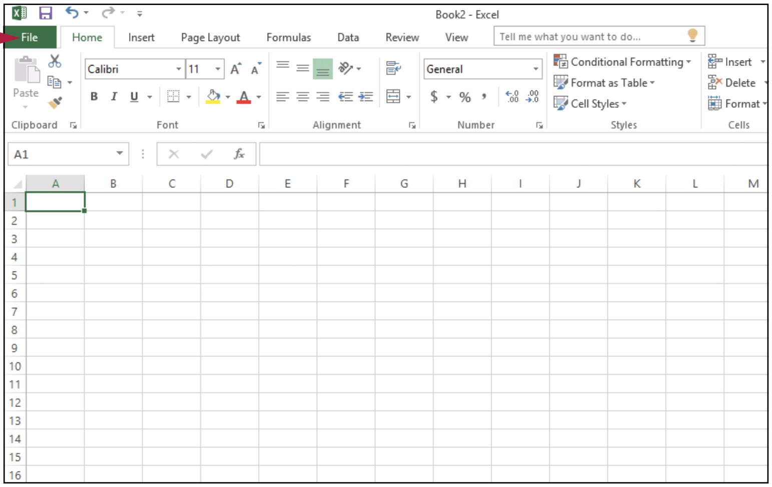
Create a New Workbook from a Template

You can save time and effort by creating a new workbook based on one of the Excel template files. Each template includes a working spreadsheet model that contains predefined headings, labels, and formulas, as well as preformatted colors, fonts, styles, borders, and more. In many cases, you can use the new workbook as is and just fill in your own data.

Excel 2016 offers more than two dozen templates, and many more are available through Microsoft Office Online.

Create a New Workbook from a Template

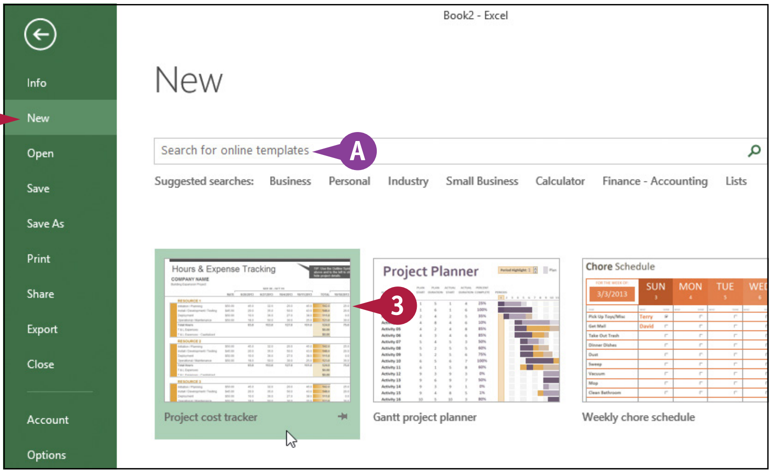
1. Click the **File** tab.


Book2 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paste
Calibri
11
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
A1
1

2. Click **New**.

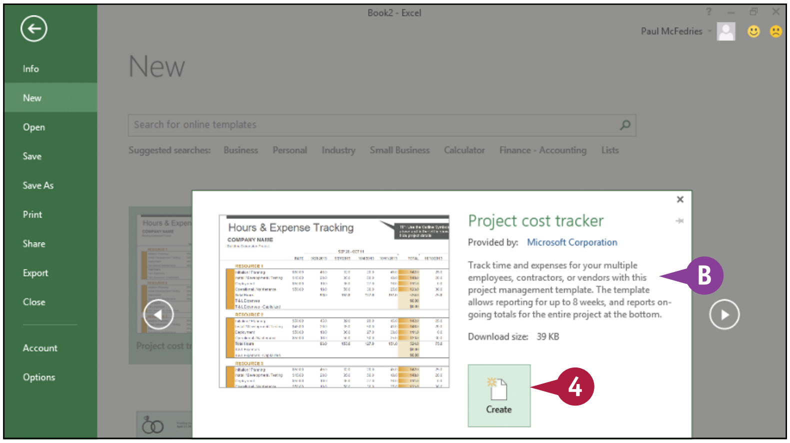
   A To use an Office Online template, use the Search Online Templates text box to type a word or two that defines the type of template you want to use.

3. Click the template you want to use.


Book2 - Excel
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
New
Search for online templates
Suggested searches:
Business
Personal
Industry
Small Business
Calculator
Finance - Accounting
Lists
Project cost tracker
Gantt project planner
Weekly chore schedule
2
A
3

B A preview of the template appears.

4 Click **Create**.


Book2 - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
New
Search for online templates
Suggested searches: Business Personal Industry Small Business Calculator Finance - Accounting Lists
Hours & Expense Tracking
Create
B
4

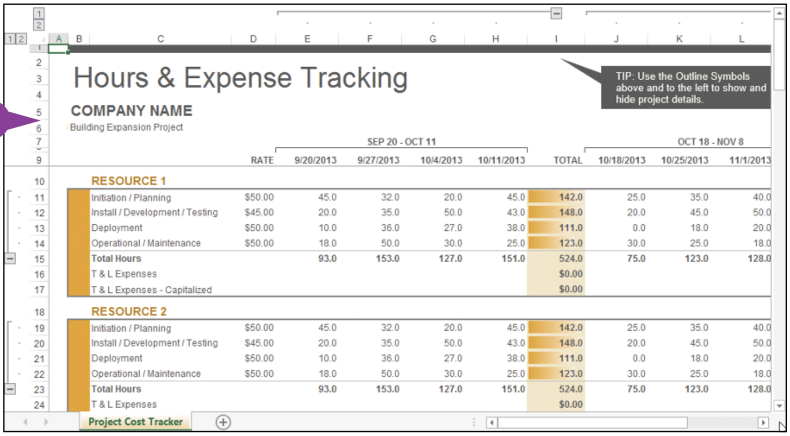
Project cost tracker

Provided by: Microsoft Corporation

Track time and expenses for your multiple employees, contractors, or vendors with this project management template. The template allows reporting for up to 8 weeks, and reports ongoing totals for the entire project at the bottom.

Download size: 39 KB

C Excel creates the new workbook and displays it in the Excel window.


C
Project Cost Tracker

Hours & Expense Tracking

COMPANY NAME

Building Expansion Project

TIP: Use the Outline Symbols above and to the left to show and hide project details.

		SEP 20 - OCT 11					OCT 18 - NOV 8		
	RATE	9/20/2013	9/27/2013	10/4/2013	10/11/2013	TOTAL	10/18/2013	10/25/2013	11/1/2013
RESOURCE 1									
Initiation / Planning	$50.00	45.0	32.0	20.0	45.0	142.0	25.0	35.0	40.0
Install / Development / Testing	$45.00	20.0	35.0	50.0	43.0	148.0	20.0	45.0	50.0
Deployment	$50.00	10.0	36.0	27.0	38.0	111.0	0.0	18.0	20.0
Operational / Maintenance	$50.00	18.0	50.0	30.0	25.0	123.0	30.0	25.0	18.0
Total Hours		**93.0**	**153.0**	**127.0**	**151.0**	524.0	**75.0**	**123.0**	**128.0**
T & L Expenses						$0.00			
T & L Expenses - Capitalized						$0.00			
RESOURCE 2									
Initiation / Planning	$50.00	45.0	32.0	20.0	45.0	142.0	25.0	35.0	40.0
Install / Development / Testing	$45.00	20.0	35.0	50.0	43.0	148.0	20.0	45.0	50.0
Deployment	$50.00	10.0	36.0	27.0	38.0	111.0	0.0	18.0	20.0
Operational / Maintenance	$50.00	18.0	50.0	30.0	25.0	123.0	30.0	25.0	18.0
Total Hours		**93.0**	**153.0**	**127.0**	**151.0**	524.0	**75.0**	**123.0**	**128.0**
T & L Expenses						$0.00			

TIP

Can I create my own template?

Yes. If you have a specific workbook structure that you use frequently, you should save it as a template so that you do not have to re-create the same structure from scratch each time. Open the workbook, click **File**, and then click **Save as**. In the Save As dialog box, click **Computer**, and then click **Browse**. Click the **Save as type** ▼ and then click **Excel Template**. Type a name in the **File name** text box and then click **Save**. To use the template, click **File** and click **Open**; then, in the Open dialog box, click **Computer**, click **Browse**, and then click your template file.

Save a Workbook

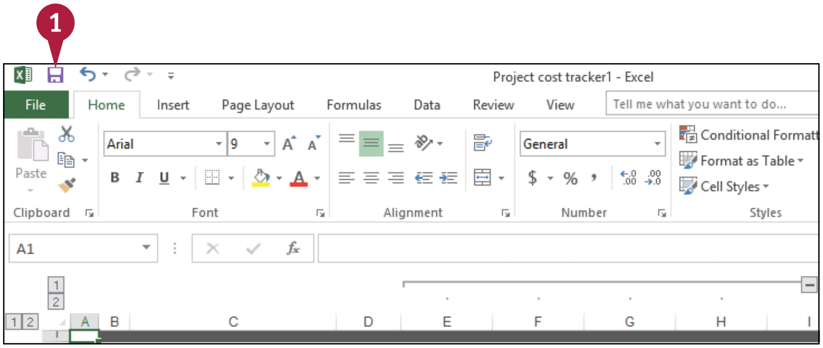
After you create a workbook in Excel and make changes to it, you can save the document to preserve your work. When you edit a workbook, Excel stores the changes in your computer's memory, which is erased each time you shut down your computer. Saving the document preserves your changes on your computer's hard drive. To ensure that you do not lose any work if your computer crashes or Excel freezes up, you should save your work frequently: at least every few minutes.

Save a Workbook

1. Click **Save** (💾).

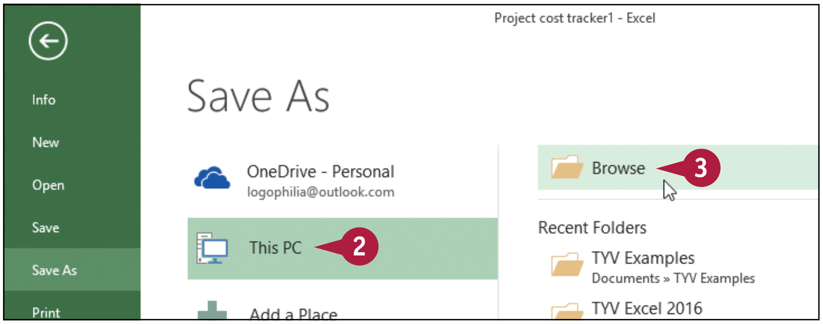
   You can also press Ctrl + S.

   If you have saved the document previously, your changes are now preserved, and you do not need to follow the rest of the steps in this section.


1
Project cost tracker1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paste
Arial
9
General
Conditional Formatt
Format as Table
Cell Styles
Clipboard
Font
Alignment
Number
Styles
A1
A
B
C
D
E
F
G
H
I

The Save As tab appears.

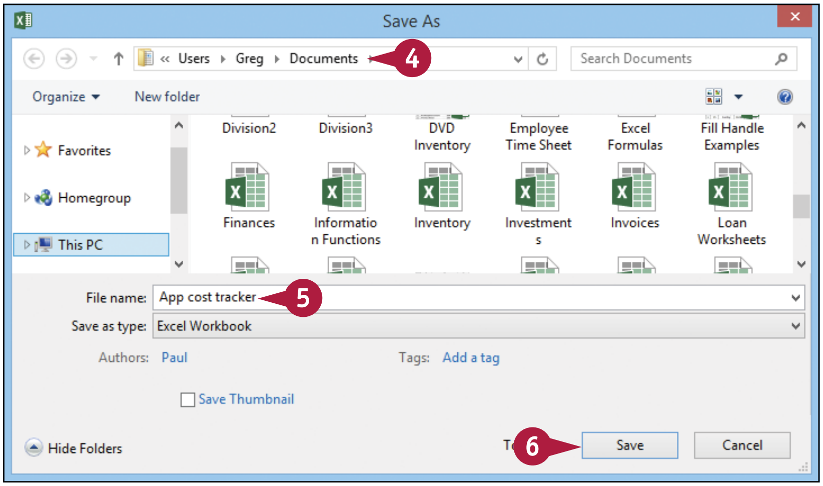
2. Click **This PC**.
3. Click **Browse**.


Project cost tracker1 - Excel
Info
New
Open
Save
Save As
Print
Save As
OneDrive - Personal
logophilia@outlook.com
This PC
2
Add a Place
Browse
3
Recent Folders
TYV Examples
Documents » TYV Examples
TYV Excel 2016

The Save As dialog box appears.

4. Select a folder in which to store the file.
5. Click in the **File name** text box and type the name that you want to use for the document.
6. Click **Save**.

   Excel saves the file.


Save As
« Users › Greg › Documents
4
Search Documents
Organize
New folder
Favorites
Homegroup
This PC
Division2
Division3
DVD Inventory
Employee Time Sheet
Excel Formulas
Fill Handle Examples
Finances
Information Functions
Inventory
Investments
Invoices
Loan Worksheets
5
Save Thumbnail
Hide Folders
6
Save
Cancel

File name: App cost tracker

Save as type: Excel Workbook

Authors: Paul

Tags: Add a tag

Note: To learn how to save a workbook in an older Excel format, see Chapter 14.

Open a Workbook

To view or make changes to an Excel workbook that you have saved in the past, you must open the workbook in Excel. To open a workbook, you must first locate it in the folder you used when you originally saved the file.

If you have used the workbook recently, you can save time by opening the workbook from the Excel Recent Workbooks menu, which displays a list of the 25 workbooks that you have used most recently.

Open a Workbook

1. Click the **File** tab (not shown).
2. Click **Open**.

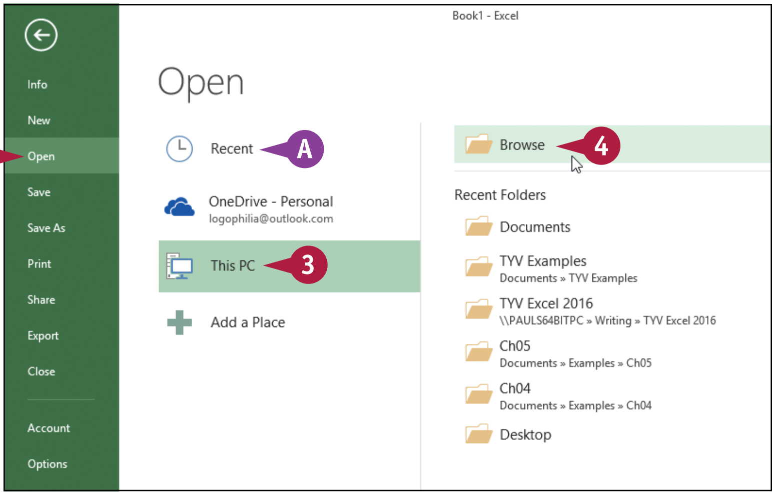
   The Open tab appears.

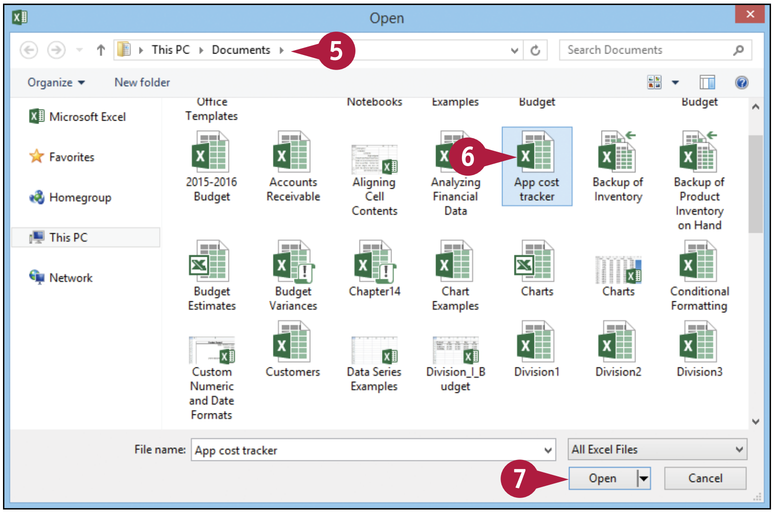
   A You can click **Recent** to see a list of your recently used workbooks. If you see the file you want, click it and then skip the rest of these steps.
3. Click **This PC**.
4. Click **Browse**.

   You can also press Ctrl + O.

   The Open dialog box appears.
5. Select the folder that contains the workbook you want to open.
6. Click the workbook.
7. Click **Open**.

   The workbook appears in a window.


Book1 - Excel
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Open
Recent
OneDrive - Personal
logophilia@outlook.com
This PC
Add a Place
Browse
Recent Folders
Documents
TYV Examples
Documents » TYV Examples
TYV Excel 2016
\\PAULS64BITPC » Writing » TYV Excel 2016
Ch05
Documents » Examples » Ch05
Ch04
Documents » Examples » Ch04
Desktop
2
A
3
4


Open
This PC › Documents ›
Search Documents
Organize
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
Office Templates
Notebooks
Examples
Budget
Budget
2015-2016 Budget
Accounts Receivable
Aligning Cell Contents
Analyzing Financial Data
App cost tracker
Backup of Inventory
Backup of Product Inventory on Hand
Budget Estimates
Budget Variances
Chapter14
Chart Examples
Charts
Charts
Conditional Formatting
Custom Numeric and Date Formats
Customers
Data Series Examples
Division_I_Budget
Division1
Division2
Division3
All Excel Files
Open
Cancel
5
6
7

File name: App cost tracker

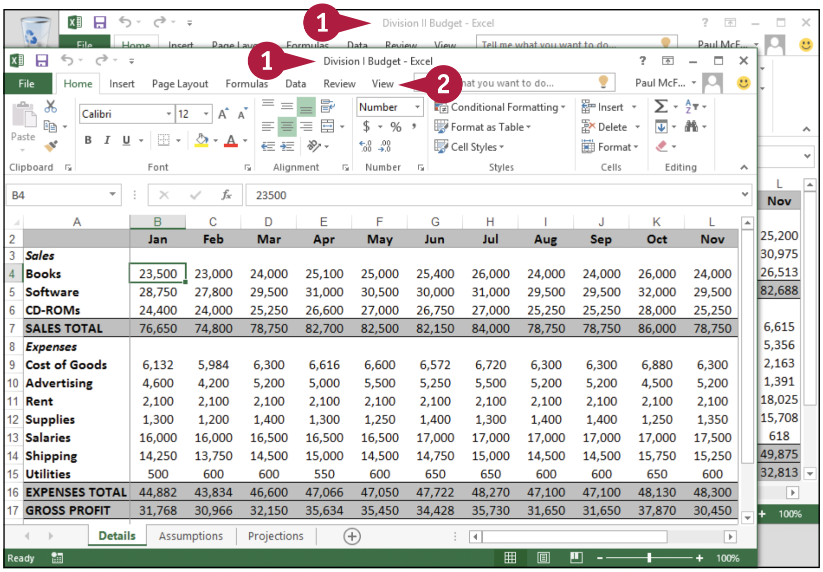
Arrange Workbook Windows

You can view two or more workbooks at once by arranging the workbook windows on the Windows desktop. This is useful if, for example, you want to compare or contrast data in two or more workbooks. By arranging the workbooks so that they do not overlap each other, you can see the workbooks' data without having to switch from one window to another.

Excel offers four view modes for arranging workbook windows: Tiled, Horizontal, Vertical, and Cascade.

Arrange Workbook Windows

1. Open the workbooks you want to view.
2. Click the **View** tab.

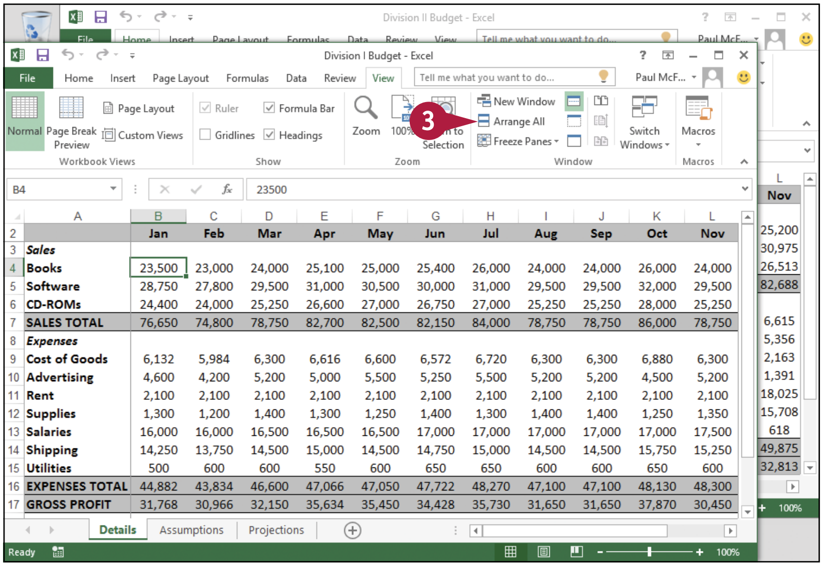


1
Division II Budget - Excel
1
Division I Budget - Excel
2
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Details
Assumptions
Projections
Ready
100%

B4 | 23500

	A	B	C	D	E	F	G	H	I	J	K	L
2		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
3	*Sales*											
4	Books	23,500	23,000	24,000	25,100	25,000	25,400	26,000	24,000	24,000	26,000	24,000
5	Software	28,750	27,800	29,500	31,000	30,500	30,000	31,000	29,500	29,500	32,000	29,500
6	CD-ROMs	24,400	24,000	25,250	26,600	27,000	26,750	27,000	25,250	25,250	28,000	25,250
7	SALES TOTAL	76,650	74,800	78,750	82,700	82,500	82,150	84,000	78,750	78,750	86,000	78,750
8	*Expenses*											
9	Cost of Goods	6,132	5,984	6,300	6,616	6,600	6,572	6,720	6,300	6,300	6,880	6,300
10	Advertising	4,600	4,200	5,200	5,000	5,500	5,250	5,500	5,200	5,200	4,500	5,200
11	Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
12	Supplies	1,300	1,200	1,400	1,300	1,250	1,400	1,300	1,400	1,400	1,250	1,350
13	Salaries	16,000	16,000	16,500	16,500	16,500	17,000	17,000	17,000	17,000	17,000	17,500
14	Shipping	14,250	13,750	14,500	15,000	14,500	14,750	15,000	14,500	14,500	15,750	15,250
15	Utilities	500	600	600	550	600	650	650	600	600	650	600
16	EXPENSES TOTAL	44,882	43,834	46,600	47,066	47,050	47,722	48,270	47,100	47,100	48,130	48,300
17	GROSS PROFIT	31,768	30,966	32,150	35,634	35,450	34,428	35,730	31,650	31,650	37,870	30,450

3. Click **Arrange All** (▤).



Division II Budget - Excel
Division I Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Normal
Page Break Preview
Page Layout
Custom Views
Ruler
Formula Bar
Gridlines
Headings
Zoom
100%
Zoom to Selection
New Window
Arrange All
Freeze Panes
Switch Windows
Macros
Workbook Views
Show
Zoom
Window
Macros
3
Details
Assumptions
Projections
Ready
100%

B4 | 23500

	A	B	C	D	E	F	G	H	I	J	K	L
2		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
3	*Sales*											
4	Books	23,500	23,000	24,000	25,100	25,000	25,400	26,000	24,000	24,000	26,000	24,000
5	Software	28,750	27,800	29,500	31,000	30,500	30,000	31,000	29,500	29,500	32,000	29,500
6	CD-ROMs	24,400	24,000	25,250	26,600	27,000	26,750	27,000	25,250	25,250	28,000	25,250
7	SALES TOTAL	76,650	74,800	78,750	82,700	82,500	82,150	84,000	78,750	78,750	86,000	78,750
8	*Expenses*											
9	Cost of Goods	6,132	5,984	6,300	6,616	6,600	6,572	6,720	6,300	6,300	6,880	6,300
10	Advertising	4,600	4,200	5,200	5,000	5,500	5,250	5,500	5,200	5,200	4,500	5,200
11	Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
12	Supplies	1,300	1,200	1,400	1,300	1,250	1,400	1,300	1,400	1,400	1,250	1,350
13	Salaries	16,000	16,000	16,500	16,500	16,500	17,000	17,000	17,000	17,000	17,000	17,500
14	Shipping	14,250	13,750	14,500	15,000	14,500	14,750	15,000	14,500	14,500	15,750	15,250
15	Utilities	500	600	600	550	600	650	650	600	600	650	600
16	EXPENSES TOTAL	44,882	43,834	46,600	47,066	47,050	47,722	48,270	47,100	47,100	48,130	48,300
17	GROSS PROFIT	31,768	30,966	32,150	35,634	35,450	34,428	35,730	31,650	31,650	37,870	30,450

The Arrange Windows dialog box appears.

4. Click a view mode (○ changes to ●).

   Tiled arranges the workbooks evenly on the Windows desktop.

   Horizontal stacks the workbooks one above the other.

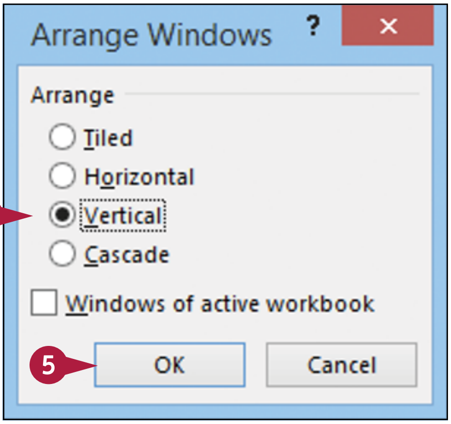
   Vertical displays the workbooks side by side.

   Cascade arranges the workbooks in an overlapping cascade pattern.

5. Click **OK**.

Ⓐ Excel arranges the workbook windows.

This example shows two workbooks arranged with the Vertical view mode.

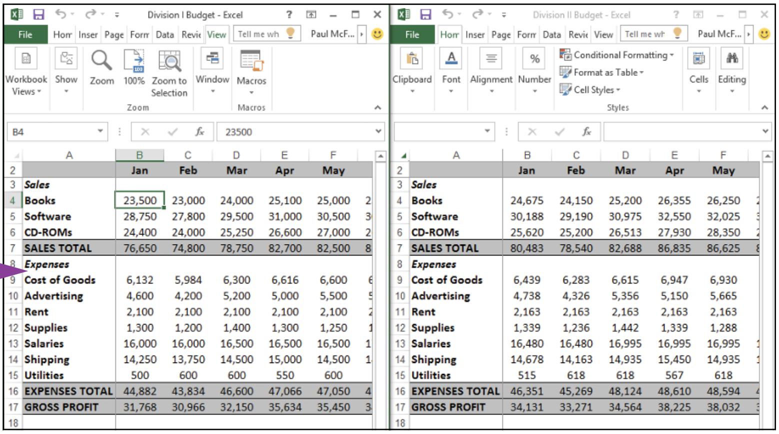

Arrange Windows
?
✕
4
5

Arrange

○ Tiled
○ Horizontal
● Vertical
○ Cascade

☐ Windows of active workbook

OK
Cancel


Division I Budget - Excel
File
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Page
Form
Data
Revie
View
Tell me wh
Paul McF...
Workbook Views
Show
Zoom
100%
Zoom to Selection
Window
Macros
Zoom
Macros
A
Division II Budget - Excel
File
Hom
Inser
Page
Form
Data
Revie
View
Tell me wh
Paul McF...
Clipboard
Font
Alignment
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Cells
Editing

B4 = 23500

	A	B	C	D	E	F
2		Jan	Feb	Mar	Apr	May
3	*Sales*					
4	Books	23,500	23,000	24,000	25,100	25,000
5	Software	28,750	27,800	29,500	31,000	30,500
6	CD-ROMs	24,400	24,000	25,250	26,600	27,000
7	SALES TOTAL	76,650	74,800	78,750	82,700	82,500
8	*Expenses*					
9	Cost of Goods	6,132	5,984	6,300	6,616	6,600
10	Advertising	4,600	4,200	5,200	5,000	5,500
11	Rent	2,100	2,100	2,100	2,100	2,100
12	Supplies	1,300	1,200	1,400	1,300	1,250
13	Salaries	16,000	16,000	16,500	16,500	16,500
14	Shipping	14,250	13,750	14,500	15,000	14,500
15	Utilities	500	600	600	550	600
16	EXPENSES TOTAL	44,882	43,834	46,600	47,066	47,050
17	GROSS PROFIT	31,768	30,966	32,150	35,634	35,450
18						

	A	B	C	D	E	F
2		Jan	Feb	Mar	Apr	May
3	*Sales*					
4	Books	24,675	24,150	25,200	26,355	26,250
5	Software	30,188	29,190	30,975	32,550	32,025
6	CD-ROMs	25,620	25,200	26,513	27,930	28,350
7	SALES TOTAL	80,483	78,540	82,688	86,835	86,625
8	*Expenses*					
9	Cost of Goods	6,439	6,283	6,615	6,947	6,930
10	Advertising	4,738	4,326	5,356	5,150	5,665
11	Rent	2,163	2,163	2,163	2,163	2,163
12	Supplies	1,339	1,236	1,442	1,339	1,288
13	Salaries	16,480	16,480	16,995	16,995	16,995
14	Shipping	14,678	14,163	14,935	15,450	14,935
15	Utilities	515	618	618	567	618
16	EXPENSES TOTAL	46,351	45,269	48,124	48,610	48,594
17	GROSS PROFIT	34,131	33,271	34,564	38,225	38,032
18						

TIPS

How do I return to viewing one workbook at a time?

Click the workbook you want to use, and then click the workbook window's **Maximize** button (☐). This maximizes the workbook on the Windows desktop, so you only see that workbook. To switch to another open workbook, click the Excel icon (X) in the taskbar to display thumbnail versions of the open workbooks, and then click the one you want to view.

Is it possible to view two different sections of a single workbook at the same time?

Yes. Excel enables you to create a second window for a workbook and you can then arrange the two windows as described in this section. Switch to the workbook you want to view, click the **View** tab, and then click **New Window** (▤). Follow steps 1 to 3 to open the Arrange Windows dialog box and select a view option. Select the **Windows of active workbook** check box (☐ changes to ☑), and then click **OK**.

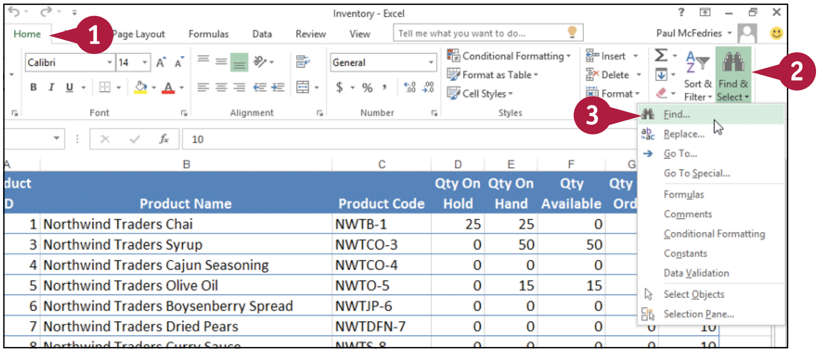
Find Text in a Workbook

Most spreadsheet models require at most a screen or two in a single worksheet, so locating the text you want is usually not difficult. However, you might be working with a large spreadsheet model that takes up either multiple screens in a single worksheet or multiple worksheets. In such large workbooks, locating specific text can be difficult and time-consuming. You can make this task easier and faster using the Excel Find feature, which searches the entire workbook in the blink of an eye.

Find Text in a Workbook

1. Click the **Home** tab.
2. Click **Find & Select**.
3. Click **Find**.

Note: You can also run the Find command by pressing Ctrl + F.

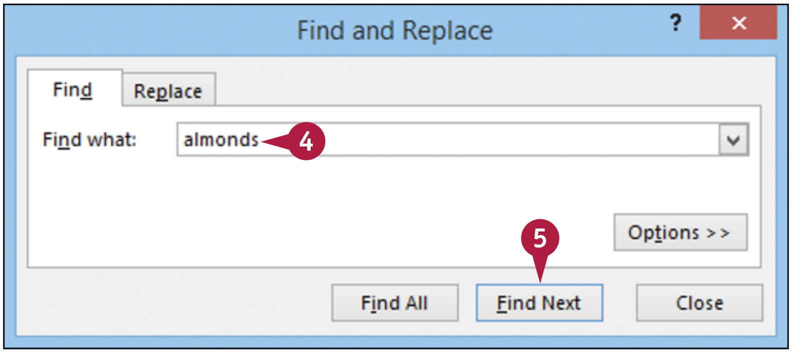


Inventory - Excel
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Calibri
14
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Font
Alignment
Number
Styles
Find...
Replace...
Go To...
Go To Special...
Formulas
Comments
Conditional Formatting
Constants
Data Validation
Select Objects
Selection Pane...
1
2
3

duct D	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available
1	Northwind Traders Chai	NWTB-1	25	25	0
3	Northwind Traders Syrup	NWTCO-3	0	50	50
4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0
5	Northwind Traders Olive Oil	NWTO-5	0	15	15
6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0
7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0

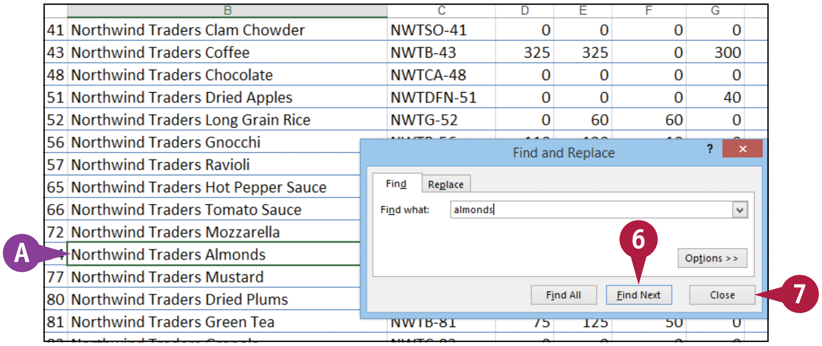
The Find and Replace dialog box appears.

4. Click in the **Find what** text box and type the text you want to find.
5. Click **Find Next**.



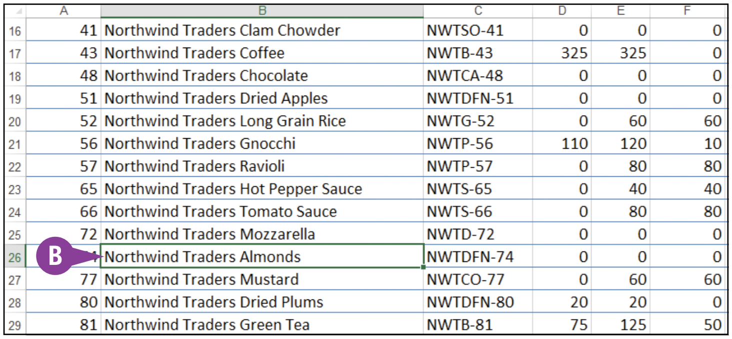
Find and Replace
?
×
Find
Replace
Options >>
Find All
Find Next
Close
4
5

Find what: almonds



	B	C	D	E	F	G
41	Northwind Traders Clam Chowder	NWTSO-41	0	0	0	0
43	Northwind Traders Coffee	NWTB-43	325	325	0	300
48	Northwind Traders Chocolate	NWTCA-48	0	0	0	0
51	Northwind Traders Dried Apples	NWTDFN-51	0	0	0	40
52	Northwind Traders Long Grain Rice	NWTG-52	0	60	60	0
56	Northwind Traders Gnocchi					
57	Northwind Traders Ravioli					
65	Northwind Traders Hot Pepper Sauce					
66	Northwind Traders Tomato Sauce					
72	Northwind Traders Mozzarella					
	Northwind Traders Almonds					
77	Northwind Traders Mustard					
80	Northwind Traders Dried Plums					
81	Northwind Traders Green Tea	NWTB-81	75	125	50	0

Find what: almonds



	A	B	C	D	E	F
16	41	Northwind Traders Clam Chowder	NWTSO-41	0	0	0
17	43	Northwind Traders Coffee	NWTB-43	325	325	0
18	48	Northwind Traders Chocolate	NWTCA-48	0	0	0
19	51	Northwind Traders Dried Apples	NWTDFN-51	0	0	0
20	52	Northwind Traders Long Grain Rice	NWTG-52	0	60	60
21	56	Northwind Traders Gnocchi	NWTP-56	110	120	10
22	57	Northwind Traders Ravioli	NWTP-57	0	80	80
23	65	Northwind Traders Hot Pepper Sauce	NWTS-65	0	40	40
24	66	Northwind Traders Tomato Sauce	NWTS-66	0	80	80
25	72	Northwind Traders Mozzarella	NWTD-72	0	0	0
26		Northwind Traders Almonds	NWTDFN-74	0	0	0
27	77	Northwind Traders Mustard	NWTCO-77	0	60	60
28	80	Northwind Traders Dried Plums	NWTDFN-80	20	20	0
29	81	Northwind Traders Green Tea	NWTB-81	75	125	50

Ⓐ Excel selects the next cell that contains an instance of the search text.

Note: If the search text does not exist in the document, Excel displays a dialog box to let you know.

6 If the selected instance is not the one you want, click **Find Next** until Excel finds the correct instance.

7 Click **Close** to close the Find and Replace dialog box.

Ⓑ Excel leaves the cell selected.

TIPS

When I search for a particular term, Excel only looks in the current worksheet. How can I get Excel to search the entire workbook?

In the Find and Replace dialog box, click **Options** to expand the dialog box. Click the **Within** ▾ and then click **Workbook**. This option tells Excel to examine the entire workbook for your search text.

When I search for a name such as *Bill*, Excel also matches the non-name *bill*. Is there a way to fix this?

Yes. In the Find and Replace dialog box, click **Options** to expand the dialog box. Select the **Match case** check box (☐ changes to ☑). This option tells Excel to match the search text only if it has the same mix of uppercase and lowercase letters that you specify in the **Find what** text box. If you type **Bill**, for example, the program matches only *Bill* and not *bill*.

Replace Text in a Workbook

Do you need to replace a word or part of a word with some other text? If you only need to replace one or two instances of the text, you can usually perform the replacement quickly and easily. However, if you have many instances of the text to replace, the replacement can take a long time and the more instances there are, the more likely it is that you will make a mistake. You can save time and do a more accurate job if you let the Excel Replace feature replace the text for you.

Replace Text in a Workbook

1. Click the **Home** tab.
2. Click **Find & Select**.
3. Click **Replace**.

Note: You can also run the Replace command by pressing Ctrl + H.

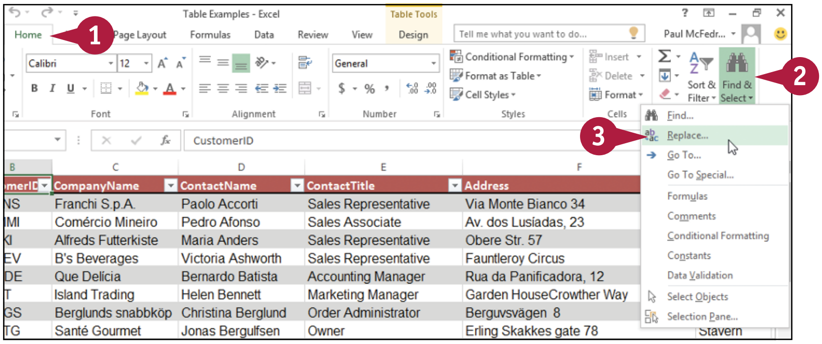


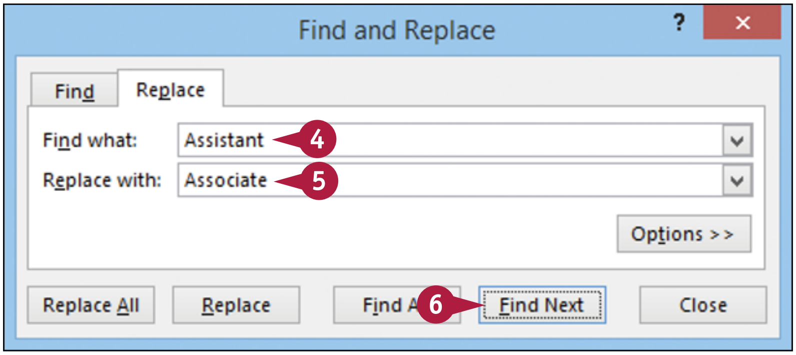
Table Examples - Excel
Table Tools
Home
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McFedr...
Calibri
12
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Find & Select
Font
Alignment
Number
Styles
Cells
Find...
Replace...
Go To...
Go To Special...
Formulas
Comments
Conditional Formatting
Constants
Data Validation
Select Objects
Selection Pane...
Stavern
1
2
3

CustomerID

B	C	D	E	F
merID	CompanyName	ContactName	ContactTitle	Address
NS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bianco 34
MI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23
KI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
EV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
DE	Que Delícia	Bernardo Batista	Accounting Manager	Rua da Panificadora, 12
T	Island Trading	Helen Bennett	Marketing Manager	Garden HouseCrowther Way
GS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
TG	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakkes gate 78

The Find and Replace dialog box appears.

4. In the **Find what** text box, type the text you want to find.
5. Click in the **Replace with** text box and type the text you want to use as the replacement.
6. Click **Find Next**.


Find and Replace
?
×
Find
Replace
Options >>
Replace All
Replace
Find All
Find Next
Close
4
5
6

Find what: Assistant

Replace with: Associate

Ⓐ Excel selects the cell that contains the next instance of the search text.

Note: If the search text does not exist in the document, Excel displays a dialog box to let you know.

⑦ If the selected instance is not the one you want, click **Find Next** until Excel finds the correct instance.

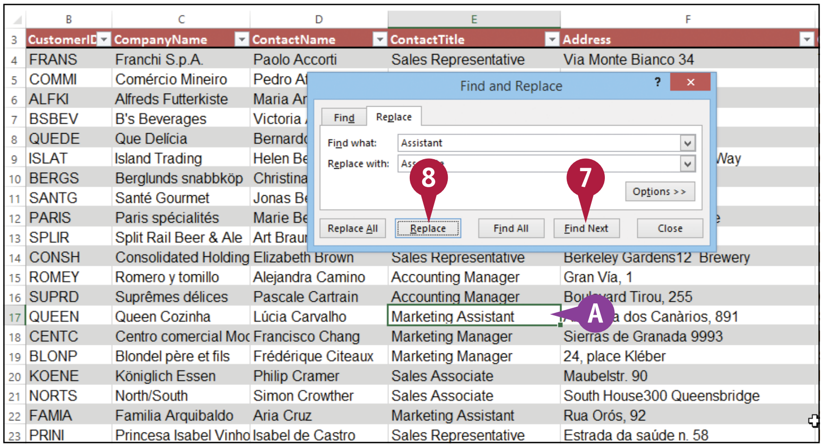
⑧ Click **Replace**.

Ⓑ Excel replaces the selected text with the replacement text.

Ⓒ Excel selects the next instance of the search text.

⑨ Repeat steps 7 and 8 until you have replaced all the instances you want to replace.

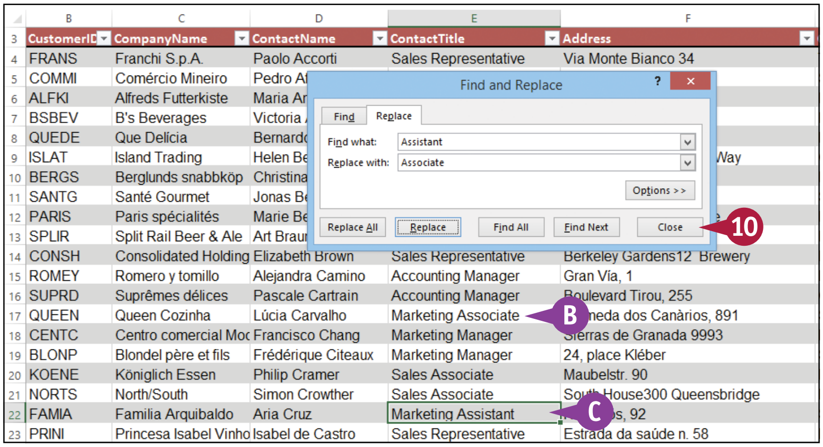
⑩ Click **Close** to close the Find and Replace dialog box.



Find what: Assistant

Replace with: Ass

	B	C	D	E	F
3	CustomerI	CompanyName	ContactName	ContactTitle	Address
4	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bianco 34
5	COMMI	Comércio Mineiro	Pedro Af		
6	ALFKI	Alfreds Futterkiste	Maria Ar		
7	BSBEV	B's Beverages	Victoria		
8	QUEDE	Que Delícia	Bernardc		
9	ISLAT	Island Trading	Helen Be		Way
10	BERGS	Berglunds snabbköp	Christina		
11	SANTG	Santé Gourmet	Jonas Be		
12	PARIS	Paris spécialités	Marie Be		e
13	SPLIR	Split Rail Beer & Ale	Art Braur		
14	CONSH	Consolidated Holding	Elizabeth Brown	Sales Representative	Berkeley Gardens12 Brewery
15	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Vía, 1
16	SUPRD	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Tirou, 255
17	QUEEN	Queen Cozinha	Lúcia Carvalho	Marketing Assistant	a dos Canàrios, 891
18	CENTC	Centro comercial Moc	Francisco Chang	Marketing Manager	Sierras de Granada 9993
19	BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber
20	KOENE	Königlich Essen	Philip Cramer	Sales Associate	Maubelstr. 90
21	NORTS	North/South	Simon Crowther	Sales Associate	South House300 Queensbridge
22	FAMIA	Familia Arquibaldo	Aria Cruz	Marketing Assistant	Rua Orós, 92
23	PRINI	Princesa Isabel Vinho	Isabel de Castro	Sales Representative	Estrada da saúde n. 58



Find what: Assistant

Replace with: Associate

	B	C	D	E	F
3	CustomerI	CompanyName	ContactName	ContactTitle	Address
4	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bianco 34
5	COMMI	Comércio Mineiro	Pedro Af		
6	ALFKI	Alfreds Futterkiste	Maria Ar		
7	BSBEV	B's Beverages	Victoria		
8	QUEDE	Que Delícia	Bernardc		
9	ISLAT	Island Trading	Helen Be		Way
10	BERGS	Berglunds snabbköp	Christina		
11	SANTG	Santé Gourmet	Jonas Be		
12	PARIS	Paris spécialités	Marie Be		
13	SPLIR	Split Rail Beer & Ale	Art Braur		
14	CONSH	Consolidated Holding	Elizabeth Brown	Sales Representative	Berkeley Gardens12 Brewery
15	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Vía, 1
16	SUPRD	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Tirou, 255
17	QUEEN	Queen Cozinha	Lúcia Carvalho	Marketing Associate	neda dos Canàrios, 891
18	CENTC	Centro comercial Moc	Francisco Chang	Marketing Manager	Sierras de Granada 9993
19	BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber
20	KOENE	Königlich Essen	Philip Cramer	Sales Associate	Maubelstr. 90
21	NORTS	North/South	Simon Crowther	Sales Associate	South House300 Queensbridge
22	FAMIA	Familia Arquibaldo	Aria Cruz	Marketing Assistant	s, 92
23	PRINI	Princesa Isabel Vinho	Isabel de Castro	Sales Representative	Estrada da saúde n. 58

TIP

Is there a faster way to replace every instance of the search text with the replacement text?

Yes. In the Find and Replace dialog box, click **Replace All**. This tells Excel to replace every instance of the search text with the replacement text. However, you should exercise some caution with this feature because it may make some replacements that you did not intend. Click **Find Next** a few times to make sure the matches are correct. Also, consider clicking **Options** and then selecting the **Match case** check box (☐ changes to ☑), as described in the previous section, "Find Text in a Workbook."

Check Spelling and Grammar

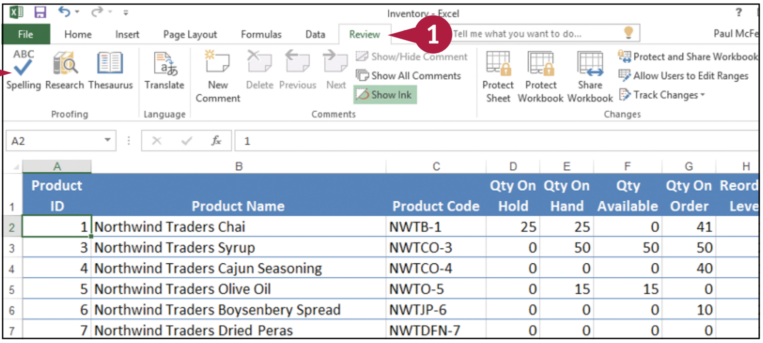
Although Excel workbooks are mostly concerned with numbers, formulas, and data, a workbook that contains misspelled words might not be taken as seriously as one that is free of jarring typos. You can eliminate any text errors in your Excel workbooks by taking advantage of the spell-checker, which identifies potentially misspelled words and offers suggested corrections.

When the spell-checker flags a word as misspelled, you can correct the word, tell the spell-checker to ignore it, or add it to the spell-checker's dictionary.

Check Spelling and Grammar

1. Click the **Review** tab.
2. Click **Spelling** (✓).

Note: You can also press F7.


Inventory - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
Tell me what you want to do...
Paul McFe
Spelling
Research
Thesaurus
Translate
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Protect Sheet
Protect Workbook
Share Workbook
Protect and Share Workbook
Allow Users to Edit Ranges
Track Changes
Proofing
Language
Comments
Changes
1
2

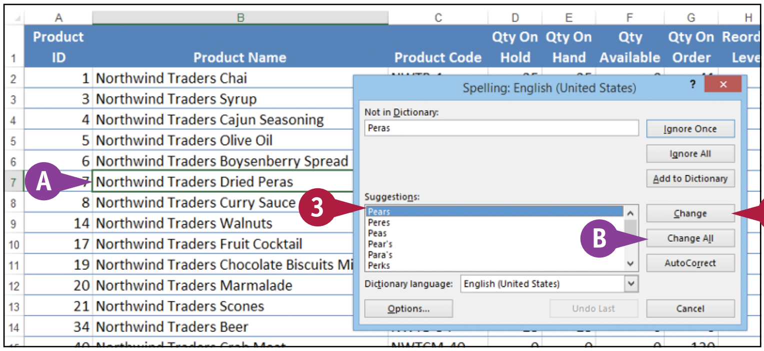
A2 | 1

	A	B	C	D	E	F	G	H
1	Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reord Leve
2	1	Northwind Traders Chai	NWTB-1	25	25	0	41	
3	3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	
4	4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	
5	5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	
6	6	Northwind Traders Boysenbery Spread	NWTJP-6	0	0	0	10	
7	7	Northwind Traders Dried Peras	NWTDFN-7	0	0	0	0	

- **A** The Spelling dialog box appears and selects the cell that contains the first error.

3. Click the correction you want to use.
4. Click **Change**.

- **B** Click **Change All** to correct every instance of the error.


A
B
3
4
Spelling: English (United States)
?
✕
Ignore Once
Ignore All
Add to Dictionary
Change
Change All
AutoCorrect
Options...
Undo Last
Cancel

	A	B
1	Product ID	Product Name
2	1	Northwind Traders Chai
3	3	Northwind Traders Syrup
4	4	Northwind Traders Cajun Seasoning
5	5	Northwind Traders Olive Oil
6	6	Northwind Traders Boysenberry Spread
7	7	Northwind Traders Dried Peras
8	8	Northwind Traders Curry Sauce
9	14	Northwind Traders Walnuts
10	17	Northwind Traders Fruit Cocktail
11	19	Northwind Traders Chocolate Biscuits Mi
12	20	Northwind Traders Marmalade
13	21	Northwind Traders Scones
14	34	Northwind Traders Beer

Not in Dictionary: Peras

Suggestions:
Pears
Peres
Peas
Pear's
Para's
Perks

Dictionary language: English (United States)

Ⓒ The spell-checker displays the next error.

5 If you want to correct the word, repeat step **4**.

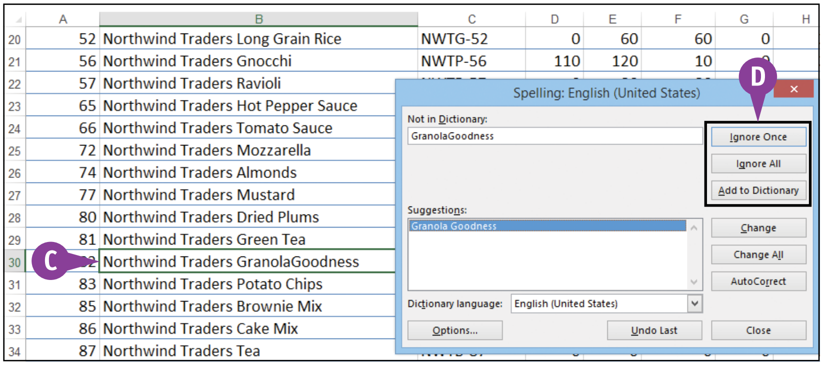
Ⓓ If you do not want to correct the word, click one of the following buttons:

Click **Ignore Once** to skip this instance of the error.

Click **Ignore All** to skip all instances of the error.

Click **Add to Dictionary** to include the word in the spell-checker's dictionary.

6 When the check is complete, click **OK**.



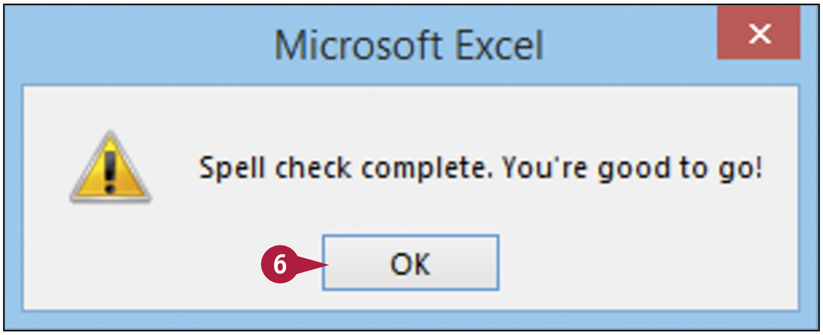
	A	B	C	D	E	F	G	H
20	52	Northwind Traders Long Grain Rice	NWTG-52	0	60	60	0	
21	56	Northwind Traders Gnocchi	NWTP-56	110	120	10		
22	57	Northwind Traders Ravioli						
23	65	Northwind Traders Hot Pepper Sauce						
24	66	Northwind Traders Tomato Sauce						
25	72	Northwind Traders Mozzarella						
26	74	Northwind Traders Almonds						
27	77	Northwind Traders Mustard						
28	80	Northwind Traders Dried Plums						
29	81	Northwind Traders Green Tea						
30		Northwind Traders GranolaGoodness						
31	83	Northwind Traders Potato Chips						
32	85	Northwind Traders Brownie Mix						
33	86	Northwind Traders Cake Mix						
34	87	Northwind Traders Tea						

Spelling: English (United States)

Not in Dictionary: GranolaGoodness

Suggestions: Granola Goodness

Dictionary language: English (United States)



Microsoft Excel

Spell check complete. You're good to go!

TIP

Can I remove a word that I added to the spell-checker's dictionary?

Yes. Follow these steps:

1 Click **File**.

2 Click **Options** to open the Excel Options dialog box.

3 Click **Proofing**.

4 Click **Custom Dictionaries** to open the Custom Dictionaries dialog box.

5 Click the dictionary marked as **Default** and then click **Edit Word List**.

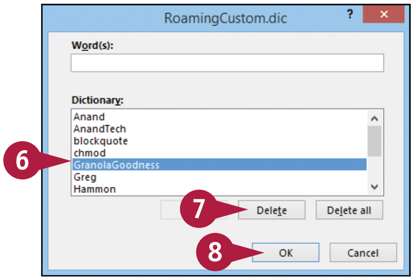
6 Click the term you want to remove.

7 Click **Delete**.

8 Click **OK** to return to the Custom Dictionaries dialog box.

9 Click **OK** to return to the Excel Options dialog box.

10 Click **OK**.



RoamingCustom.dic

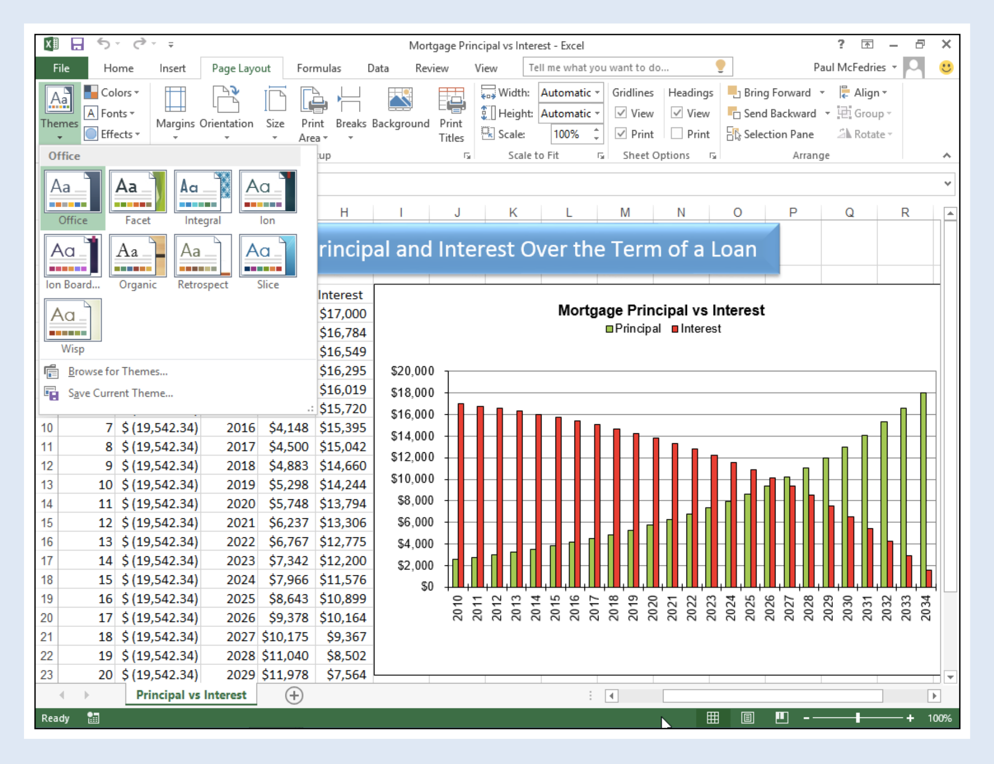
Word(s):

Dictionary:
Anand
AnandTech
blockquote
chmod
GranolaGoodness
Greg
Hammon

CHAPTER 7

Formatting Workbooks

Excel offers several settings that enable you to control the look of a workbook, including the workbook colors, fonts, and special effects. You can also apply a workbook theme and add a header and footer to a workbook.


Mortgage Principal vs Interest - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
☑ View
☑ Print
Headings
☑ View
☐ Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Align
Group
Rotate
Arrange
Office
Office
Facet
Integral
Ion
Ion Board...
Organic
Retrospect
Slice
Wisp
Browse for Themes...
Save Current Theme...
H
I
J
K
L
M
N
O
P
Q
R
rincipal and Interest Over the Term of a Loan
Mortgage Principal vs Interest
🟩 Principal
🟥 Interest
$20,000
$18,000
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
Principal vs Interest
Ready
100%

					Interest
					$17,000
					$16,784
					$16,549
					$16,295
					$16,019
					$15,720
10	7	$ (19,542.34)	2016	$4,148	$15,395
11	8	$ (19,542.34)	2017	$4,500	$15,042
12	9	$ (19,542.34)	2018	$4,883	$14,660
13	10	$ (19,542.34)	2019	$5,298	$14,244
14	11	$ (19,542.34)	2020	$5,748	$13,794
15	12	$ (19,542.34)	2021	$6,237	$13,306
16	13	$ (19,542.34)	2022	$6,767	$12,775
17	14	$ (19,542.34)	2023	$7,342	$12,200
18	15	$ (19,542.34)	2024	$7,966	$11,576
19	16	$ (19,542.34)	2025	$8,643	$10,899
20	17	$ (19,542.34)	2026	$9,378	$10,164
21	18	$ (19,542.34)	2027	$10,175	$9,367
22	19	$ (19,542.34)	2028	$11,040	$8,502
23	20	$ (19,542.34)	2029	$11,978	$7,564

Modify the Workbook Colors 154
Set the Workbook Fonts 156
Choose Workbook Effects. 158
Apply a Workbook Theme. 160
Add a Workbook Header 162
Add a Workbook Footer. 164

Modify the Workbook Colors

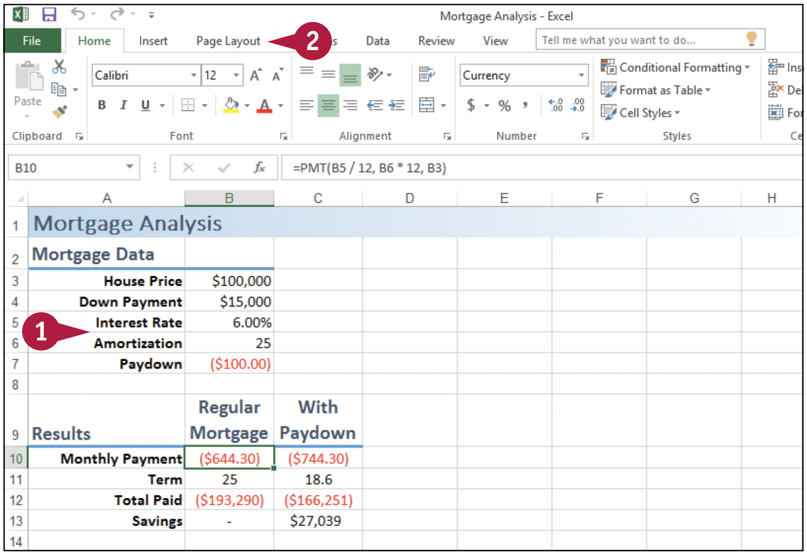
You can give your workbook a new look by selecting a different color scheme. Each color scheme affects a dozen workbook elements, including the workbook's text colors, background colors, border colors, chart colors, and more. Excel offers more than 20 color schemes. However, if none of these predefined schemes suits your needs, you can also create your own custom color scheme.

To get the most out of the Excel color schemes, you must apply styles to your ranges, as described in Chapter 3.

Modify the Workbook Colors

1. Open or switch to the workbook you want to format.

2. Click the **Page Layout** tab.

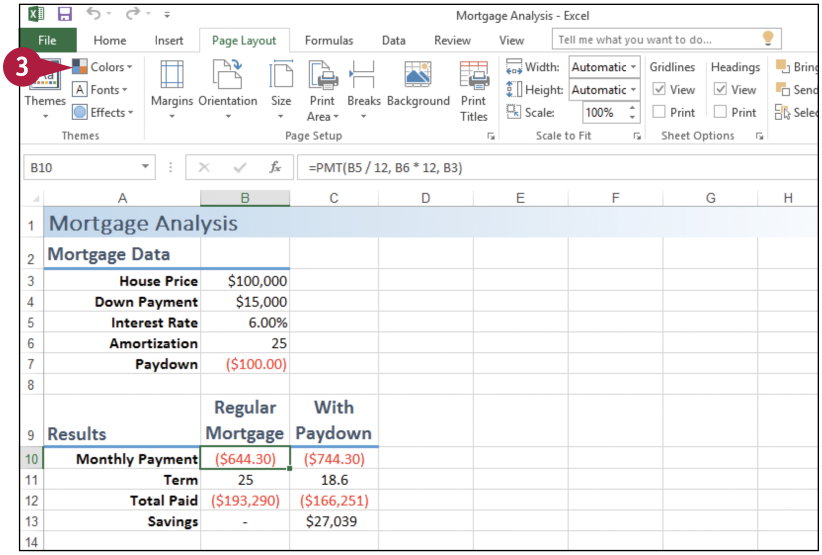


Mortgage Analysis - Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Paste
Calibri
12
Currency
Conditional Formatting
Format as Table
Cell Styles
Clipboard
Font
Alignment
Number
Styles
2
1

B10 =PMT(B5 / 12, B6 * 12, B3)

	A	B	C
1	Mortgage Analysis		
2	Mortgage Data		
3	House Price	$100,000	
4	Down Payment	$15,000	
5	Interest Rate	6.00%	
6	Amortization	25	
7	Paydown	($100.00)	
8			
9	Results	Regular Mortgage	With Paydown
10	Monthly Payment	($644.30)	($744.30)
11	Term	25	18.6
12	Total Paid	($193,290)	($166,251)
13	Savings	-	$27,039
14			

3. Click **Colors** (▦).

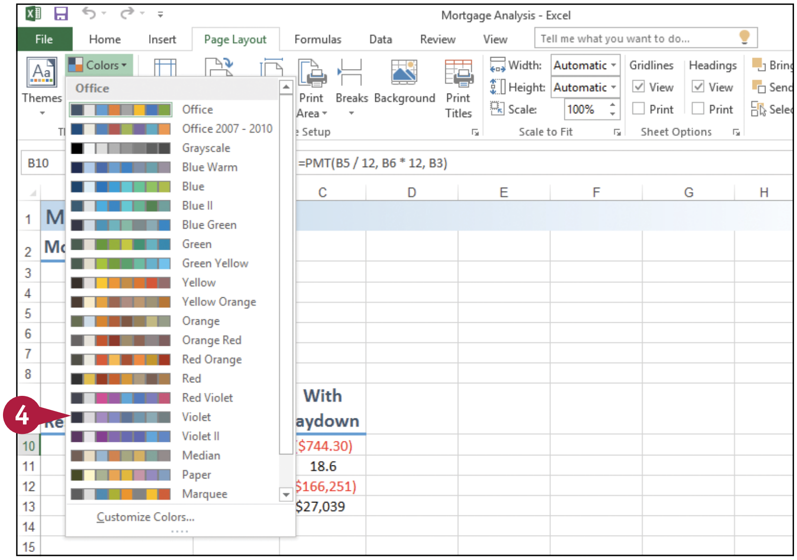


Mortgage Analysis - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Colors
Fonts
Effects
Themes
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Gridlines
Headings
View
Print
Bring
Send
Selec
Page Setup
Scale to Fit
Sheet Options
3

B10 =PMT(B5 / 12, B6 * 12, B3)

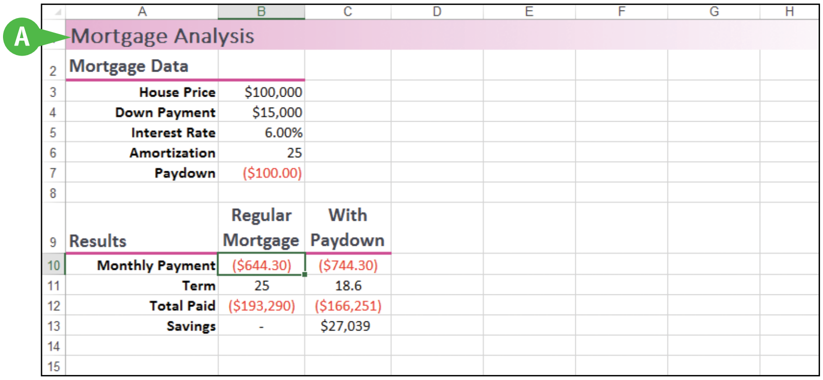
	A	B	C
1	Mortgage Analysis		
2	Mortgage Data		
3	House Price	$100,000	
4	Down Payment	$15,000	
5	Interest Rate	6.00%	
6	Amortization	25	
7	Paydown	($100.00)	
8			
9	Results	Regular Mortgage	With Paydown
10	Monthly Payment	($644.30)	($744.30)
11	Term	25	18.6
12	Total Paid	($193,290)	($166,251)
13	Savings	-	$27,039
14			

④ Click the color scheme you want to apply.


Mortgage Analysis - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Themes
Colors
Office
Office
Office 2007 - 2010
Grayscale
Blue Warm
Blue
Blue II
Blue Green
Green
Green Yellow
Yellow
Yellow Orange
Orange
Orange Red
Red Orange
Red
Red Violet
Violet
Violet II
Median
Paper
Marquee
Customize Colors...
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
View
Print
Headings
View
Print
Sheet Options
Bring
Send
Selec
4

B10 =PMT(B5 / 12, B6 * 12, B3)

Ⓐ Excel applies the color scheme to the workbook.



	A	B	C
1	Mortgage Analysis		
2	Mortgage Data		
3	House Price	$100,000	
4	Down Payment	$15,000	
5	Interest Rate	6.00%	
6	Amortization	25	
7	Paydown	($100.00)	
8			
9	Results	Regular Mortgage	With Paydown
10	Monthly Payment	($644.30)	($744.30)
11	Term	25	18.6
12	Total Paid	($193,290)	($166,251)
13	Savings	-	$27,039
14			
15			

TIP

Can I create my own color scheme?

Yes, by following these steps:

① Click the **Page Layout** tab.

② Click ▦.

③ Click **Customize Colors**.

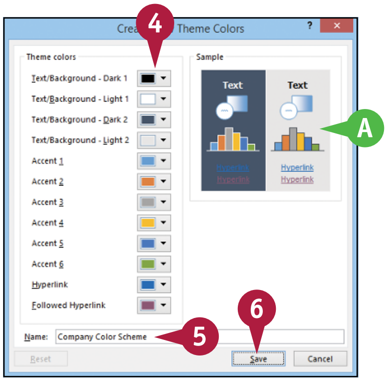
The Create New Theme Colors dialog box appears.

④ For each theme color, click ▾ and then click the color you want to use.

Ⓐ The Sample area shows what your theme colors look like.

⑤ Type a name for the custom color scheme.

⑥ Click **Save**.


Create New Theme Colors
Theme colors
Text/Background - Dark 1
Text/Background - Light 1
Text/Background - Dark 2
Text/Background - Light 2
Accent 1
Accent 2
Accent 3
Accent 4
Accent 5
Accent 6
Hyperlink
Followed Hyperlink
Sample
Text
Text
Hyperlink
Hyperlink
Reset
Save
Cancel
4
A
5
6

Name: Company Color Scheme

Set the Workbook Fonts

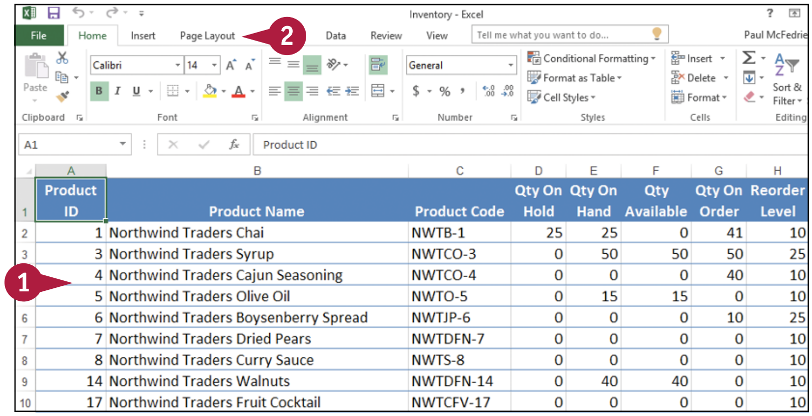
You can add visual appeal to your workbook by selecting a different font scheme. Each font scheme has two defined fonts: a *heading font* for the titles and headings, and a *body font* for the regular worksheet text. Excel offers more than 20 font schemes. However, if none of the predefined schemes is suitable, you can create a custom font scheme.

To get the most out of the Excel font schemes, particularly the heading fonts, you must apply styles to your ranges, as described in Chapter 3.

Set the Workbook Fonts

① Open or switch to the workbook you want to format.

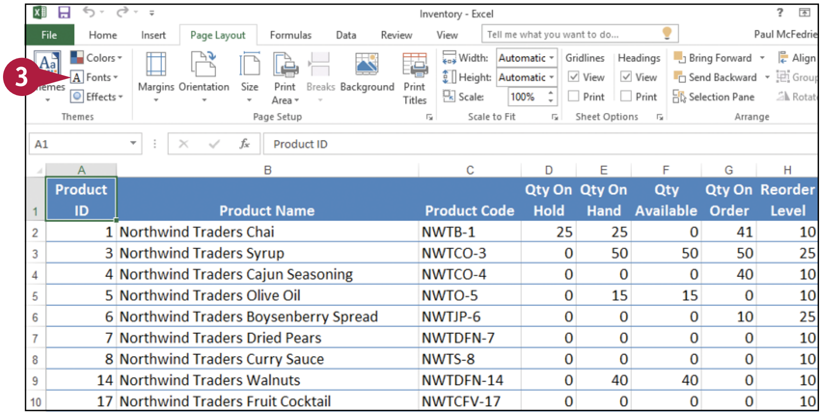
② Click the **Page Layout** tab.


Inventory - Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Paul McFedrie
Paste
Calibri
14
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
2
1

A1 | Product ID

Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
1	Northwind Traders Chai	NWTB-1	25	25	0	41	10
3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10
8	Northwind Traders Curry Sauce	NWTS-8	0	0	0	0	10
14	Northwind Traders Walnuts	NWTDFN-14	0	40	40	0	10
17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	0	0	10

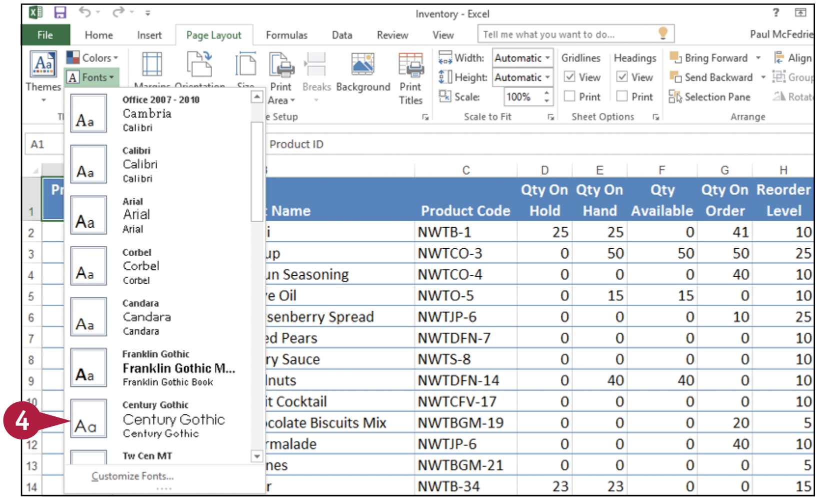
③ Click **Fonts** (A).


Inventory - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedrie
Colors
Fonts
Effects
Themes
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Align
Group
Rotate
Arrange
3

A1 | Product ID

Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
1	Northwind Traders Chai	NWTB-1	25	25	0	41	10
3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10
8	Northwind Traders Curry Sauce	NWTS-8	0	0	0	0	10
14	Northwind Traders Walnuts	NWTDFN-14	0	40	40	0	10
17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	0	0	10

④ Click the font scheme you want to apply.

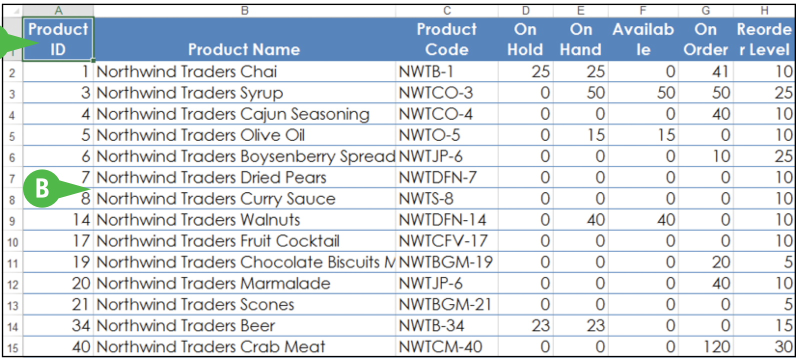

Inventory - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedrie
Themes
Colors
Fonts
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Width:
Automatic
Height:
Automatic
Scale:
100%
Scale to Fit
Gridlines
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Align
Group
Rotate
Arrange
A1
Office 2007 - 2010
Cambria
Calibri
Calibri
Calibri
Calibri
Arial
Arial
Arial
Corbel
Corbel
Corbel
Candara
Candara
Candara
Franklin Gothic
Franklin Gothic M...
Franklin Gothic Book
Century Gothic
Century Gothic
Century Gothic
Tw Cen MT
Customize Fonts...
4

Product ID

		C	D	E	F	G	H
1	Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
2	i	NWTB-1	25	25	0	41	10
3	up	NWTCO-3	0	50	50	50	25
4	un Seasoning	NWTCO-4	0	0	0	40	10
5	e Oil	NWTO-5	0	15	15	0	10
6	senberry Spread	NWTJP-6	0	0	0	10	25
7	ed Pears	NWTDFN-7	0	0	0	0	10
8	ry Sauce	NWTS-8	0	0	0	0	10
9	lnuts	NWTDFN-14	0	40	40	0	10
10	it Cocktail	NWTCFV-17	0	0	0	0	10
11	colate Biscuits Mix	NWTBGM-19	0	0	0	20	5
12	rmalade	NWTJP-6	0	0	0	40	10
13	nes	NWTBGM-21	0	0	0	0	5
14	r	NWTB-34	23	23	0	0	15

Ⓐ Excel applies the heading font to the workbook's headings.

Ⓑ Excel applies the body font to the workbook's regular text.



	A	B	C	D	E	F	G	H
1	Product ID	Product Name	Product Code	On Hold	On Hand	Available	On Order	Reorder Level
2	1	Northwind Traders Chai	NWTB-1	25	25	0	41	10
3	3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10
8	8	Northwind Traders Curry Sauce	NWTS-8	0	0	0	0	10
9	14	Northwind Traders Walnuts	NWTDFN-14	0	40	40	0	10
10	17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	0	0	10
11	19	Northwind Traders Chocolate Biscuits M	NWTBGM-19	0	0	0	20	5
12	20	Northwind Traders Marmalade	NWTJP-6	0	0	0	40	10
13	21	Northwind Traders Scones	NWTBGM-21	0	0	0	0	5
14	34	Northwind Traders Beer	NWTB-34	23	23	0	0	15
15	40	Northwind Traders Crab Meat	NWTCM-40	0	0	0	120	30

TIP

Can I create my own font scheme?

Yes, by following these steps:

① Click the **Page Layout** tab.

② Click A.

③ Click **Customize Fonts**.

The Create New Theme Fonts dialog box appears.

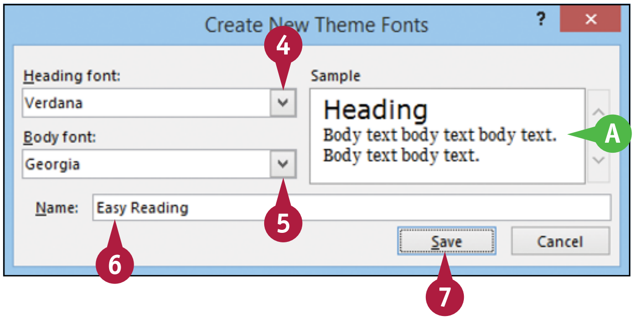
④ Click the **Heading font** ▾ and then click the font you want to use for titles and headings.

⑤ Click the **Body font** ▾ and then click the font you want to use for regular sheet text.

Ⓐ The Sample area shows what your theme fonts look like.

⑥ Type a name for the custom font scheme.

⑦ Click **Save**.


Create New Theme Fonts
?
×
Sample
Save
Cancel
4
5
6
7
A

Heading font: Verdana

Body font: Georgia

Heading
Body text body text body text. Body text body text.

Name: Easy Reading

Choose Workbook Effects

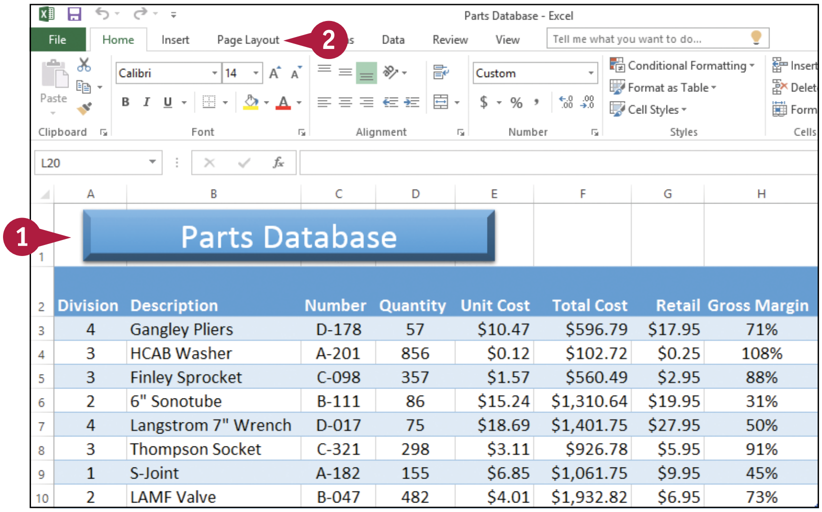
You can enhance the look of your workbook by selecting a different effect scheme. The effect scheme applies to charts and graphic objects, and each scheme defines a border style, fill style, and added effect such as a drop shadow or glow. Excel offers more than 20 effect schemes.

To get the most out of the Excel effect schemes, you must apply a style to your chart, as described in Chapter 12, or to your graphic object, as described in Chapter 13.

Choose Workbook Effects

① Open or switch to the workbook you want to format.

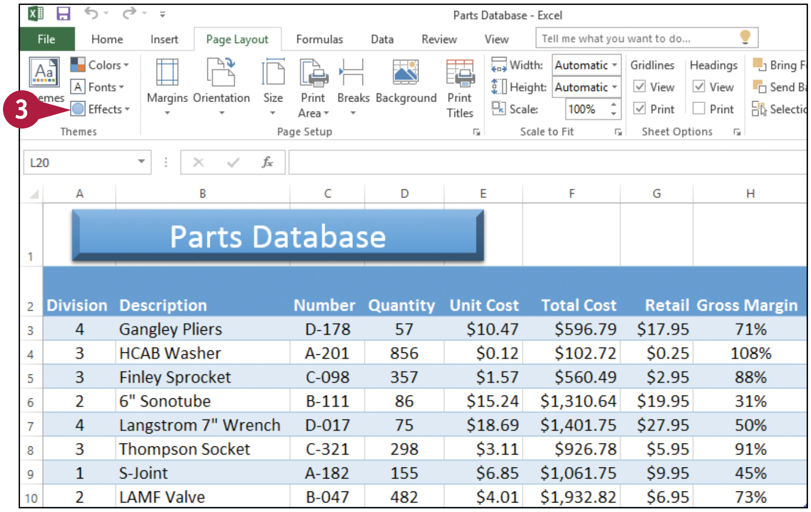
② Click the **Page Layout** tab.



Parts Database - Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Paste
Calibri
14
Custom
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
L20
2
1

	A	B	C	D	E	F	G	H
1	Parts Database							
2	Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
3	4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
4	3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
5	3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
6	2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
7	4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
8	3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
9	1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

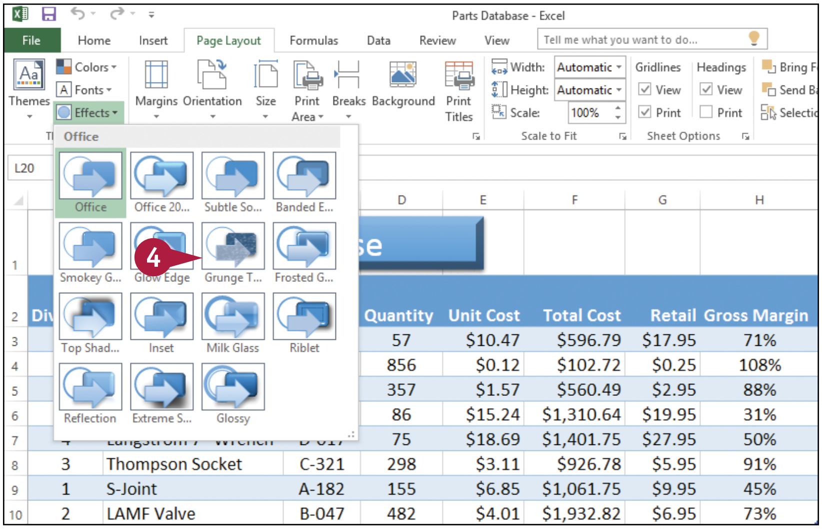
③ Click **Effects** (🔵).



Parts Database - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
Headings
☑ View
☑ Print
☑ View
☐ Print
Sheet Options
Bring Forward
Send Backward
Selection
L20
3

	A	B	C	D	E	F	G	H
1	Parts Database							
2	Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
3	4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
4	3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
5	3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
6	2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
7	4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
8	3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
9	1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

4 Click the effect scheme you want to apply.


Parts Database - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width:
Automatic
Height:
Automatic
Scale:
100%
Scale to Fit
Gridlines
View
Print
Headings
View
Print
Sheet Options
Bring F
Send B
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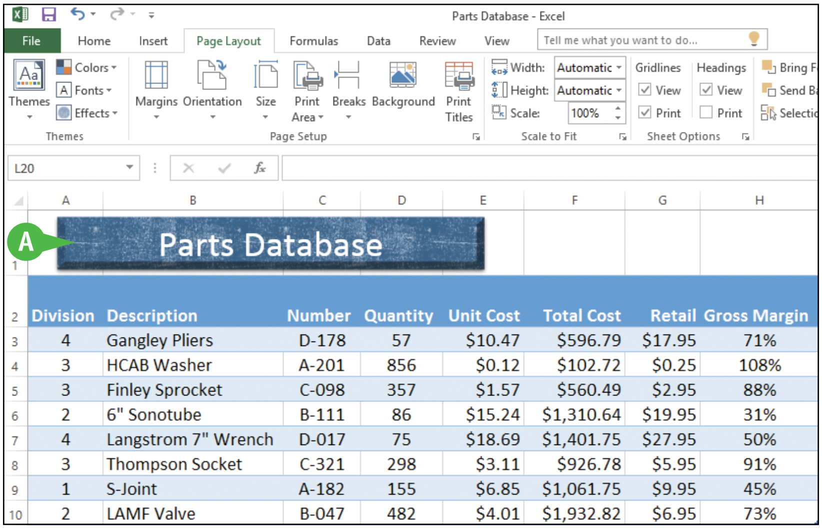
L20
Office
Office
Office 20...
Subtle So...
Banded E...
Smokey G...
Glow Edge
Grunge T...
Frosted G...
Top Shad...
Inset
Milk Glass
Riblet
Reflection
Extreme S...
Glossy
4

	A	B	C	D	E	F	G	H
2	Div			Quantity	Unit Cost	Total Cost	Retail	Gross Margin
3				57	$10.47	$596.79	$17.95	71%
4				856	$0.12	$102.72	$0.25	108%
5				357	$1.57	$560.49	$2.95	88%
6				86	$15.24	$1,310.64	$19.95	31%
7				75	$18.69	$1,401.75	$27.95	50%
8	3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
9	1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

A Excel applies the effect scheme to the workbook's charts and graphics.


Parts Database - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Width:
Automatic
Height:
Automatic
Scale:
100%
Scale to Fit
Gridlines
View
Print
Headings
View
Print
Sheet Options
Bring F
Send B
Selectio
L20
A
Parts Database

	A	B	C	D	E	F	G	H
1	Parts Database							
2	Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
3	4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
4	3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
5	3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
6	2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
7	4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
8	3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
9	1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

TIPS

Can I create a custom effect scheme?

No. Unlike with the color schemes and font schemes described earlier in this chapter, Excel does not have a feature that enables you to create your own effect scheme.

Why are all the effect schemes the same color?

The color you see in the effect schemes depends on the color scheme you have applied to your workbook. If you apply a different color scheme, as described in the "Modify the Workbook Colors" section earlier in the chapter, you will see a different color in the effect schemes. If you want to use a custom effect color, create a custom color scheme and change the Accent 1 color to the color you want.

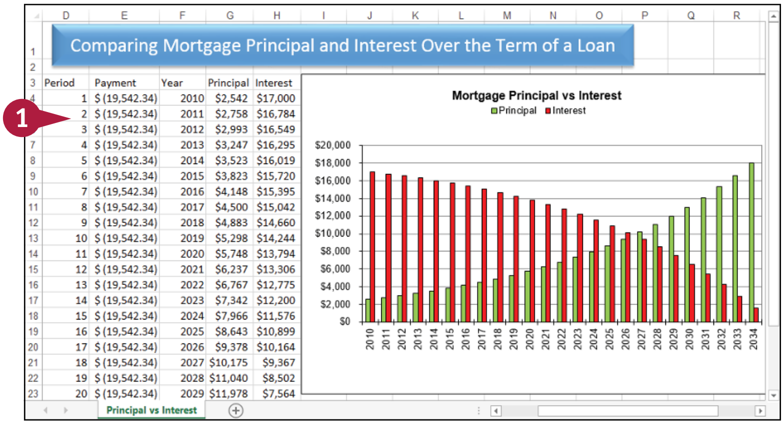
Apply a Workbook Theme

You can give your workbook a completely new look by selecting a different workbook theme. Each theme consists of the workbook's colors, fonts, and effects. Excel offers ten predefined workbook themes.

To get the most out of the Excel workbook themes, you must apply styles to your ranges, as described in Chapter 3; to your charts, as described in Chapter 12; and to your graphic objects, as described in Chapter 13.

Apply a Workbook Theme

1. Open or switch to the workbook you want to format.

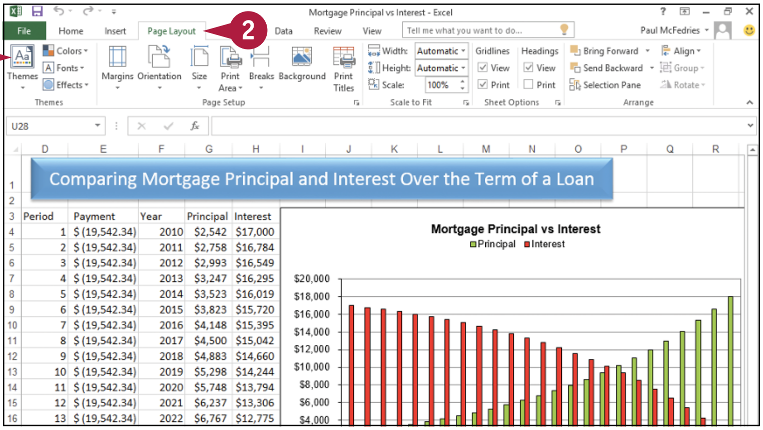


1
Mortgage Principal vs Interest
🟩Principal 🟥Interest
$20,000
$18,000
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
Principal vs Interest

Comparing Mortgage Principal and Interest Over the Term of a Loan

Period	Payment	Year	Principal	Interest
1	$ (19,542.34)	2010	$2,542	$17,000
2	$ (19,542.34)	2011	$2,758	$16,784
3	$ (19,542.34)	2012	$2,993	$16,549
4	$ (19,542.34)	2013	$3,247	$16,295
5	$ (19,542.34)	2014	$3,523	$16,019
6	$ (19,542.34)	2015	$3,823	$15,720
7	$ (19,542.34)	2016	$4,148	$15,395
8	$ (19,542.34)	2017	$4,500	$15,042
9	$ (19,542.34)	2018	$4,883	$14,660
10	$ (19,542.34)	2019	$5,298	$14,244
11	$ (19,542.34)	2020	$5,748	$13,794
12	$ (19,542.34)	2021	$6,237	$13,306
13	$ (19,542.34)	2022	$6,767	$12,775
14	$ (19,542.34)	2023	$7,342	$12,200
15	$ (19,542.34)	2024	$7,966	$11,576
16	$ (19,542.34)	2025	$8,643	$10,899
17	$ (19,542.34)	2026	$9,378	$10,164
18	$ (19,542.34)	2027	$10,175	$9,367
19	$ (19,542.34)	2028	$11,040	$8,502
20	$ (19,542.34)	2029	$11,978	$7,564

2. Click the **Page Layout** tab.
3. Click **Themes** (Aa).



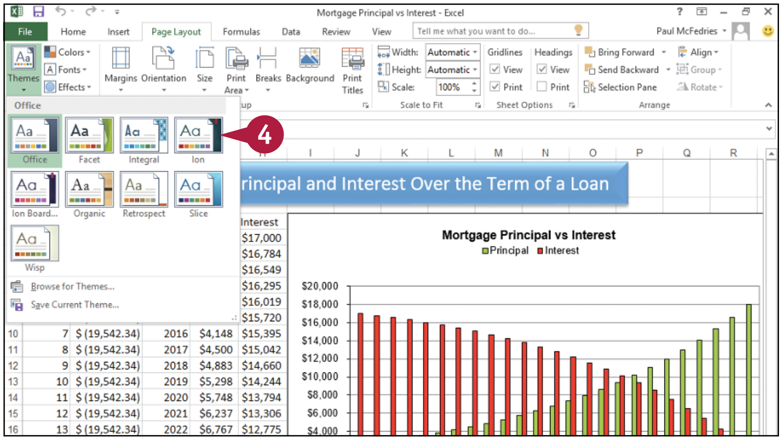
2
3
Mortgage Principal vs Interest - Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Width:
Height:
Scale:
Scale to Fit
Gridlines
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Align
Group
Rotate
Arrange
U28
Mortgage Principal vs Interest
🟩Principal 🟥Interest
$20,000
$18,000
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000

Width: Automatic
Height: Automatic
Scale: 100%
Gridlines ☑ View ☑ Print
Headings ☑ View ☐ Print

Comparing Mortgage Principal and Interest Over the Term of a Loan

Period	Payment	Year	Principal	Interest
1	$ (19,542.34)	2010	$2,542	$17,000
2	$ (19,542.34)	2011	$2,758	$16,784
3	$ (19,542.34)	2012	$2,993	$16,549
4	$ (19,542.34)	2013	$3,247	$16,295
5	$ (19,542.34)	2014	$3,523	$16,019
6	$ (19,542.34)	2015	$3,823	$15,720
7	$ (19,542.34)	2016	$4,148	$15,395
8	$ (19,542.34)	2017	$4,500	$15,042
9	$ (19,542.34)	2018	$4,883	$14,660
10	$ (19,542.34)	2019	$5,298	$14,244
11	$ (19,542.34)	2020	$5,748	$13,794
12	$ (19,542.34)	2021	$6,237	$13,306
13	$ (19,542.34)	2022	$6,767	$12,775

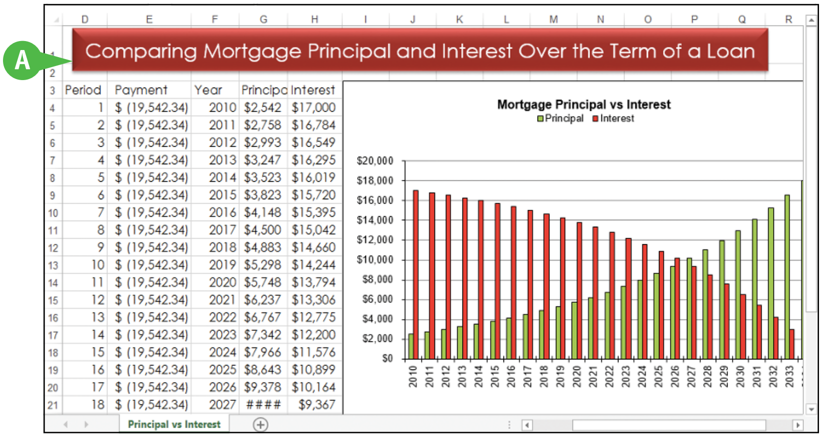
④ Click the workbook theme you want to apply.


Mortgage Principal vs Interest - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Align
Group
Rotate
Arrange
Office
Office
Facet
Integral
Ion
Ion Board...
Organic
Retrospect
Slice
Wisp
Browse for Themes...
Save Current Theme...
4
rincipal and Interest Over the Term of a Loan
Mortgage Principal vs Interest
Principal
Interest
$20,000
$18,000
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000

					Interest
					$17,000
					$16,784
					$16,549
					$16,295
					$16,019
					$15,720
10	7	$ (19,542.34)	2016	$4,148	$15,395
11	8	$ (19,542.34)	2017	$4,500	$15,042
12	9	$ (19,542.34)	2018	$4,883	$14,660
13	10	$ (19,542.34)	2019	$5,298	$14,244
14	11	$ (19,542.34)	2020	$5,748	$13,794
15	12	$ (19,542.34)	2021	$6,237	$13,306
16	13	$ (19,542.34)	2022	$6,767	$12,775

Ⓐ Excel applies the theme to the workbook.

Note: After you apply the theme, the new font size might require you to adjust the column widths to see your data properly.


A
Comparing Mortgage Principal and Interest Over the Term of a Loan
Mortgage Principal vs Interest
Principal
Interest
$20,000
$18,000
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
Principal vs Interest

3	Period	Payment	Year	Principa	Interest
4	1	$ (19,542.34)	2010	$2,542	$17,000
5	2	$ (19,542.34)	2011	$2,758	$16,784
6	3	$ (19,542.34)	2012	$2,993	$16,549
7	4	$ (19,542.34)	2013	$3,247	$16,295
8	5	$ (19,542.34)	2014	$3,523	$16,019
9	6	$ (19,542.34)	2015	$3,823	$15,720
10	7	$ (19,542.34)	2016	$4,148	$15,395
11	8	$ (19,542.34)	2017	$4,500	$15,042
12	9	$ (19,542.34)	2018	$4,883	$14,660
13	10	$ (19,542.34)	2019	$5,298	$14,244
14	11	$ (19,542.34)	2020	$5,748	$13,794
15	12	$ (19,542.34)	2021	$6,237	$13,306
16	13	$ (19,542.34)	2022	$6,767	$12,775
17	14	$ (19,542.34)	2023	$7,342	$12,200
18	15	$ (19,542.34)	2024	$7,966	$11,576
19	16	$ (19,542.34)	2025	$8,643	$10,899
20	17	$ (19,542.34)	2026	$9,378	$10,164
21	18	$ (19,542.34)	2027	####	$9,367

TIP

Can I create my own workbook theme?

Yes, by following these steps:

① Format the workbook with a color scheme, font scheme, and effect scheme, as described in the previous three sections.

② Click the **Page Layout** tab.

③ Click Aa.

④ Click **Save Current Theme**.

The Save Current Theme dialog box appears.

⑤ Type a name for the custom theme.

⑥ Click **Save**.

Add a Workbook Header

If you will be printing a workbook, you can enhance the printout by building a custom header that includes information such as the page number, date, filename, or even a picture.

The *header* is an area on the printed page between the top of the page text and the top margin. Excel offers a number of predefined header items that enable you to quickly add data to the workbook header. If none of the predefined header items suits your needs, Excel also offers tools that make it easy to build a custom header.

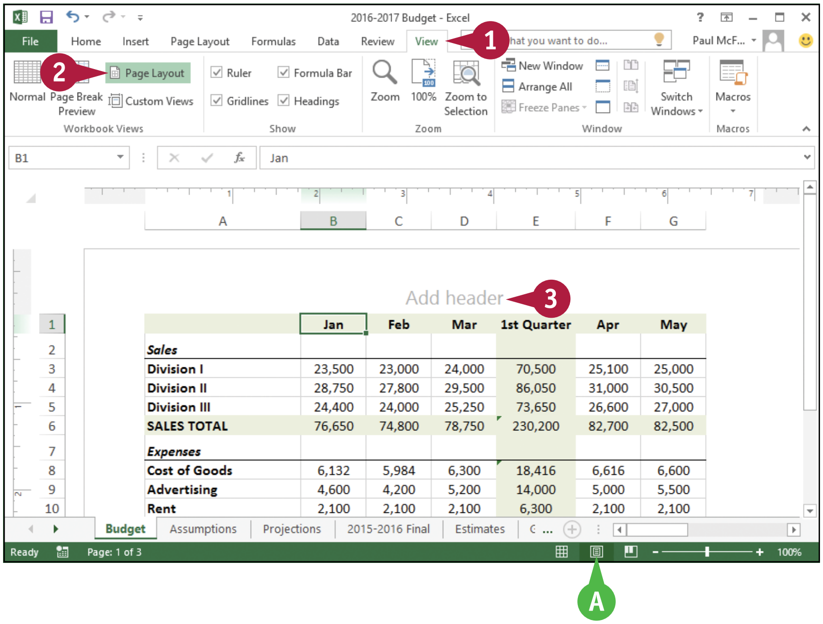
Add a Workbook Header

1. Click the **View** tab.
2. Click **Page Layout** (▤).

   Excel switches to Page Layout view.

- A You can also click the **Page Layout** button (▤).

3. Click the **Add header** text.

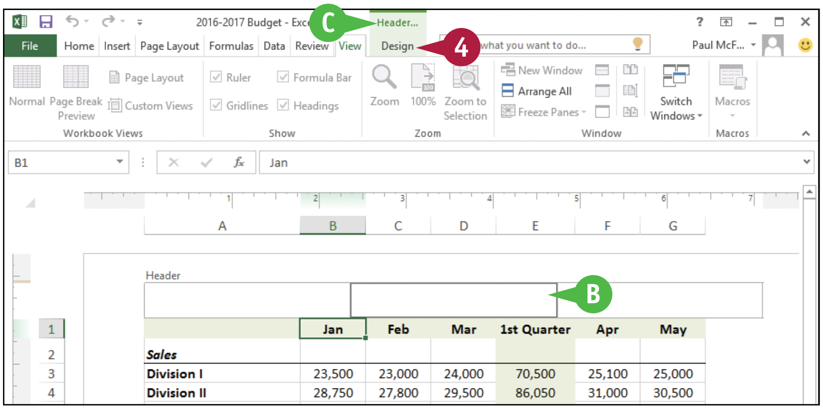

2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
1
What you want to do...
Paul McF...
2
Normal
Page Break Preview
Page Layout
Custom Views
Workbook Views
Ruler
Formula Bar
Gridlines
Headings
Show
Zoom
100%
Zoom to Selection
New Window
Arrange All
Freeze Panes
Window
Switch Windows
Macros
Add header
3
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Ready
Page: 1 of 3
100%
A

B1: Jan

	Jan	Feb	Mar	1st Quarter	Apr	May
Sales						
Division I	23,500	23,000	24,000	70,500	25,100	25,000
Division II	28,750	27,800	29,500	86,050	31,000	30,500
Division III	24,400	24,000	25,250	73,650	26,600	27,000
SALES TOTAL	76,650	74,800	78,750	230,200	82,700	82,500
Expenses						
Cost of Goods	6,132	5,984	6,300	18,416	6,616	6,600
Advertising	4,600	4,200	5,200	14,000	5,000	5,500
Rent	2,100	2,100	2,100	6,300	2,100	2,100

- B Excel opens the header area for editing.
- C Excel adds the Header & Footer Tools tab.

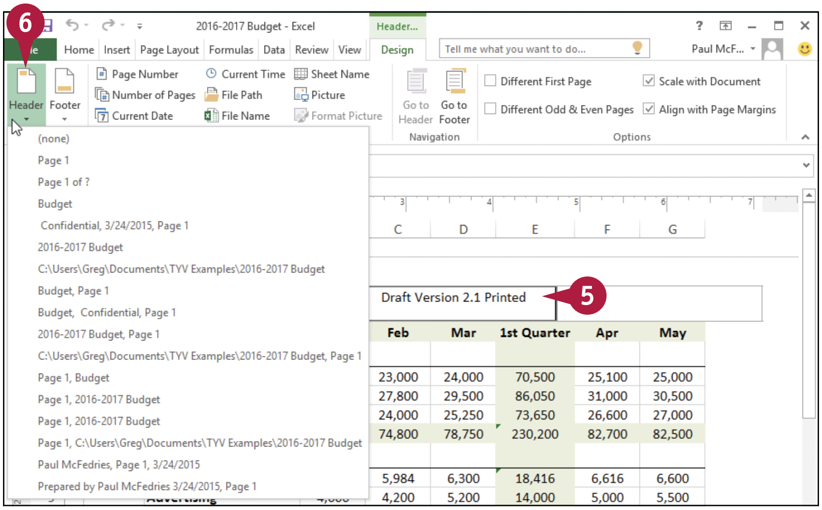
4. Click the **Design** tab.


2016-2017 Budget - Excel
C
Header...
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
4
what you want to do...
Paul McF...
Normal
Page Break Preview
Page Layout
Custom Views
Workbook Views
Ruler
Formula Bar
Gridlines
Headings
Show
Zoom
100%
Zoom to Selection
New Window
Arrange All
Freeze Panes
Window
Switch Windows
Macros
Header
B

B1: Jan

	Jan	Feb	Mar	1st Quarter	Apr	May
Sales						
Division I	23,500	23,000	24,000	70,500	25,100	25,000
Division II	28,750	27,800	29,500	86,050	31,000	30,500

5. Type your text in the header.
6. If you want to include a predefined header item, click **Header** and then click the item.


6
2016-2017 Budget - Excel
Header...
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McF...
Header
Footer
Page Number
Number of Pages
Current Date
Current Time
File Path
File Name
Sheet Name
Picture
Format Picture
Go to Header
Go to Footer
Navigation
Different First Page
Different Odd & Even Pages
Scale with Document
Align with Page Margins
Options
(none)
Page 1
Page 1 of ?
Budget
Confidential, 3/24/2015, Page 1
2016-2017 Budget
C:\Users\Greg\Documents\TYV Examples\2016-2017 Budget
Budget, Page 1
Budget, Confidential, Page 1
2016-2017 Budget, Page 1
C:\Users\Greg\Documents\TYV Examples\2016-2017 Budget, Page 1
Page 1, Budget
Page 1, 2016-2017 Budget
Page 1, 2016-2017 Budget
Page 1, C:\Users\Greg\Documents\TYV Examples\2016-2017 Budget
Paul McFedries, Page 1, 3/24/2015
Prepared by Paul McFedries 3/24/2015, Page 1
C
D
E
F
G
5

Draft Version 2.1 Printed

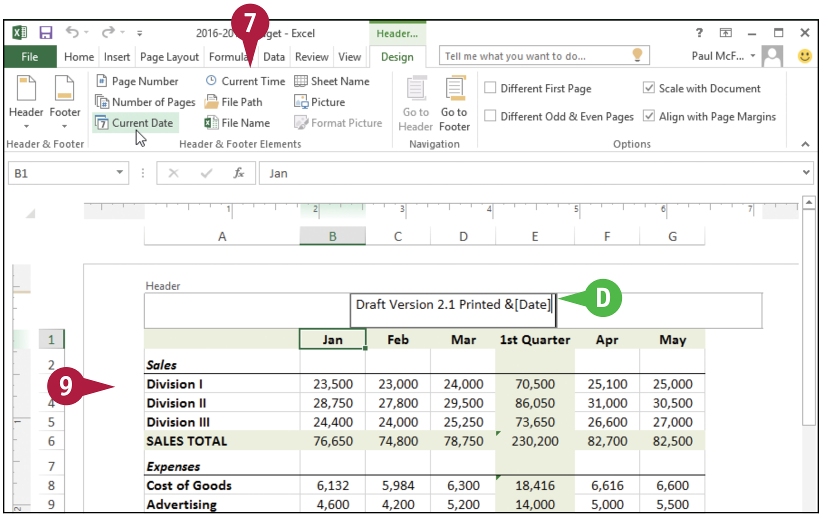
Feb	Mar	1st Quarter	Apr	May
23,000	24,000	70,500	25,100	25,000
27,800	29,500	86,050	31,000	30,500
24,000	25,250	73,650	26,600	27,000
74,800	78,750	230,200	82,700	82,500
5,984	6,300	18,416	6,616	6,600
4,200	5,200	14,000	5,000	5,500

7. Click a button in the Header & Footer Elements group to add that element to the header.

D Excel inserts a code into the header, such as &[Date] for the Current Date element, as shown here.

8. Repeat steps **5** to **7** to build the header.
9. Click outside the header area.

Excel applies the header. When you are in Page Layout view, you see the current values for elements such as the date.


7
2016-2017 Budget - Excel
Header...
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McF...
Header
Footer
Header & Footer
Page Number
Number of Pages
Current Date
Current Time
File Path
File Name
Sheet Name
Picture
Format Picture
Header & Footer Elements
Go to Header
Go to Footer
Navigation
Different First Page
Different Odd & Even Pages
Scale with Document
Align with Page Margins
Options
B1
Jan
Header
D
9

Draft Version 2.1 Printed &[Date]

	A	B	C	D	E	F	G
1		Jan	Feb	Mar	1st Quarter	Apr	May
2	Sales						
3	Division I	23,500	23,000	24,000	70,500	25,100	25,000
4	Division II	28,750	27,800	29,500	86,050	31,000	30,500
5	Division III	24,400	24,000	25,250	73,650	26,600	27,000
6	SALES TOTAL	76,650	74,800	78,750	230,200	82,700	82,500
7	Expenses						
8	Cost of Goods	6,132	5,984	6,300	18,416	6,616	6,600
9	Advertising	4,600	4,200	5,200	14,000	5,000	5,500

TIP

Can I have multiple headers in a workbook?

Yes. You can have a different header and footer on the first page, which is useful if you want to add a title or explanatory text to the first page. In the Design tab, select the **Different First Page** check box (☐ changes to ☑).

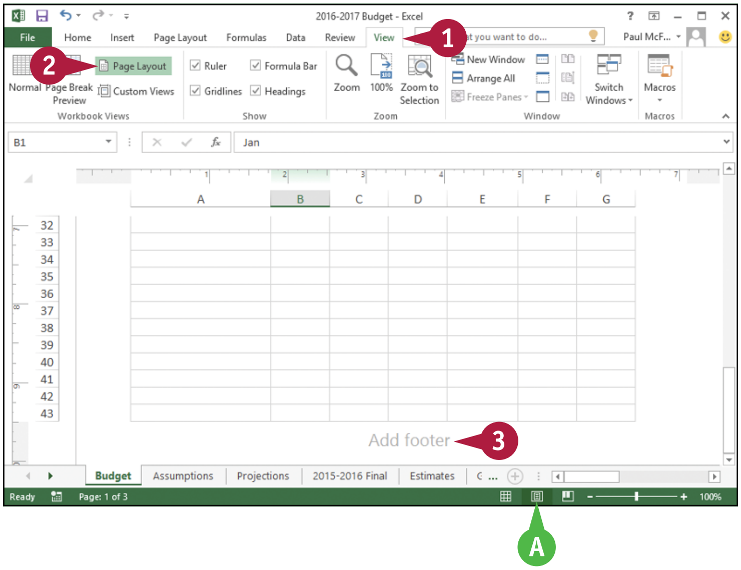
You can also have different headers and footers on the even and odd pages of the printout, such as showing the filename on the even pages and the page numbers on the odd pages. In the Design tab, select the **Different Odd & Even Pages** check box (☐ changes to ☑).

Add a Workbook Footer

If you will be printing a workbook, you can enhance the printout by building a custom footer that includes information such as the current page number, the total number of pages, the worksheet name, and more.

The *footer* is an area on the printed page between the bottom of the page text and the bottom margin. Excel offers a number of predefined footer items that enable you to quickly add data to the workbook footer. If none of the predefined footer items suits your needs, Excel also offers tools that make it easy to build a custom footer.

Add a Workbook Footer



2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Page Layout
Normal
Page Break Preview
Custom Views
Workbook Views
Ruler
Formula Bar
Gridlines
Headings
Show
Zoom
100%
Zoom to Selection
New Window
Arrange All
Freeze Panes
Switch Windows
Window
Macros
B1
Jan
Add footer
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Ready
Page: 1 of 3
100%
1
2
3
A

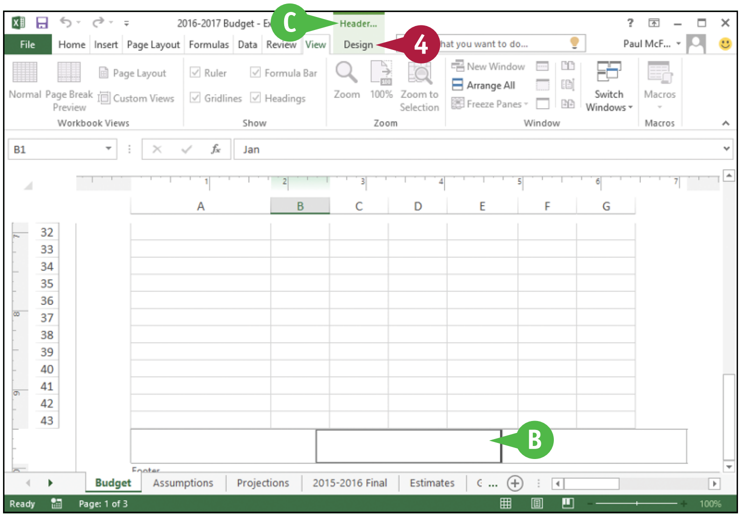
1. Click the **View** tab.
2. Click **Page Layout** (▦).

   Excel switches to Page Layout view.

- **A** You can also click the **Page Layout** button (▣).

3. Scroll down to the bottom of the page and click the **Add footer** text.

Note: You can also click the **Add header** text and then click the Design tab's **Go to Footer** command (▤).



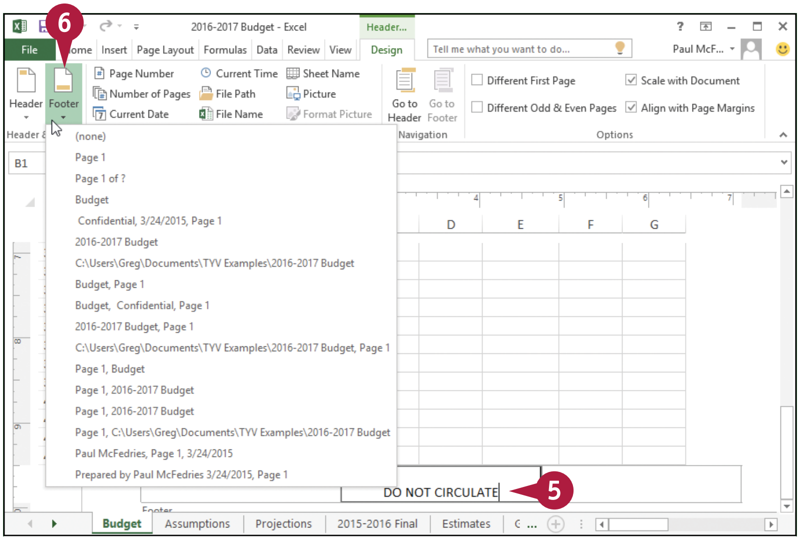
2016-2017 Budget - Ex
Header...
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Footer
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Ready
Page: 1 of 3
C
4
B

- **B** Excel opens the footer area for editing.
- **C** Excel adds the Header & Footer Tools tab.

4. Click the **Design** tab.

5 Type your text in the footer.

6 If you want to include a predefined footer item, click **Footer** and then click the item.


6
5
2016-2017 Budget - Excel
Header...
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McF...
Header
Footer
Page Number
Number of Pages
Current Date
Current Time
File Path
File Name
Sheet Name
Picture
Format Picture
Go to Header
Go to Footer
Navigation
☐ Different First Page
☐ Different Odd & Even Pages
☑ Scale with Document
☑ Align with Page Margins
Options
B1
(none)
Page 1
Page 1 of ?
Budget
Confidential, 3/24/2015, Page 1
2016-2017 Budget
C:\Users\Greg\Documents\TYV Examples\2016-2017 Budget
Budget, Page 1
Budget, Confidential, Page 1
2016-2017 Budget, Page 1
C:\Users\Greg\Documents\TYV Examples\2016-2017 Budget, Page 1
Page 1, Budget
Page 1, 2016-2017 Budget
Page 1, 2016-2017 Budget
Page 1, C:\Users\Greg\Documents\TYV Examples\2016-2017 Budget
Paul McFedries, Page 1, 3/24/2015
Prepared by Paul McFedries 3/24/2015, Page 1
D
E
F
G
Footer
Budget
Assumptions
Projections
2015-2016 Final
Estimates

DO NOT CIRCULATE

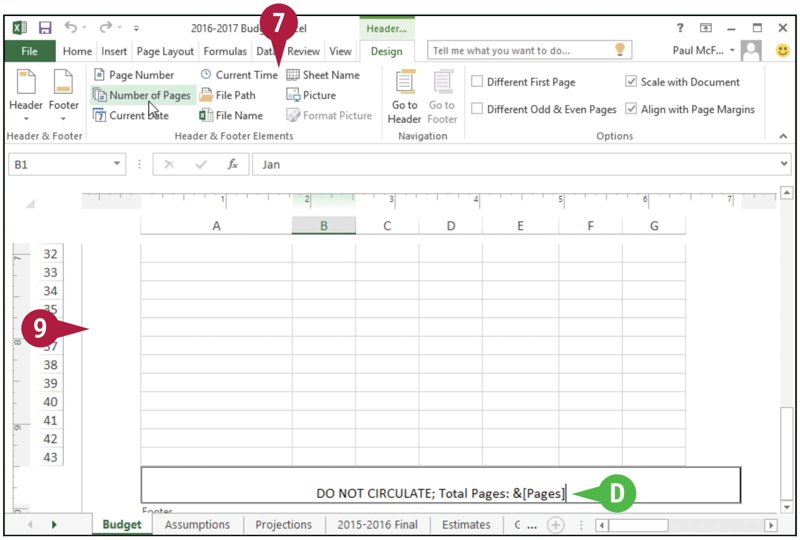
7 Click a button in the Header & Footer Elements group to add that element to the footer.

D Excel inserts a code into the footer, such as &[Pages] for the Number of Pages element, as shown here.

8 Repeat steps 5 to 7 to build the footer.

9 Click outside the footer area.

Excel applies the footer. When you are in Page Layout view, you see the current values for elements such as the page number.


7
9
D
2016-2017 Budget - Excel
Header...
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McF...
Header
Footer
Header & Footer
Page Number
Number of Pages
Current Date
Current Time
File Path
File Name
Sheet Name
Picture
Format Picture
Header & Footer Elements
Go to Header
Go to Footer
Navigation
☐ Different First Page
☐ Different Odd & Even Pages
☑ Scale with Document
☑ Align with Page Margins
Options
B1
Jan
A
B
C
D
E
F
G
32
33
34
35
37
38
39
40
41
42
43
Footer
Budget
Assumptions
Projections
2015-2016 Final
Estimates

DO NOT CIRCULATE; Total Pages: &[Pages]

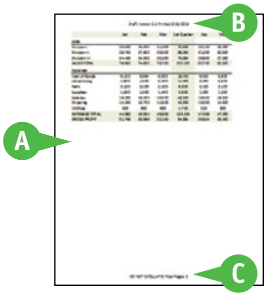
TIP

Can I view my headers and footers before I print the workbook?

Yes. Follow these steps:

1 Click the **File** tab.

2 Click **Print**.



A The right side of the Print tab shows you a preview of the workbook printout.

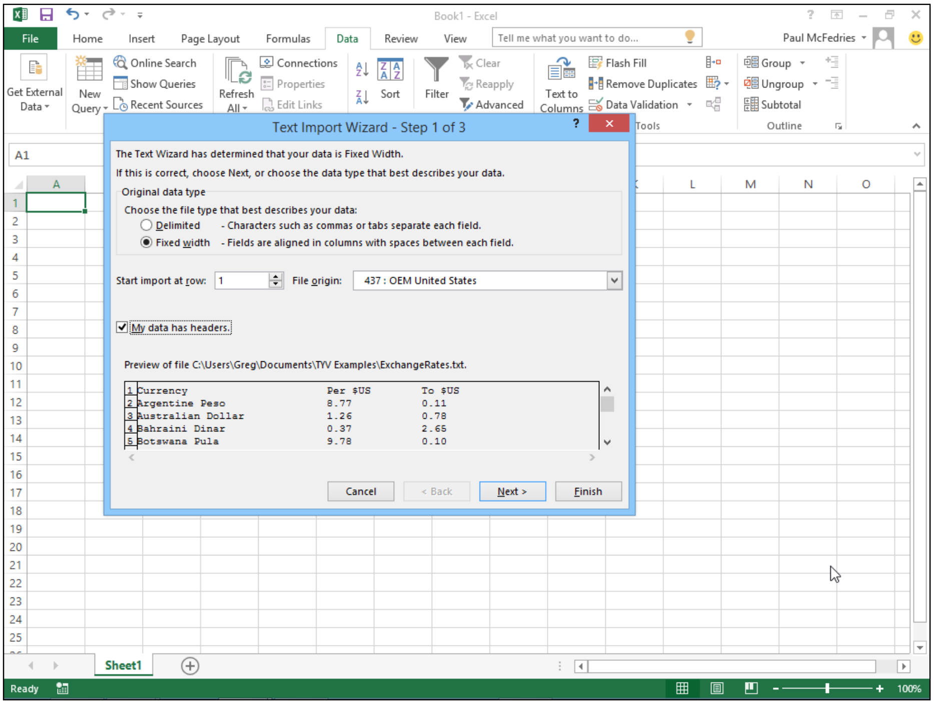
B The header appears here.

C The footer appears here.

CHAPTER 8

Importing Data into Excel

Excel offers a number of tools that enable you to import external data into the program. Excel can access a wide variety of external data types. However, this chapter focuses on the six most common types: data source files, Access tables, Word tables, text files, web pages, and XML files.


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Get External Data
New Query
Online Search
Show Queries
Recent Sources
Refresh All
Connections
Properties
Edit Links
Sort
Filter
Clear
Reapply
Advanced
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Tools
Group
Ungroup
Subtotal
Outline
A1
Sheet1
Ready
100%

Text Import Wizard - Step 1 of 3

The Text Wizard has determined that your data is Fixed Width.

If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

○ Delimited - Characters such as commas or tabs separate each field.

● Fixed width - Fields are aligned in columns with spaces between each field.

Start import at row: 1 File origin: 437 : OEM United States

☑ My data has headers.

Preview of file C:\Users\Greg\Documents\TYV Examples\ExchangeRates.txt.

```
1 Currency                   Per $US      To $US
2 Argentine Peso             8.77         0.11
3 Australian Dollar          1.26         0.78
4 Bahraini Dinar             0.37         2.65
5 Botswana Pula              9.78         0.10
```

Cancel
< Back
Next >
Finish

Understanding External Data 168
Import Data from a Data Source. 170
Import Data from an Access Table. 172
Import Data from a Word Table 174
Import Data from a Text File 176
Import Data from a Web Page. 180
Import Data from an XML File. 182
Refresh Imported Data 184
Separate Cell Text into Columns. 186

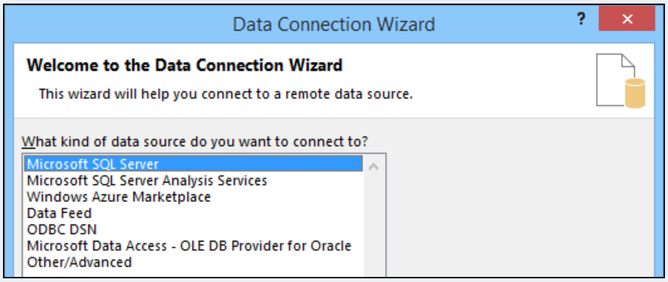
Understanding External Data

External data is data that resides outside of Excel in a file, database, server, or website. You can import external data directly into an Excel PivotTable or worksheet for additional types of data analysis.

Before you learn the specifics of importing external data into your Excel workbooks, you need to understand the various types of external data that you are likely to encounter. For the vast majority of applications, external data comes in one of the following six formats: data sources, Access tables, Word tables, text files, web pages, and XML files.

Data Source File

Open Database Connectivity (ODBC) data sources give you access to data residing in databases such as Access and dBase, or on servers such as SQL Server and Oracle. However, there are many other data-source types that connect to specific objects in a data source. For more information, see the next section, "Import Data from a Data Source."


Data Connection Wizard
?
×

Welcome to the Data Connection Wizard

This wizard will help you connect to a remote data source.

What kind of data source do you want to connect to?

Microsoft SQL Server
Microsoft SQL Server Analysis Services
Windows Azure Marketplace
Data Feed
ODBC DSN
Microsoft Data Access - OLE DB Provider for Oracle
Other/Advanced

Access Table

Microsoft Access is the Office suite's relational database management system, and so it is often used to store and manage the bulk of the data used by a person, team, department, or company. For more information, see the section "Import Data from an Access Table."

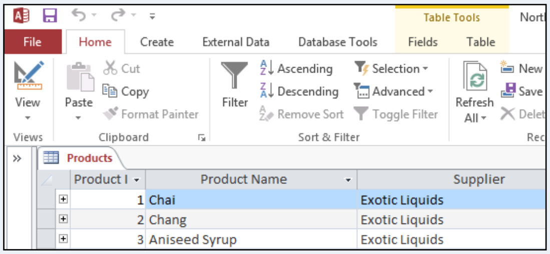
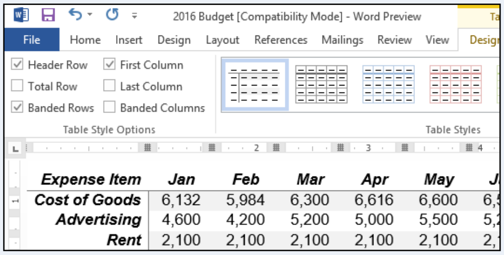


Table Tools
File
Home
Create
External Data
Database Tools
Fields
Table
View
Paste
Cut
Copy
Format Painter
Filter
Ascending
Descending
Remove Sort
Selection
Advanced
Toggle Filter
Refresh All
New
Save
Views
Clipboard
Sort & Filter
Products

Product I	Product Name	Supplier
1	Chai	Exotic Liquids
2	Chang	Exotic Liquids
3	Aniseed Syrup	Exotic Liquids

Word Table

Some simple data is often stored in a table embedded in a Word document. You can only perform so much analysis on that data within Word, and so it is often useful to import the data from the Word table into an Excel worksheet. For more information, see the section "Import Data from a Word Table."

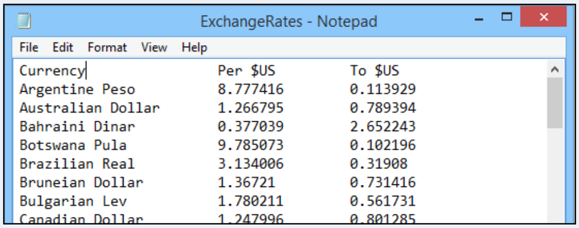

2016 Budget [Compatibility Mode] - Word Preview
File
Home
Insert
Design
Layout
References
Mailings
Review
View
Design
Table Style Options
Table Styles

☑ Header Row
☑ First Column
☐ Total Row
☐ Last Column
☑ Banded Rows
☐ Banded Columns

Expense Item	Jan	Feb	Mar	Apr	May
Cost of Goods	6,132	5,984	6,300	6,616	6,600
Advertising	4,600	4,200	5,200	5,000	5,500
Rent	2,100	2,100	2,100	2,100	2,100

Text File

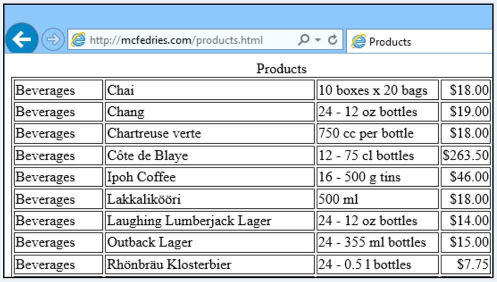
Text files often contain useful data. If that data is formatted properly — for example, where each line has the same number of items, all separated by spaces, commas, or tabs — then it is possible to import that data into Excel for further analysis. For more information, see the section "Import Data from a Text File."


ExchangeRates - Notepad
File
Edit
Format
View
Help

```
Currency                Per $US         To $US
Argentine Peso          8.777416        0.113929
Australian Dollar       1.266795        0.789394
Bahraini Dinar          0.377039        2.652243
Botswana Pula           9.785073        0.102196
Brazilian Real          3.134006        0.31908
Bruneian Dollar         1.36721         0.731416
Bulgarian Lev           1.780211        0.561731
Canadian Dollar         1.247996        0.801285
```

Web Page

People and companies often store useful data on web pages that reside either on the Internet or on company Intranets. This data is often a combination of text and tables, but you cannot analyze web-based data in any meaningful way in your web browser. Fortunately, Excel enables you to create a web query that lets you import text and tables from a web page. For more information, see the section "Import Data from a Web Page."



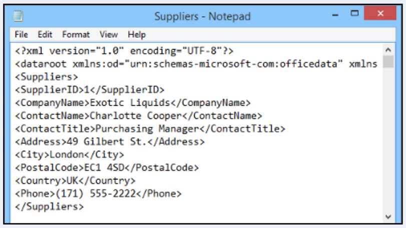
http://mcfedries.com/products.html

Products

Beverages	Chai	10 boxes x 20 bags	$18.00
Beverages	Chang	24 - 12 oz bottles	$19.00
Beverages	Chartreuse verte	750 cc per bottle	$18.00
Beverages	Côte de Blaye	12 - 75 cl bottles	$263.50
Beverages	Ipoh Coffee	16 - 500 g tins	$46.00
Beverages	Lakkalikööri	500 ml	$18.00
Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles	$14.00
Beverages	Outback Lager	24 - 355 ml bottles	$15.00
Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles	$7.75

XML

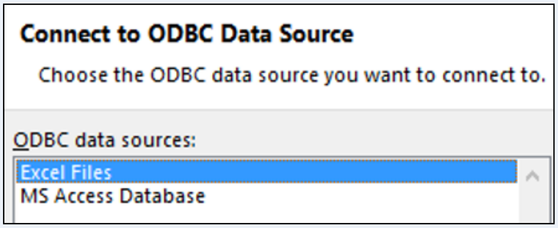
XML — Extensible Markup Language — is redefining how data is stored. This is reflected in the large number of tools that Excel now has for dealing with XML data, particularly tools for importing XML data into Excel. For more information, see the section "Import Data from an XML File."



```
<?xml version="1.0" encoding="UTF-8"?>
<dataroot xmlns:od="urn:schemas-microsoft-com:officedata" xmlns
<Suppliers>
<SupplierID>1</SupplierID>
<CompanyName>Exotic Liquids</CompanyName>
<ContactName>Charlotte Cooper</ContactName>
<ContactTitle>Purchasing Manager</ContactTitle>
<Address>49 Gilbert St.</Address>
<City>London</City>
<PostalCode>EC1 4SD</PostalCode>
<Country>UK</Country>
<Phone>(171) 555-2222</Phone>
</Suppliers>
```

Access to External Data

To use external data, you must have access to it. This usually means knowing at least one of the following: the location of the data or the login information required to authorize your use of the data.



Connect to ODBC Data Source

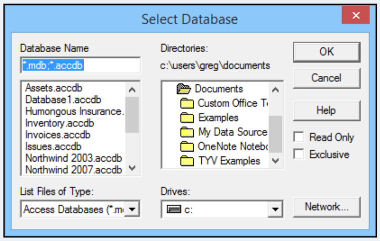
Choose the ODBC data source you want to connect to.

ODBC data sources:

- Excel Files
- MS Access Database

Location

To access external data, you must at least know where it is located. Here are the most common possibilities: in a file on your computer; in a file on your network; on a network server, particularly as part of a large, server-based database management system, such as SQL Server or Oracle; on a web page; or on a web server.



Database Name: *.mdb;*.accdb

- Assets.accdb
- Database1.accdb
- Humongous Insurance.
- Inventory.accdb
- Invoices.accdb
- Issues.accdb
- Northwind 2003.accdb
- Northwind 2007.accdb

Directories: c:\users\greg\documents

- Documents
  - Custom Office T
  - Examples
  - My Data Source
  - OneNote Notebo
  - TYV Examples

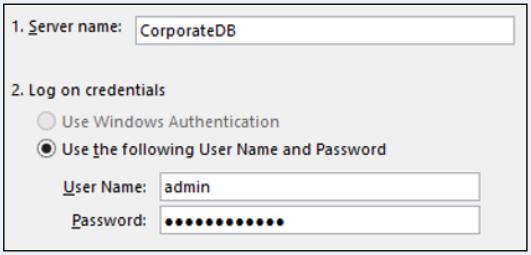
☐ Read Only
☐ Exclusive

List Files of Type: Access Databases (*.m

Drives: c:

Login

Knowing where the data is located is probably all that you require if you are dealing with a local file or database or, usually, a web page. However, after you start accessing data remotely — on a network, database server, or web server — you will also require authorization to secure that access. See the administrator of the resource to obtain a username or login ID as well as a password.



1. Server name: CorporateDB

2. Log on credentials

○ Use Windows Authentication
● Use the following User Name and Password

User Name: admin
Password: ●●●●●●●●●●●●

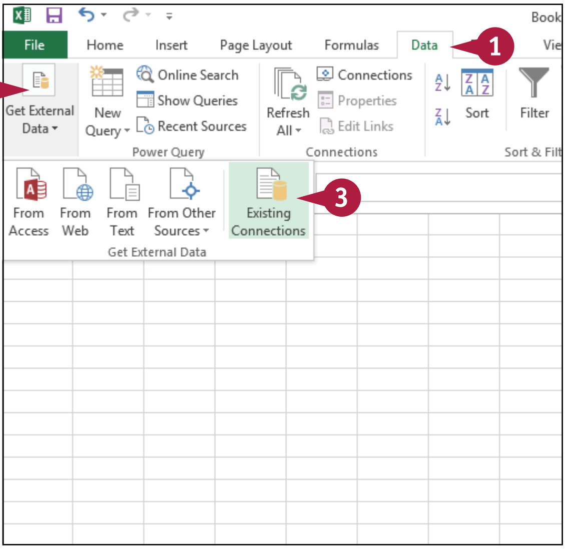
Import Data from a Data Source

You can quickly import data into just about any format by importing the data from a defined data source file.

In this section, you learn how to import data from a *data connection file*. This is a data source that connects you to a wide variety of data, including ODBC, SQL Server, SQL Server OLAP Services, Oracle, and web-based data retrieval services. You can also read the tip to learn how to create a data connection file.

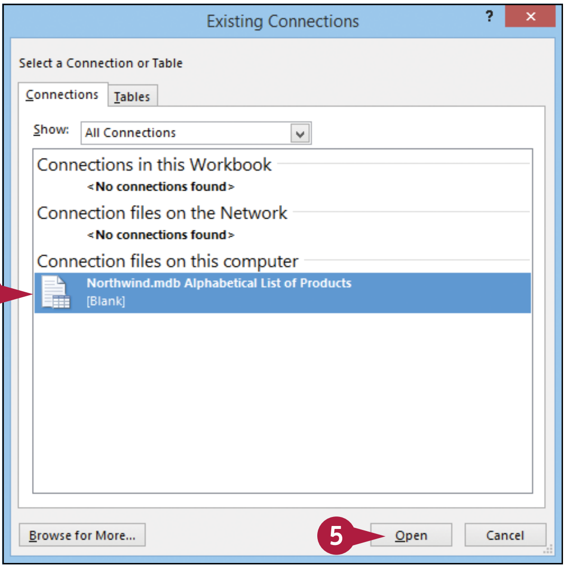
Import Data from a Data Source

1. Click the **Data** tab.
2. Click **Get External Data.**
3. Click **Existing Connections.**


Book
File
Home
Insert
Page Layout
Formulas
Data
Vie
Get External Data
New Query
Online Search
Show Queries
Recent Sources
Power Query
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Sort & Filt
From Access
From Web
From Text
From Other Sources
Existing Connections
Get External Data
1
2
3

The Existing Connections dialog box appears.

4. Click the data source you want to import.
5. Click **Open.**


Existing Connections
?
×
Select a Connection or Table
Connections
Tables
Browse for More...
Open
Cancel
4
5

Show: All Connections

Connections in this Workbook

<No connections found>

Connection files on the Network

<No connections found>

Connection files on this computer

Northwind.mdb Alphabetical List of Products

[Blank]

The Import Data dialog box appears.

6 Click **Table** (○ changes to ●).

A To import the data directly into a PivotTable, click **PivotTable Report** (○ changes to ●).

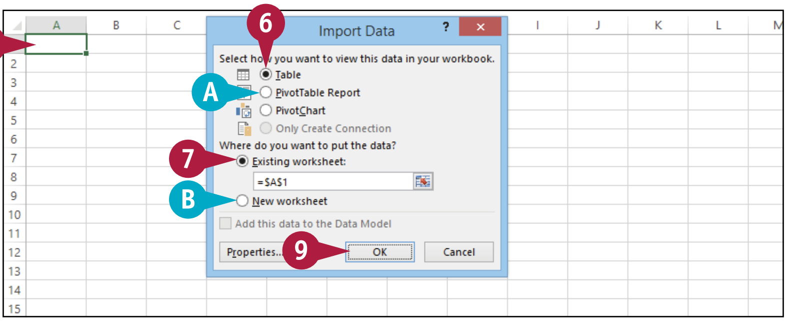
7 Click **Existing worksheet** (○ changes to ●).

8 Click the cell where you want the imported data to appear.

B To import the data to a new sheet, click **New worksheet** (○ changes to ●).

9 Click **OK**.

Excel imports the data into the worksheet.



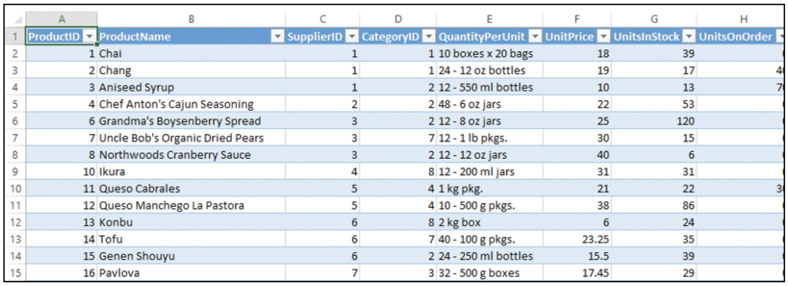
Select how you want to view this data in your workbook.

● Table
○ PivotTable Report
○ PivotChart
○ Only Create Connection

Where do you want to put the data?

● Existing worksheet:
=$A$1
○ New worksheet

☐ Add this data to the Data Model



	A	B	C	D	E	F	G	H
1	ProductID	ProductName	SupplierID	CategoryID	QuantityPerUnit	UnitPrice	UnitsInStock	UnitsOnOrder
2	1	Chai	1	1	10 boxes x 20 bags	18	39	
3	2	Chang	1	1	24 - 12 oz bottles	19	17	4
4	3	Aniseed Syrup	1	2	12 - 550 ml bottles	10	13	7
5	4	Chef Anton's Cajun Seasoning	2	2	48 - 6 oz jars	22	53	
6	6	Grandma's Boysenberry Spread	3	2	12 - 8 oz jars	25	120	
7	7	Uncle Bob's Organic Dried Pears	3	7	12 - 1 lb pkgs.	30	15	
8	8	Northwoods Cranberry Sauce	3	2	12 - 12 oz jars	40	6	
9	10	Ikura	4	8	12 - 200 ml jars	31	31	
10	11	Queso Cabrales	5	4	1 kg pkg.	21	22	3
11	12	Queso Manchego La Pastora	5	4	10 - 500 g pkgs.	38	86	
12	13	Konbu	6	8	2 kg box	6	24	
13	14	Tofu	6	7	40 - 100 g pkgs.	23.25	35	
14	15	Genen Shouyu	6	2	24 - 250 ml bottles	15.5	39	
15	16	Pavlova	7	3	32 - 500 g boxes	17.45	29	

TIP

How do I create a data connection file?

To create your own data connection (.odc) file, click the **Data** tab, click **Get External Data**, click **From Other Sources**, and then click **From Data Connection Wizard**. Click the data source you want, and then click **Next**.

The next steps depend on the data source. For example, for Microsoft SQL Server or Oracle, you specify the server name or address and your server login data; similarly, for ODBC DSN (Database Source Name) you choose the ODBC data source, specify the location of the file, and select the table or query to which you want to connect.

When you get to the Import Data dialog box, click **OK** to import the data or click **Cancel** if you just want to create the data source file for now.

Import Data from an Access Table

If you want to use Excel to analyze data from a table within an Access database, you can import the table to an Excel worksheet.

In Excel, you can use Microsoft Query to create a database query to extract records from a database, to filter and sort the records, and then to return the results to your worksheet. Excel offers tools creating a database query for any ODBC data source, including an Access database. However, Excel also gives you an easier way to do this: You can import the table directly from the Access database.

Import Data from an Access Table

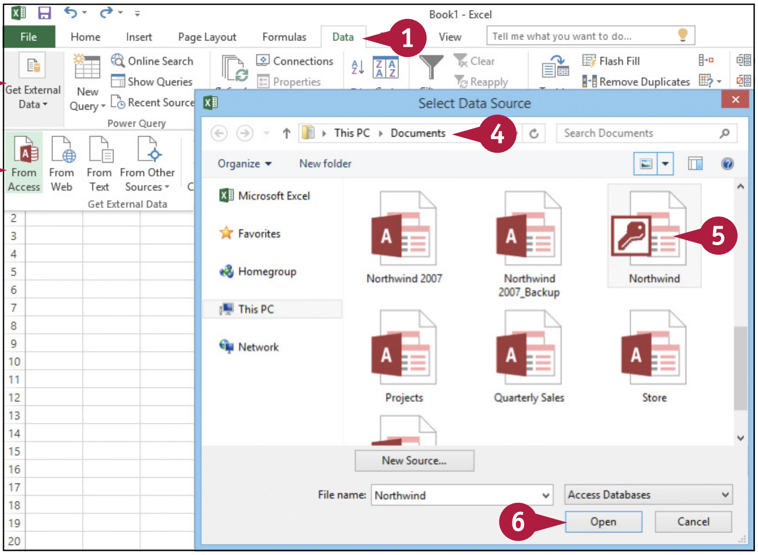
1. Click the **Data** tab.
2. Click **Get External Data**.
3. Click **From Access**.

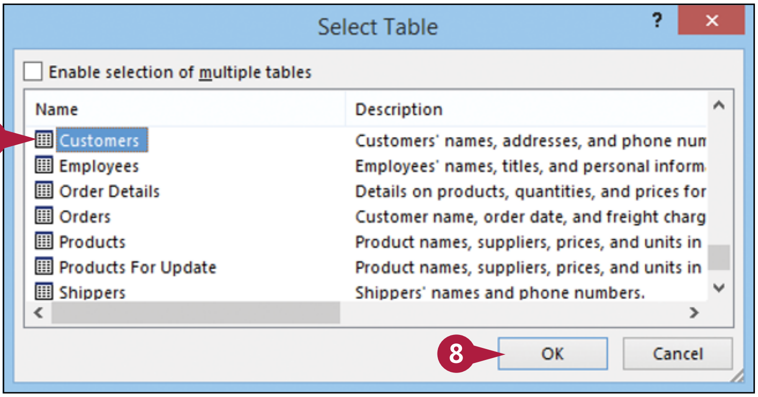
   The Select Data Source dialog box appears.
4. Open the folder that contains the database.
5. Click the file.
6. Click **Open**.

Note: If the Data Link Properties dialog box appears, make sure the login information is correct, and then click **Test Connection** until you can connect. Click **OK**.

The Select Table dialog box appears.

7. Click the table or query you want to import.
8. Click **OK**.


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Get External Data
New Query
Online Search
Show Queries
Recent Sources
Power Query
Connections
Properties
Clear
Reapply
Flash Fill
Remove Duplicates
From Access
From Web
From Text
From Other Sources
Get External Data
Select Data Source
This PC
Documents
Search Documents
Organize
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
Northwind 2007
Northwind 2007_Backup
Northwind
Projects
Quarterly Sales
Store
New Source...
File name: Northwind
Access Databases
Open
Cancel
1
2
3
4
5
6


Select Table
?
☐ Enable selection of multiple tables
OK
Cancel
7
8

Name	Description
Customers	Customers' names, addresses, and phone num
Employees	Employees' names, titles, and personal inform
Order Details	Details on products, quantities, and prices for
Orders	Customer name, order date, and freight charg
Products	Product names, suppliers, prices, and units in
Products For Update	Product names, suppliers, prices, and units in
Shippers	Shippers' names and phone numbers.

The Import Data dialog box appears.

9 Click **Table** (○ changes to ●).

A To import the data directly into a PivotTable, click **PivotTable Report** (○ changes to ●).

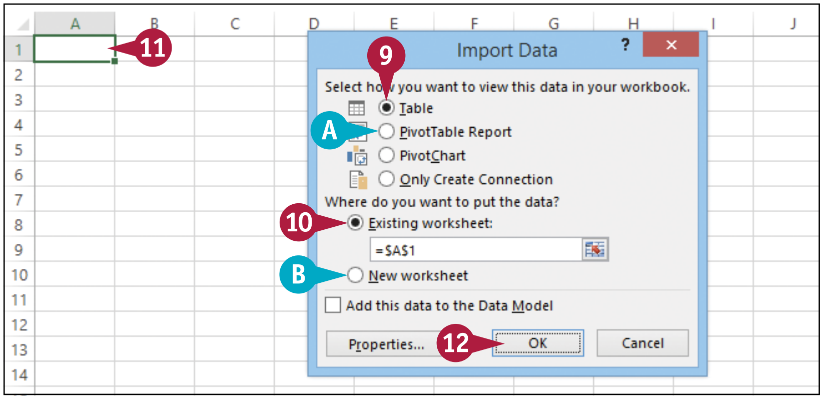
10 Select **Existing worksheet** (○ changes to ●).

11 Click the cell where you want the imported data to appear.

B To import the data to a new sheet, click **New worksheet** (○ changes to ●).

12 Click **OK**.

Excel imports the data to the worksheet.



Import Data

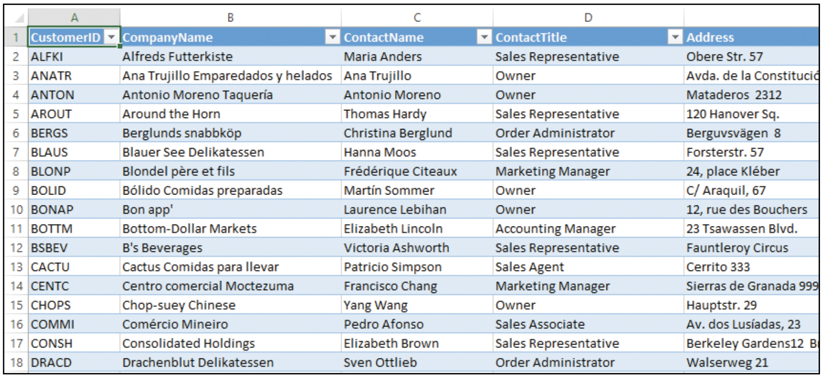
Select how you want to view this data in your workbook.

● Table
○ PivotTable Report
○ PivotChart
○ Only Create Connection

Where do you want to put the data?

● Existing worksheet:
=$A$1
○ New worksheet

☐ Add this data to the Data Model

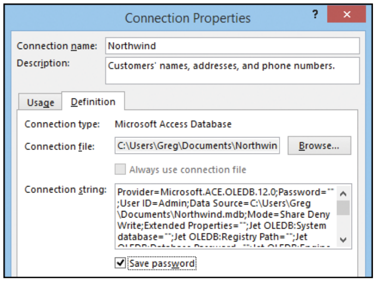


	CustomerID	CompanyName	ContactName	ContactTitle	Address
2	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
3	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la Constitució
4	ANTON	Antonio Moreno Taquería	Antonio Moreno	Owner	Mataderos 2312
5	AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.
6	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
7	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57
8	BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber
9	BOLID	Bólido Comidas preparadas	Martín Sommer	Owner	C/ Araquil, 67
10	BONAP	Bon app'	Laurence Lebihan	Owner	12, rue des Bouchers
11	BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.
12	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
13	CACTU	Cactus Comidas para llevar	Patricio Simpson	Sales Agent	Cerrito 333
14	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 999
15	CHOPS	Chop-suey Chinese	Yang Wang	Owner	Hauptstr. 29
16	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23
17	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gardens12 B
18	DRACD	Drachenblut Delikatessen	Sven Ottlieb	Order Administrator	Walserweg 21

TIP

Why am I prompted multiple times for my password?

To avoid this extra step, tell Excel to save the database password along with the external data. Click the **Data** tab, click the **Refresh All** drop-down arrow (▼), and then click **Connection Properties**. In the Connection Properties dialog box, click the **Definition** tab, and then select the **Save password** check box (☐ changes to ☑). Click **Yes**, and then click **OK**.



Connection Properties

Connection name: Northwind

Description: Customers' names, addresses, and phone numbers.

Connection type: Microsoft Access Database

Connection file: C:\Users\Greg\Documents\Northwin

☐ Always use connection file

Connection string: Provider=Microsoft.ACE.OLEDB.12.0;Password="";User ID=Admin;Data Source=C:\Users\Greg\Documents\Northwind.mdb;Mode=Share Deny Write;Extended Properties="";Jet OLEDB:System database="";Jet OLEDB:Registry Path="";Jet

☑ Save password

Import Data from a Word Table

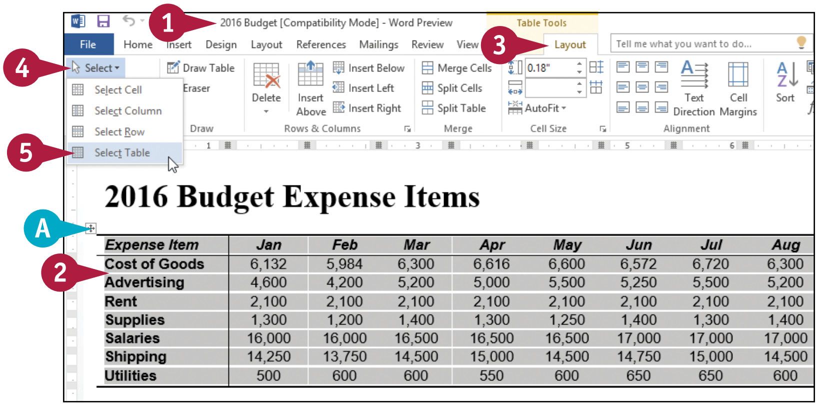
Word tables are collections of rows, columns, and cells that look like Excel ranges. You can insert fields into Word table cells to perform calculations. In fact, Word fields support cell references, built-in functions such as SUM and AVERAGE, and operators such as addition (+) and multiplication (*), to build formulas that calculate results based on the table data.

However, even the most powerful Word formulas cannot perform the tasks available to you in Excel, which offers much more sophisticated data analysis tools. Therefore, to analyze your Word table data properly, you should import the table into an Excel worksheet.

Import Data from a Word Table

1. Launch Microsoft Word and open the document that contains the table.
2. Click a cell inside the table you want to import.
3. Click the **Layout** tab.
4. Click **Select**.
5. Click **Select Table**.

A. You can also select the table by clicking the table selection handle (⊞).


2016 Budget [Compatibility Mode] - Word Preview
Table Tools
File
Home
Insert
Design
Layout
References
Mailings
Review
View
Layout
Tell me what you want to do...
Select
Select Cell
Select Column
Select Row
Select Table
Draw Table
Eraser
Draw
Delete
Insert Above
Insert Below
Insert Left
Insert Right
Rows & Columns
Merge Cells
Split Cells
Split Table
Merge
0.18"
AutoFit
Cell Size
Text Direction
Cell Margins
Alignment
Sort
1
2
3
4
5
A

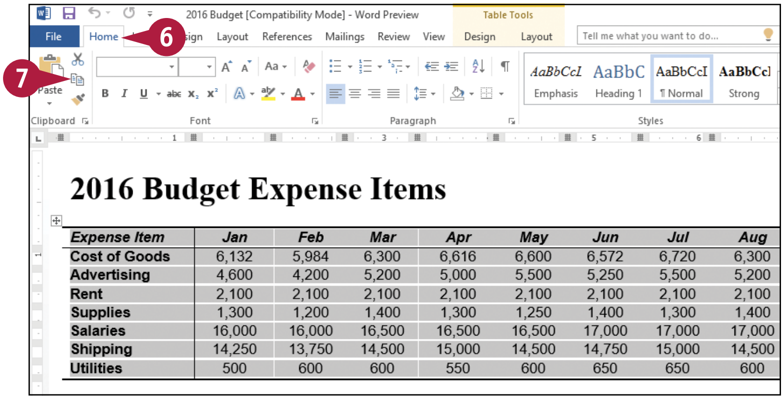
2016 Budget Expense Items

Expense Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Cost of Goods	6,132	5,984	6,300	6,616	6,600	6,572	6,720	6,300
Advertising	4,600	4,200	5,200	5,000	5,500	5,250	5,500	5,200
Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Supplies	1,300	1,200	1,400	1,300	1,250	1,400	1,300	1,400
Salaries	16,000	16,000	16,500	16,500	16,500	17,000	17,000	17,000
Shipping	14,250	13,750	14,500	15,000	14,500	14,750	15,000	14,500
Utilities	500	600	600	550	600	650	650	600

6. Click the **Home** tab.
7. Click **Copy** (📋).

You can also press Ctrl + C.

Word copies the table to the Clipboard.


2016 Budget [Compatibility Mode] - Word Preview
Table Tools
File
Home
Design
Layout
References
Mailings
Review
View
Design
Layout
Tell me what you want to do...
Paste
Clipboard
Font
Paragraph
AaBbCcL Emphasis
AaBbC Heading 1
AaBbCcI ¶ Normal
AaBbCcl Strong
Styles
6
7

2016 Budget Expense Items

Expense Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Cost of Goods	6,132	5,984	6,300	6,616	6,600	6,572	6,720	6,300
Advertising	4,600	4,200	5,200	5,000	5,500	5,250	5,500	5,200
Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Supplies	1,300	1,200	1,400	1,300	1,250	1,400	1,300	1,400
Salaries	16,000	16,000	16,500	16,500	16,500	17,000	17,000	17,000
Shipping	14,250	13,750	14,500	15,000	14,500	14,750	15,000	14,500
Utilities	500	600	600	550	600	650	650	600

8. Switch to the Excel workbook into which you want to import the table.

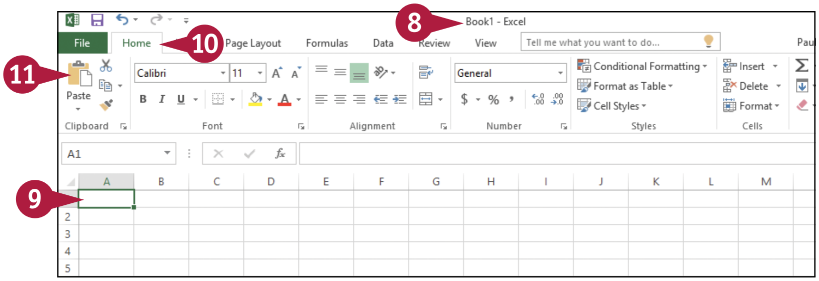
9. Click the cell where you want the table to appear.

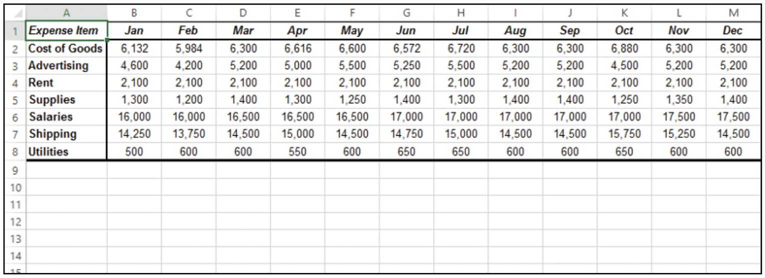
10. Click the **Home** tab.

11. Click **Paste** (📋).

    You can also press Ctrl + V.

    Excel pastes the Word table data.


8
Book1 - Excel
10
11
9
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paste
Calibri
11
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
A1



Expense Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cost of Goods	6,132	5,984	6,300	6,616	6,600	6,572	6,720	6,300	6,300	6,880	6,300	6,300
Advertising	4,600	4,200	5,200	5,000	5,500	5,250	5,500	5,200	5,200	4,500	5,200	5,200
Rent	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Supplies	1,300	1,200	1,400	1,300	1,250	1,400	1,300	1,400	1,400	1,250	1,350	1,400
Salaries	16,000	16,000	16,500	16,500	16,500	17,000	17,000	17,000	17,000	17,000	17,500	17,500
Shipping	14,250	13,750	14,500	15,000	14,500	14,750	15,000	14,500	14,500	15,750	15,250	14,500
Utilities	500	600	600	550	600	650	650	600	600	650	600	600

TIP

If I make changes to the Word data, are those changes automatically reflected in the Excel data?

No. If this is a concern, a better approach is to shift the data's container application from Word to Excel. That is, after you paste the table data into Excel, copy the Excel range, switch to Word, click the **Home** tab, click the **Paste** drop-down arrow (▼), and then click **Paste Special**. In the Paste Special dialog box, click **HTML Format** in the **As** list, and then click **Paste link** (○ changes to ●). Click **OK**, and the resulting table is linked to the Excel data. This means that any changes you make to the data in Excel automatically appear in the Word table. Note, however, that if you change the data in Word, you cannot update the original data in Excel.

Import Data from a Text File

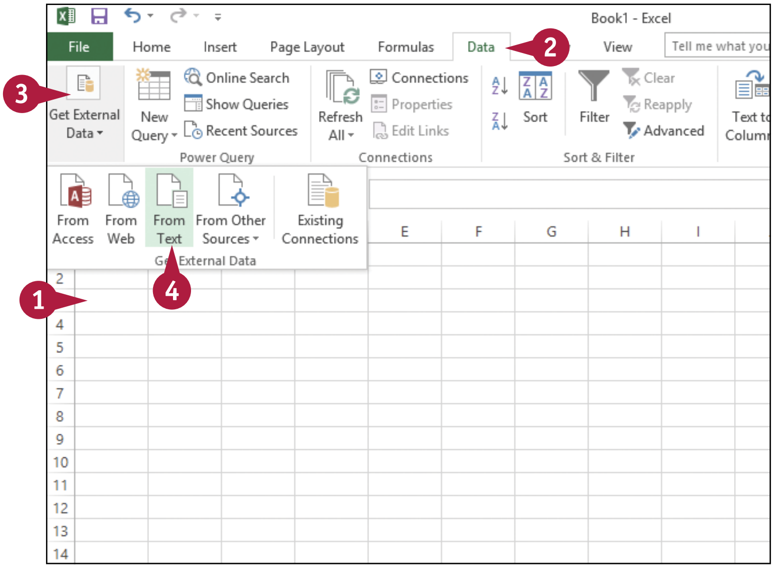
Today, most data resides in some kind of special format, such as an Excel workbook, Access database, or web page. However, it is still relatively common to find data stored in simple text files because text is a universal format that works on any system and a wide variety of programs. You can analyze the data contained in certain text files by importing the data into an Excel worksheet.

Note, however, that although you can import any text file into Excel, you will get the best results if you only import *delimited* or *fixed-width* text files. See the tip to learn more.

Import Data from a Text File

Start the Text Import Wizard

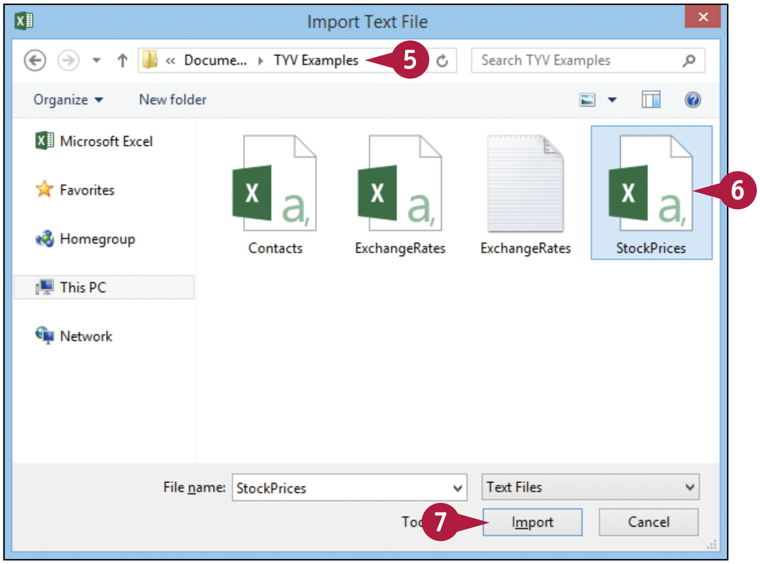
1. Click the cell where you want the imported data to appear.
2. Click the **Data** tab.
3. Click **Get External Data.**
4. Click **From Text.**


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you
Get External Data
New Query
Online Search
Show Queries
Recent Sources
Power Query
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Column
From Access
From Web
From Text
From Other Sources
Existing Connections
Get External Data
E
F
G
H
I
2
4
5
6
7
8
9
10
11
12
13
14
1
2
3
4

The Import Text File dialog box appears.

5. Open the folder that contains the text file.
6. Click the text file.
7. Click **Import.**

The Text Import Wizard – Step 1 of 3 dialog box appears.


Import Text File
« Docume... › TYV Examples
Search TYV Examples
Organize
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
Contacts
ExchangeRates
ExchangeRates
StockPrices
Tools
Import
Cancel
5
6
7

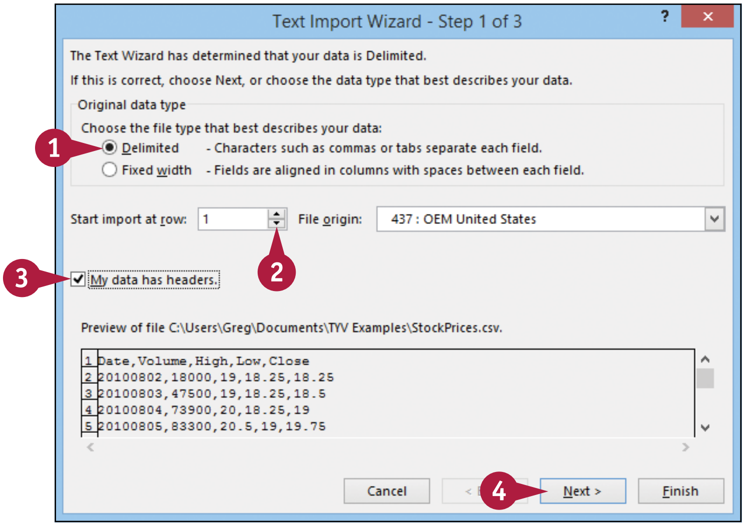
File name: StockPrices

Text Files

Note: For delimited text, continue with the subsection "Import Delimited Data"; for fixed-width text, skip to the subsection "Import Fixed-Width Data."

Import Delimited Data

1. Click **Delimited** (○ changes to ●).
2. Use the **Start import at row** spin box (⬍) to set the first row you want to import.
3. If the first import row consists of column headers, select the **My data has headers** check box (☐ changes to ☑).
4. Click **Next**.



Text Import Wizard - Step 1 of 3

The Text Wizard has determined that your data is Delimited.

If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

● Delimited - Characters such as commas or tabs separate each field.
○ Fixed width - Fields are aligned in columns with spaces between each field.

Start import at row: 1 File origin: 437 : OEM United States

☑ My data has headers.

Preview of file C:\Users\Greg\Documents\TYV Examples\StockPrices.csv.

```
1 Date,Volume,High,Low,Close
2 20100802,18000,19,18.25,18.25
3 20100803,47500,19,18.25,18.5
4 20100804,73900,20,18.25,19
5 20100805,83300,20.5,19,19.75
```

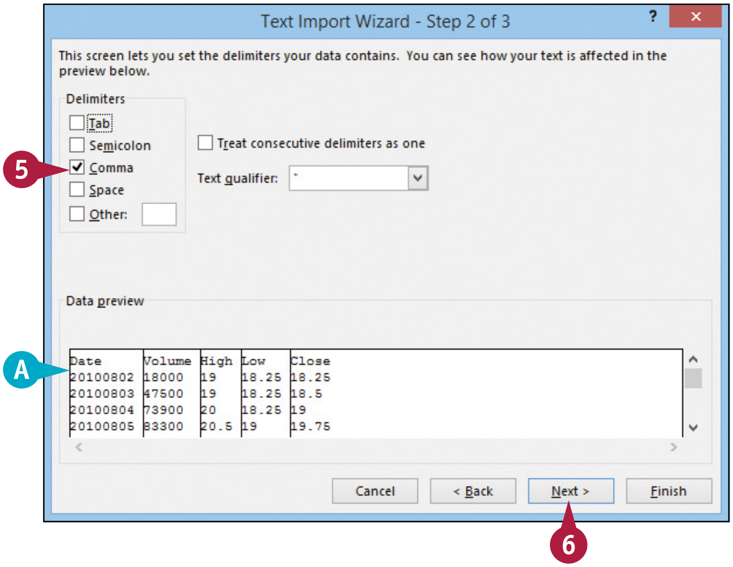
The Text Import Wizard – Step 2 of 3 dialog box appears.

5. Select the check box beside the delimiter character that your text data uses (☐ changes to ☑).

A If you choose the correct delimiter, the data appears in separate columns.

6. Click **Next**.

The Text Import Wizard – Step 3 of 3 dialog box appears.



Text Import Wizard - Step 2 of 3

This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.

Delimiters

☐ Tab
☐ Semicolon
☑ Comma
☐ Space
☐ Other:

☐ Treat consecutive delimiters as one

Text qualifier: "

Data preview

```
Date     Volume High Low   Close
20100802 18000  19   18.25 18.25
20100803 47500  19   18.25 18.5
20100804 73900  20   18.25 19
20100805 83300  20.5 19    19.75
```

Note: To complete this section, follow the steps in the subsection “Finish the Text Import Wizard.”

TIP

What are delimited and fixed-width text files?

A *delimited* text file uses a text structure in which each item on a line of text is separated by a character called a *delimiter*. The most common text delimiter is the comma (,). A delimited text file is imported into Excel by treating each line of text as a record and each item between the delimiter as a field.

A *fixed-width* text file uses a text structure in which all the items on a line of text use a set amount of space — say, 10 or 20 characters — and these fixed widths are the same on every line of text. A fixed-width text file is imported into Excel by treating each line of text as a record and each fixed-width item as a field.

continued ▶

Import Data from a Text File (continued)

If you are importing data that uses the fixed-width structure, you need to tell Excel where the separation between each field occurs.

In a fixed-width text file, each column of data is a constant width. The Text Import Wizard is usually quite good at determining the width of each column, and in most cases, the wizard automatically sets up *column break lines*, which are vertical lines that separate one field from the next. However, titles or introductory text at the beginning of the file can impair the wizard's calculations. Make sure the proposed break lines are accurate.

Import Data from a Text File (continued)

Import Fixed-Width Data

Note: You need to have run through the steps in the subsection "Start the Text Import Wizard" before continuing with this section.

1. Click **Fixed width** (○ changes to ●).
2. Use the **Start import at row** spin box (⬍) to set the first row you want to import.
3. If the first import row consists of column headers, select the **My data has headers** check box (☐ changes to ☑).
4. Click **Next**.

   The Text Import Wizard – Step 2 of 3 dialog box appears.

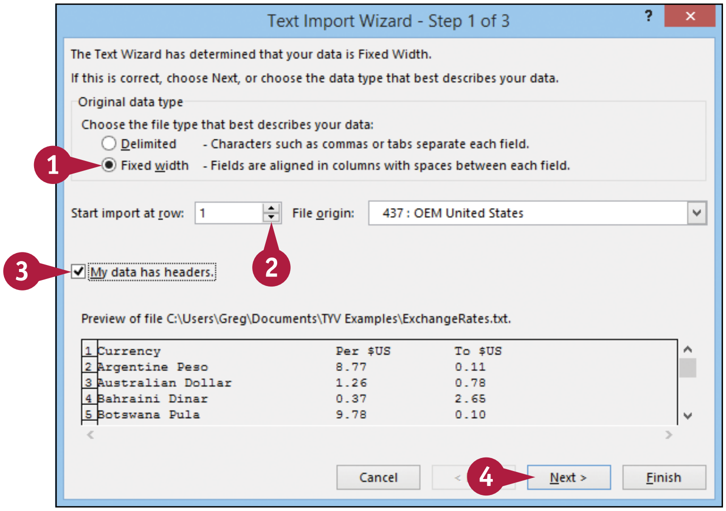
5. Click and drag a break line to set the width of each column.

   B. To create a break line, you can click the ruler at the point where you want the break to appear.

   C. To delete a break line, you can double-click it.

6. Click **Next**.

   The Text Import Wizard – Step 3 of 3 dialog box appears.



Text Import Wizard - Step 1 of 3

The Text Wizard has determined that your data is Fixed Width.

If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

○ Delimited - Characters such as commas or tabs separate each field.

● Fixed width - Fields are aligned in columns with spaces between each field.

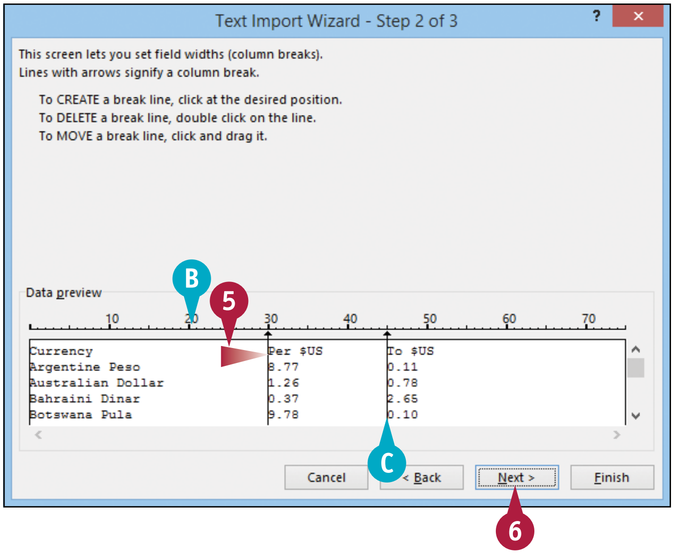
Start import at row: 1

File origin: 437 : OEM United States

☑ My data has headers.

Preview of file C:\Users\Greg\Documents\TYV Examples\ExchangeRates.txt.

```
1 Currency                          Per $US       To $US
2 Argentine Peso                    8.77          0.11
3 Australian Dollar                 1.26          0.78
4 Bahraini Dinar                    0.37          2.65
5 Botswana Pula                     9.78          0.10
```



Text Import Wizard - Step 2 of 3

This screen lets you set field widths (column breaks).
Lines with arrows signify a column break.

To CREATE a break line, click at the desired position.
To DELETE a break line, double click on the line.
To MOVE a break line, click and drag it.

Data preview

```
Currency                      Per $US       To $US
Argentine Peso                8.77          0.11
Australian Dollar             1.26          0.78
Bahraini Dinar                0.37          2.65
Botswana Pula                 9.78          0.10
```

Finish the Text Import Wizard

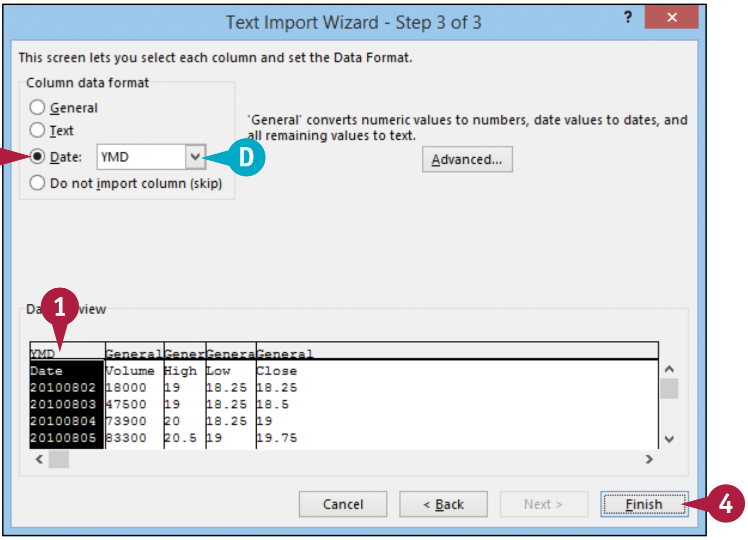
1 Click a column.

2 Click the radio button of the data format you want Excel to apply to the column (○ changes to ●).

D If you select the Date option, you can use this drop-down list to select the date format your data uses.

3 Repeat steps **1** and **2** to set the data format for all the columns.

4 Click **Finish**.



Text Import Wizard - Step 3 of 3

This screen lets you select each column and set the Data Format.

Column data format

○ General
○ Text
● Date: YMD
○ Do not import column (skip)

'General' converts numeric values to numbers, date values to dates, and all remaining values to text.

Data preview

YMD	General	Gener	Genera	General
Date	Volume	High	Low	Close
20100802	18000	19	18.25	18.25
20100803	47500	19	18.25	18.5
20100804	73900	20	18.25	19
20100805	83300	20.5	19	19.75

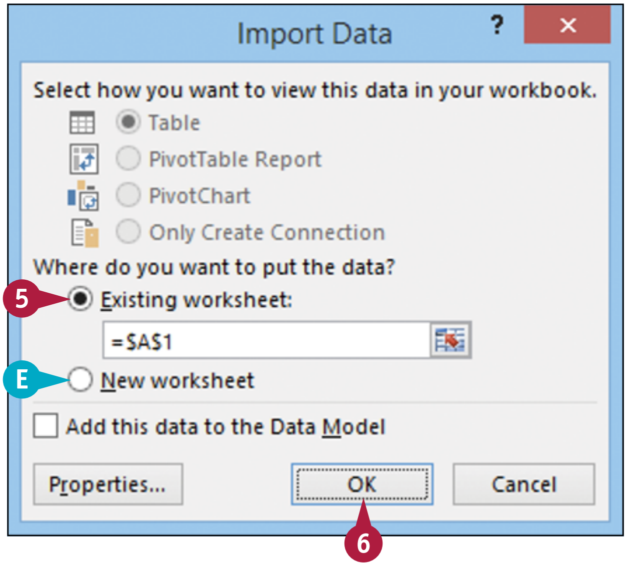
The Import Data dialog box appears.

5 Click **Existing worksheet** (○ changes to ●).

E If you want the data to appear in a new sheet, click **New worksheet** (○ changes to ●).

6 Click **OK**.

Excel imports the data to the worksheet.



Import Data

Select how you want to view this data in your workbook.

● Table
○ PivotTable Report
○ PivotChart
○ Only Create Connection

Where do you want to put the data?

● Existing worksheet:
=$A$1
○ New worksheet

☐ Add this data to the Data Model

TIPS

What do I do when my data uses a comma instead of a dot as the decimal separator?

To import such data, click **Advanced** in the Text Import Wizard – Step 3 of 3 dialog box to display the Advanced Text Import Settings dialog box. Click the **Decimal separator** drop-down arrow (▾), and then click the text's decimal separator. You can also click the **Thousands separator** drop-down arrow (▾), and then click the text's thousands separator.

If I make a mistake when importing a text file, do I have to start over?

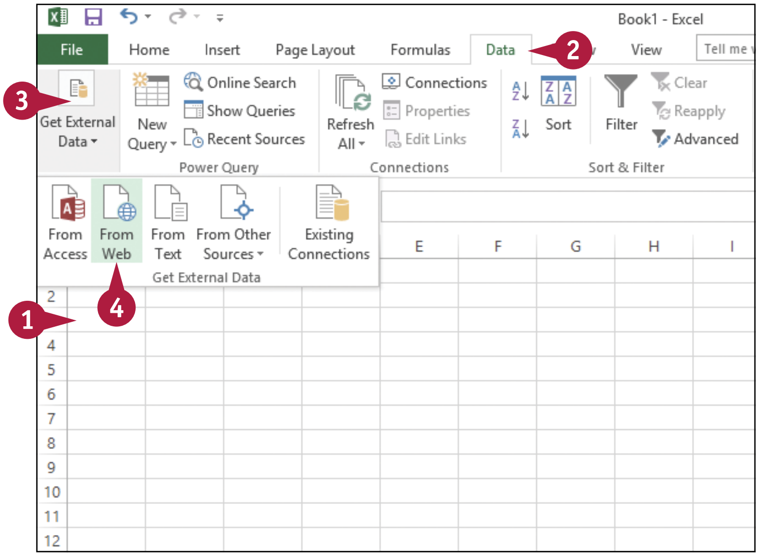
No. Click any cell in the imported data, click the **Data** tab, click the **Refresh All** drop-down arrow (▾), and then click **Connection Properties**. Click the **Definition** tab, and then click **Edit Query**. The Import Text File dialog box appears. Click the file you want, and then click **Import**. Excel launches the Import Text Wizard so you can run through the options again.

Import Data from a Web Page

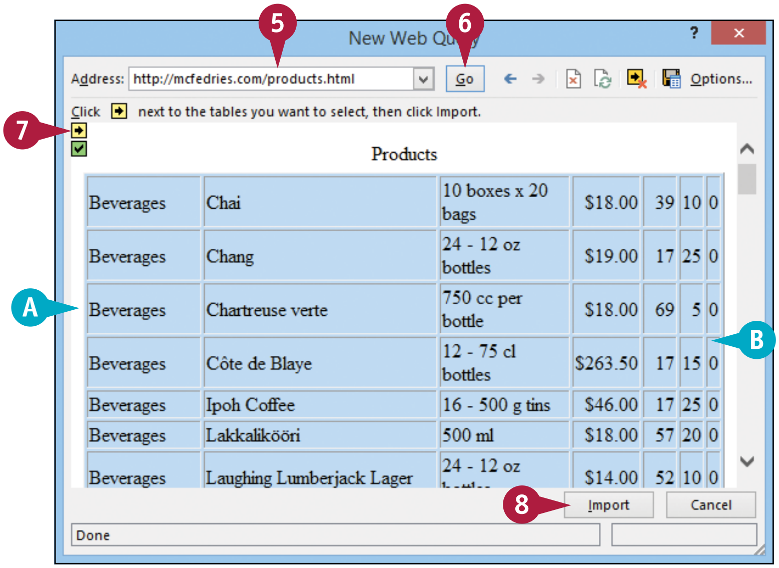
Data is often available on web pages. Although this data is usually text, some web page data comes as either a table (a rectangular array of rows and columns) or as preformatted text (text that has been structured with a predefined spacing used to organize data into columns with fixed widths).

Both types are suitable for import into Excel so that you can perform more extensive data analysis. To import web page data, the file must reside on your computer or on your network.

Import Data from a Web Page


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me
Get External Data
New Query
Online Search
Show Queries
Recent Sources
Power Query
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
From Access
From Web
From Text
From Other Sources
Existing Connections
Get External Data
E
F
G
H
I
2
4
5
6
7
8
9
10
11
12
1
2
3
4

1. Click the cell where you want the imported data to appear.
2. Click the **Data** tab.
3. Click **Get External Data**.
4. Click **From Web**.


New Web Query
?
×
Go
Options...
Import
Cancel
Done
5
6
7
8
A
B

Address: http://mcfedries.com/products.html

Click ▶ next to the tables you want to select, then click Import.

Products

Beverages	Chai	10 boxes x 20 bags	$18.00	39	10	0
Beverages	Chang	24 - 12 oz bottles	$19.00	17	25	0
Beverages	Chartreuse verte	750 cc per bottle	$18.00	69	5	0
Beverages	Côte de Blaye	12 - 75 cl bottles	$263.50	17	15	0
Beverages	Ipoh Coffee	16 - 500 g tins	$46.00	17	25	0
Beverages	Lakkalikööri	500 ml	$18.00	57	20	0
Beverages	Laughing Lumberjack Lager	24 - 12 oz	$14.00	52	10	0

The New Web Query dialog box appears.

5. Type the address of the web page.
6. Click **Go**.

A. Excel loads the page into the dialog box.

7. Click the **Select Table icon** (▶) beside the table that you want to import.

B. Excel selects the table.

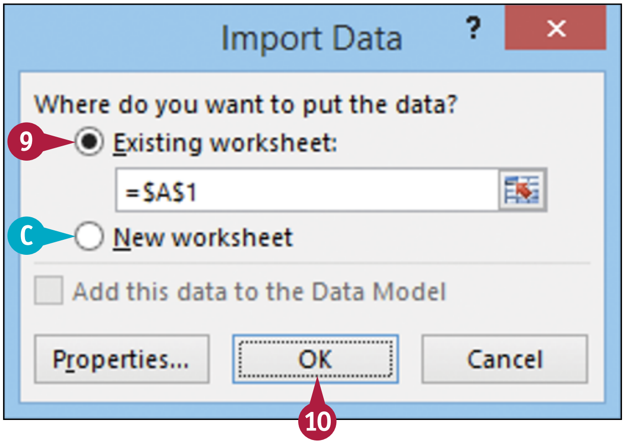
8. Click **Import**.

The Import Data dialog box appears.

9 Click **Existing worksheet** (○ changes to ●).

C If you want the data to appear in a new sheet, click **New worksheet** (○ changes to ●).

10 Click **OK**.


Import Data

Where do you want to put the data?

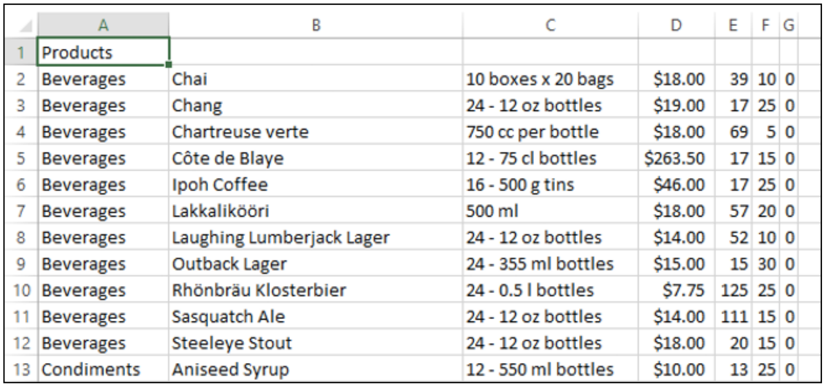
● Existing worksheet:

=$A$1

○ New worksheet

☐ Add this data to the Data Model

Excel imports the data to the worksheet.



	A	B	C	D	E	F	G
1	Products						
2	Beverages	Chai	10 boxes x 20 bags	$18.00	39	10	0
3	Beverages	Chang	24 - 12 oz bottles	$19.00	17	25	0
4	Beverages	Chartreuse verte	750 cc per bottle	$18.00	69	5	0
5	Beverages	Côte de Blaye	12 - 75 cl bottles	$263.50	17	15	0
6	Beverages	Ipoh Coffee	16 - 500 g tins	$46.00	17	25	0
7	Beverages	Lakkalikööri	500 ml	$18.00	57	20	0
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles	$14.00	52	10	0
9	Beverages	Outback Lager	24 - 355 ml bottles	$15.00	15	30	0
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles	$7.75	125	25	0
11	Beverages	Sasquatch Ale	24 - 12 oz bottles	$14.00	111	15	0
12	Beverages	Steeleye Stout	24 - 12 oz bottles	$18.00	20	15	0
13	Condiments	Aniseed Syrup	12 - 550 ml bottles	$10.00	13	25	0

TIP

Are there other ways to import a web page into Excel?

Yes. Excel gives you two other methods for creating web queries. Both of these alternative methods assume that you already have the web page open in Internet Explorer:

- Right-click the page, and then click **Export to Microsoft Excel**.
- Copy the web page text, switch to Excel, and then paste the text. When the Paste Options smart tag appears, click the smart tag drop-down arrow (▼), and then click **Refreshable Web Query**.

Each of these methods opens the New Web Query dialog box and automatically loads the web page.

If you want to save the web query for future use in other workbooks, click **Save Query** (💾) in the New Web Query dialog box, and then use the Save Workspace dialog box to save the query file.

Import Data from an XML File

You can analyze data that currently resides in XML format by importing that data into Excel and then manipulating and analyzing the resulting table.

XML, or extensible markup language, is a standard that enables the management and sharing of structured data using simple text files. These XML files organize data using *tags* that specify the equivalent of a table name and field names. Because XML is just text, if you want to perform data analysis on the XML file, you must import the XML file into an Excel table.

Import Data from an XML File

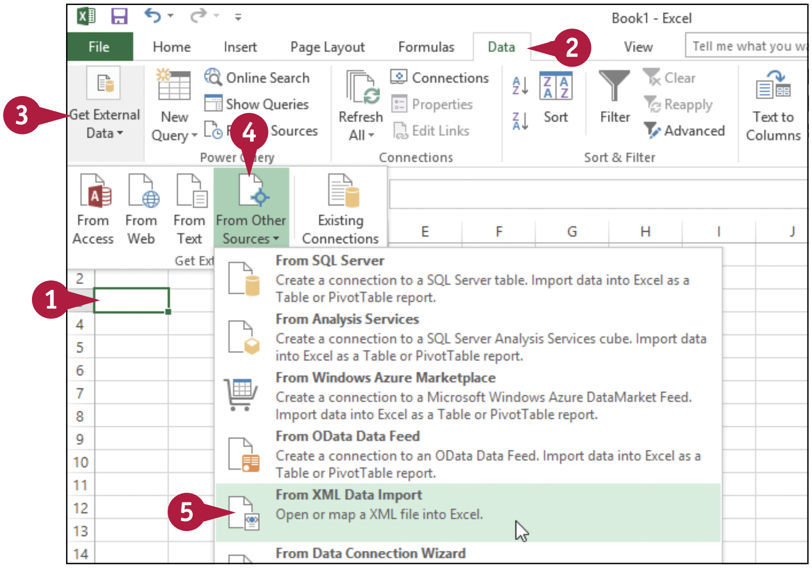
① Click the cell where you want the imported data to appear.

② Click the **Data** tab.

③ Click **Get External Data.**

④ Click **From Other Sources.**

⑤ Click **From XML Data Import.**


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you w
Get External Data
New Query
Online Search
Show Queries
Sources
Power Query
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
From Access
From Web
From Text
From Other Sources
Existing Connections
Get Ext
E
F
G
H
I
J
1
2
3
4
5

From SQL Server
Create a connection to a SQL Server table. Import data into Excel as a Table or PivotTable report.

From Analysis Services
Create a connection to a SQL Server Analysis Services cube. Import data into Excel as a Table or PivotTable report.

From Windows Azure Marketplace
Create a connection to a Microsoft Windows Azure DataMarket Feed. Import data into Excel as a Table or PivotTable report.

From OData Data Feed
Create a connection to an OData Data Feed. Import data into Excel as a Table or PivotTable report.

From XML Data Import
Open or map a XML file into Excel.

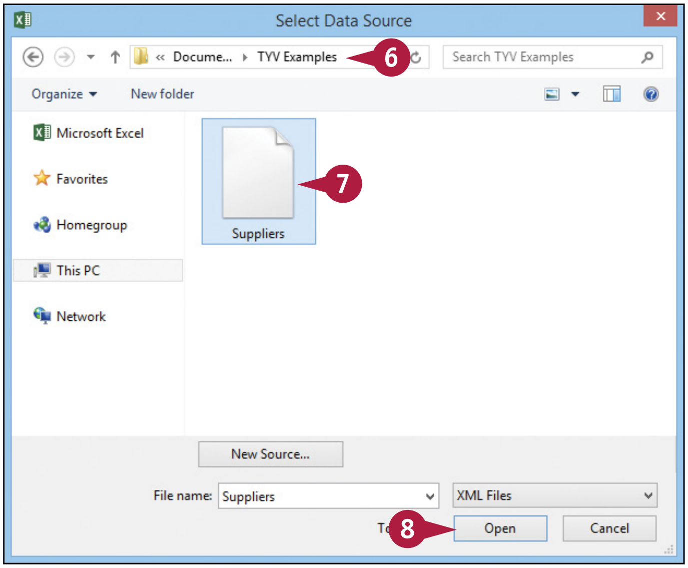
From Data Connection Wizard

The Select Data Source dialog box appears.

⑥ Select the folder that contains the XML file you want to import.

⑦ Click the XML file.

⑧ Click **Open**.


Select Data Source
Docume...
TYV Examples
Search TYV Examples
Organize
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
Suppliers
New Source...
Open
Cancel
6
7
8

File name: Suppliers

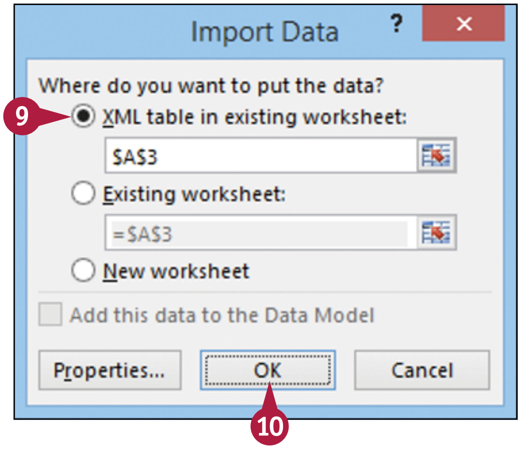
XML Files

Note: If you see a dialog box that says there is a problem with the data, click **OK**.

The Import Data dialog box appears.

9 Click **XML table in existing worksheet** (○ changes to ●).

10 Click **OK**.



Import Data

Where do you want to put the data?

● XML table in existing worksheet: $A$3

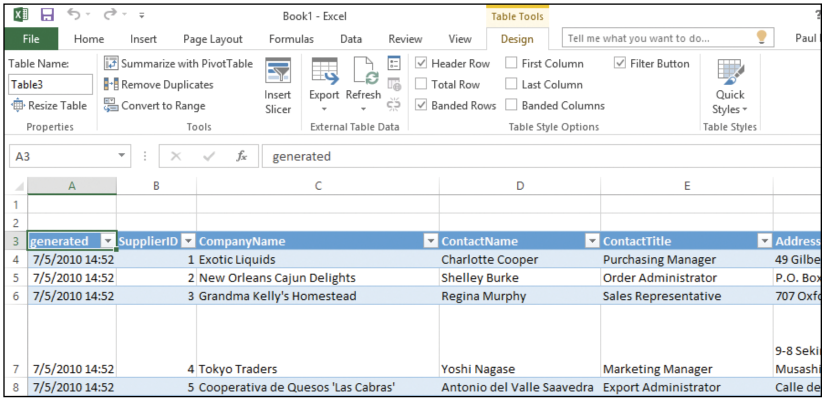
○ Existing worksheet: =$A$3

○ New worksheet

☐ Add this data to the Data Model

?
×
9
Properties...
OK
Cancel
10

Excel imports the data into the worksheet as an XML table.



Book1 - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul
Summarize with PivotTable
Remove Duplicates
Convert to Range
Resize Table
Properties
Tools
Insert Slicer
Export
Refresh
External Table Data
Table Style Options
Quick Styles
Table Styles

Table Name: Table3

☑ Header Row ☐ First Column ☑ Filter Button

☐ Total Row ☐ Last Column

☑ Banded Rows ☐ Banded Columns

A3 generated

	A	B	C	D	E	
1						
2						
3	generated	SupplierID	CompanyName	ContactName	ContactTitle	Address
4	7/5/2010 14:52	1	Exotic Liquids	Charlotte Cooper	Purchasing Manager	49 Gilbe
5	7/5/2010 14:52	2	New Orleans Cajun Delights	Shelley Burke	Order Administrator	P.O. Box
6	7/5/2010 14:52	3	Grandma Kelly's Homestead	Regina Murphy	Sales Representative	707 Oxf
7	7/5/2010 14:52	4	Tokyo Traders	Yoshi Nagase	Marketing Manager	9-8 Seki Musashi
8	7/5/2010 14:52	5	Cooperativa de Quesos 'Las Cabras'	Antonio del Valle Saavedra	Export Administrator	Calle de

TIPS

What does an XML file look like?

An XML file is a text file that uses a specific structure. Here is a simple XML example that constitutes a single record in a table named *Products:*

```
<Products>
<ProductName>Chai</ProductName>
<CompanyName>Exotic Liquids</CompanyName>
<ContactName>Charlotte Cooper</ContactName>
</Products>
```

Can I remove a field in the XML table?

Yes. Right-click the XML table, click **XML**, and then click **XML Source** to display the XML Source pane. The XML Source pane displays a list of the fields — called *elements* in the XML table. To remove an element, right-click it and then click **Remove element.** To add an element back into the XML list, right-click the element and then click **Map element.**

Refresh Imported Data

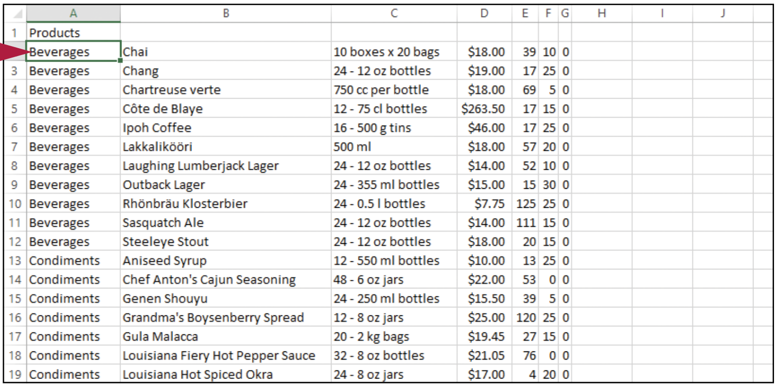
External data often changes; you can ensure that you are working with the most up-to-date version of the information by refreshing the imported data.

Refreshing the imported data means retrieving the most current version of the source data. This is usually a straightforward operation. However, it is possible to construct a query that accesses confidential information or destroys some or all of the external data. Therefore, when you refresh imported data, Excel always lets you know the potential risks and asks if you are sure the query is safe.

Refresh Imported Data

Refresh Non-Text Data

1. Click any cell inside the imported data.



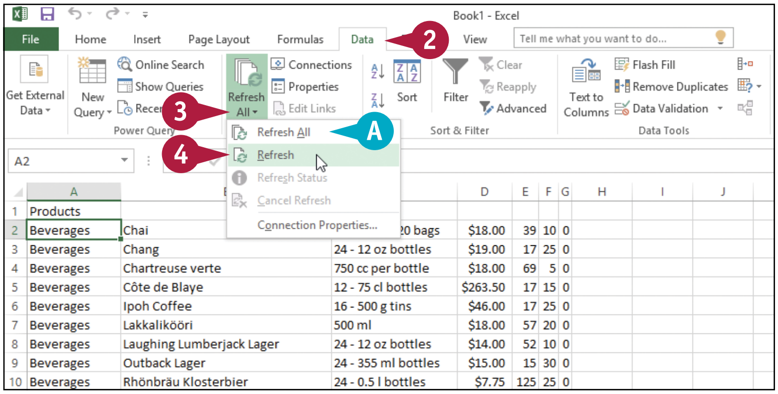
	A	B	C	D	E	F	G	H	I	J
1	Products									
2	Beverages	Chai	10 boxes x 20 bags	$18.00	39	10	0			
3	Beverages	Chang	24 - 12 oz bottles	$19.00	17	25	0			
4	Beverages	Chartreuse verte	750 cc per bottle	$18.00	69	5	0			
5	Beverages	Côte de Blaye	12 - 75 cl bottles	$263.50	17	15	0			
6	Beverages	Ipoh Coffee	16 - 500 g tins	$46.00	17	25	0			
7	Beverages	Lakkalikööri	500 ml	$18.00	57	20	0			
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles	$14.00	52	10	0			
9	Beverages	Outback Lager	24 - 355 ml bottles	$15.00	15	30	0			
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles	$7.75	125	25	0			
11	Beverages	Sasquatch Ale	24 - 12 oz bottles	$14.00	111	15	0			
12	Beverages	Steeleye Stout	24 - 12 oz bottles	$18.00	20	15	0			
13	Condiments	Aniseed Syrup	12 - 550 ml bottles	$10.00	13	25	0			
14	Condiments	Chef Anton's Cajun Seasoning	48 - 6 oz jars	$22.00	53	0	0			
15	Condiments	Genen Shouyu	24 - 250 ml bottles	$15.50	39	5	0			
16	Condiments	Grandma's Boysenberry Spread	12 - 8 oz jars	$25.00	120	25	0			
17	Condiments	Gula Malacca	20 - 2 kg bags	$19.45	27	15	0			
18	Condiments	Louisiana Fiery Hot Pepper Sauce	32 - 8 oz bottles	$21.05	76	0	0			
19	Condiments	Louisiana Hot Spiced Okra	24 - 8 oz jars	$17.00	4	20	0			

2. Click the **Data** tab.
3. Click the **Refresh All** drop-down arrow (▼).
4. Click **Refresh**.

Note: You can also refresh the current data by pressing Alt + F5.

Ⓐ To refresh all the imported data in the current workbook, you can click **Refresh All**, or press Ctrl + Alt + F5.

Excel refreshes the imported data.


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Get External Data
New Query
Online Search
Show Queries
Recent
Power Query
Refresh All
Connections
Properties
Edit Links
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Data Tools
Refresh All
Refresh
Refresh Status
Cancel Refresh
Connection Properties...
A2
1
2
3
4
A

	A	B	C	D	E	F	G	H	I	J
1	Products									
2	Beverages	Chai	20 bags	$18.00	39	10	0			
3	Beverages	Chang	24 - 12 oz bottles	$19.00	17	25	0			
4	Beverages	Chartreuse verte	750 cc per bottle	$18.00	69	5	0			
5	Beverages	Côte de Blaye	12 - 75 cl bottles	$263.50	17	15	0			
6	Beverages	Ipoh Coffee	16 - 500 g tins	$46.00	17	25	0			
7	Beverages	Lakkalikööri	500 ml	$18.00	57	20	0			
8	Beverages	Laughing Lumberjack Lager	24 - 12 oz bottles	$14.00	52	10	0			
9	Beverages	Outback Lager	24 - 355 ml bottles	$15.00	15	30	0			
10	Beverages	Rhönbräu Klosterbier	24 - 0.5 l bottles	$7.75	125	25	0			

Refresh Text Data

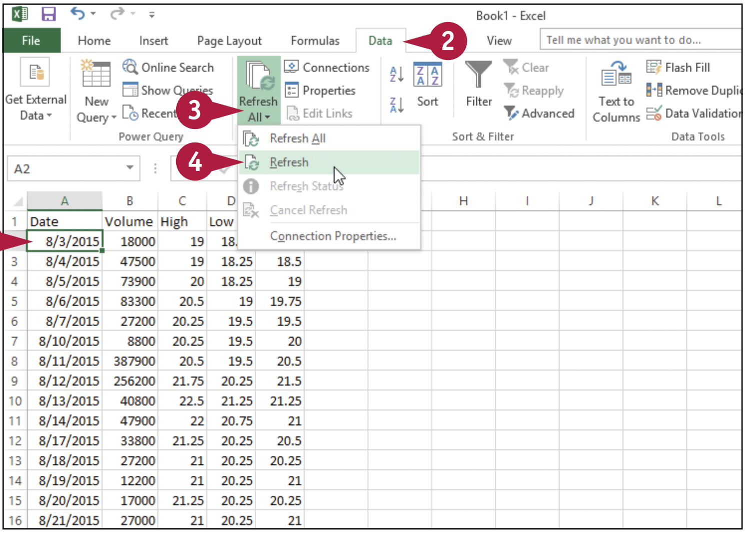
1. Click any cell inside the imported text data.

2. Click the **Data** tab.

3. Click the **Refresh All** drop-down arrow (▼).

4. Click **Refresh**.

Note: You can also refresh the current data by pressing Alt + F5.


Book1 - Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Get External Data
New Query
Online Search
Show Queries
Recent
Power Query
Refresh All
Connections
Properties
Edit Links
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Dupli
Data Validation
Data Tools
Refresh All
Refresh
Refresh Status
Cancel Refresh
Connection Properties...
A2
1
2
3
4

	A	B	C	D	E
1	Date	Volume	High	Low	
2	8/3/2015	18000	19	18.	
3	8/4/2015	47500	19	18.25	18.5
4	8/5/2015	73900	20	18.25	19
5	8/6/2015	83300	20.5	19	19.75
6	8/7/2015	27200	20.25	19.5	19.5
7	8/10/2015	8800	20.25	19.5	20
8	8/11/2015	387900	20.5	19.5	20.5
9	8/12/2015	256200	21.75	20.25	21.5
10	8/13/2015	40800	22.5	21.25	21.25
11	8/14/2015	47900	22	20.75	21
12	8/17/2015	33800	21.25	20.25	20.5
13	8/18/2015	27200	21	20.25	20.25
14	8/19/2015	12200	21	20.25	21
15	8/20/2015	17000	21.25	20.25	20.25
16	8/21/2015	27000	21	20.25	21

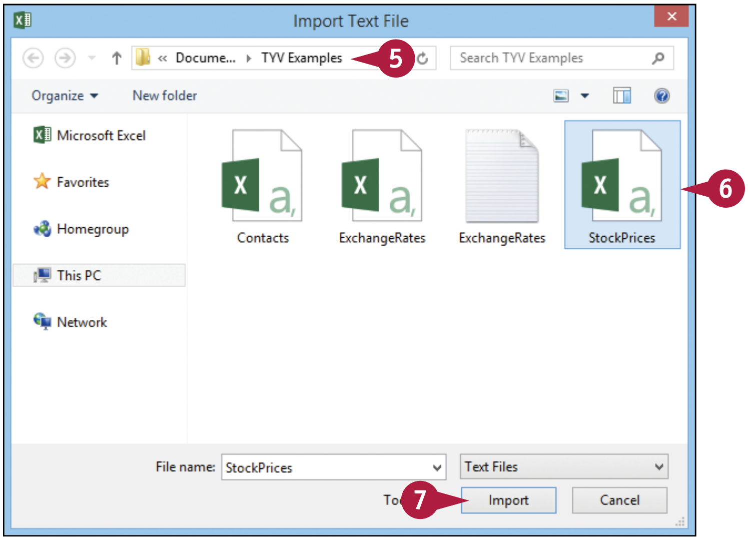
The Import Text File dialog box appears.

5. Open the folder that contains the text file.

6. Click the text file.

7. Click **Import**.

Excel refreshes the imported text data.


Import Text File
« Docume... ▸ TYV Examples
Search TYV Examples
Organize ▾
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
Contacts
ExchangeRates
ExchangeRates
StockPrices
To
Import
Cancel
5
6
7

File name: StockPrices

Text Files

TIPS

Is there an easier way to refresh data regularly?

In most cases, you can set up a schedule that automatically refreshes the data at a specified interval. Follow steps 1 to 3 in the subsection "Refresh Non-Text Data," and then click **Connection Properties**. Select the **Refresh Every** check box (☐ changes to ☑). Use the spin box (⬍) to specify the refresh interval in minutes (not every type of imported data supports this feature).

Why does my refresh not seem to be working?

The refresh may take a long time. To check the status of the refresh, follow steps 1 to 3 in the subsection "Refresh Non-Text Data," and then click **Refresh Status** to display the External Data Refresh Status dialog box; click **Close** to continue the refresh. If the refresh is taking too long, repeat steps 1 to 3, and then click **Cancel Refresh** to stop it.

Separate Cell Text into Columns

You can make imported data easier to analyze by separating the text in each cell into two or more columns of data.

An imported data column may contain multiple items of data. In imported contact data, for example, a column might contain each person's first and last name, separated by a space. This is problematic when sorting the contacts by last name, so you need to organize the names into separate columns. Excel makes this easy with the Text to Columns feature, which examines a column of data and then separates it into two or more columns.

Separate Cell Text into Columns

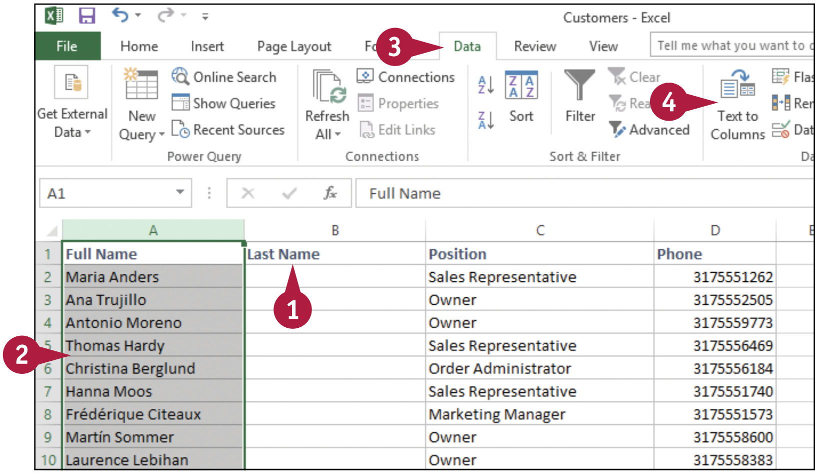
1. Insert a column to the right of the column you want to separate.

Note: If the data will separate into three or more columns, you can insert as many new columns as you need to hold the separated data.

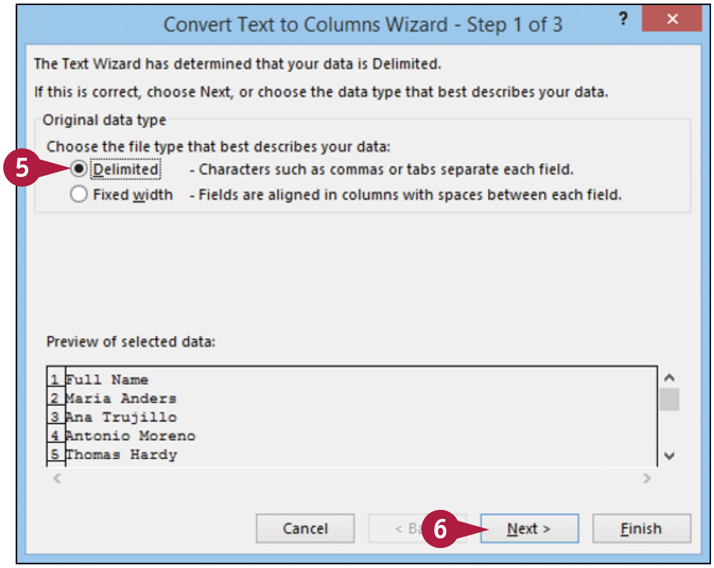
2. Select the data you want to separate.
3. Click the **Data** tab.
4. Click **Text to Columns** (▤).

   The Convert Text to Columns Wizard – Step 1 of 3 dialog box appears.

5. Click **Delimited** (○ changes to ●).
6. Click **Next**.


Customers - Excel
File
Home
Insert
Page Layout
Fo
Data
Review
View
Tell me what you want to d
Get External Data
New Query
Online Search
Show Queries
Recent Sources
Power Query
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Rea
Advanced
Sort & Filter
Text to Columns
Flas
Rer
Dat
Da
A1
Full Name
1
2
3
4

	A	B	C	D
1	Full Name	Last Name	Position	Phone
2	Maria Anders		Sales Representative	3175551262
3	Ana Trujillo		Owner	3175552505
4	Antonio Moreno		Owner	3175559773
5	Thomas Hardy		Sales Representative	3175556469
6	Christina Berglund		Order Administrator	3175556184
7	Hanna Moos		Sales Representative	3175551740
8	Frédérique Citeaux		Marketing Manager	3175551573
9	Martín Sommer		Owner	3175558600
10	Laurence Lebihan		Owner	3175558383


Convert Text to Columns Wizard - Step 1 of 3
?
×
5
6
Cancel
< Ba
Next >
Finish

The Text Wizard has determined that your data is Delimited.

If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

● Delimited - Characters such as commas or tabs separate each field.

○ Fixed width - Fields are aligned in columns with spaces between each field.

Preview of selected data:

```
1 Full Name
2 Maria Anders
3 Ana Trujillo
4 Antonio Moreno
5 Thomas Hardy
```

The Convert Text to Columns Wizard – Step 2 of 3 dialog box appears.

7 Select the check box beside the delimiter character that your text data uses (☐ changes to ☑).

A If you choose the correct delimiter, the data appears in separate columns.

8 Click **Next**.

The Convert Text to Columns Wizard – Step 3 of 3 dialog box appears.

9 Click a column.

10 Click the radio button of the data format you want Excel to apply to the column (○ changes to ●).

B If you click the **Date** option, you can use this list to click the date format your data uses.

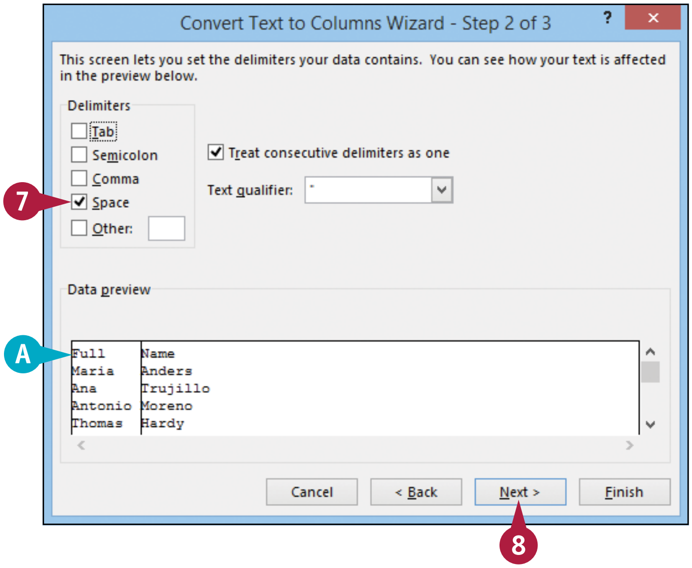
11 Repeat steps 9 and 10 to set the data format for all the columns.

12 Click **Finish**.

Excel asks if you want to replace the contents of the destination cells.

13 Click **OK** (not shown).

Excel separates the data.



Convert Text to Columns Wizard - Step 2 of 3

This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.

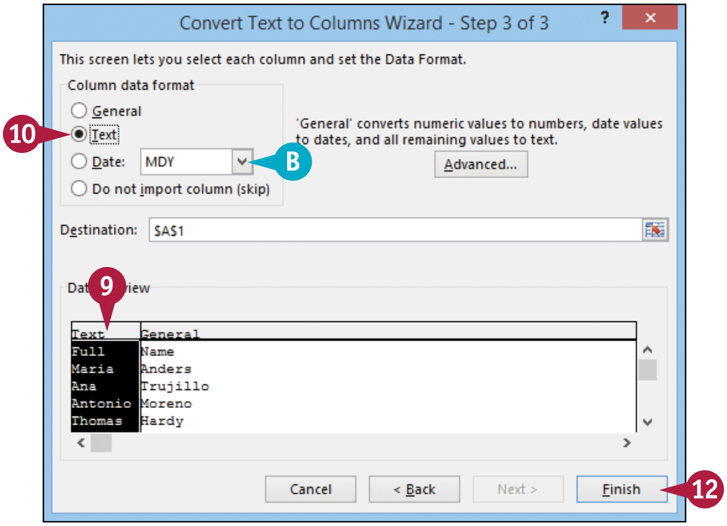
Delimiters
☐ Tab
☐ Semicolon
☐ Comma
☑ Space
☐ Other:

☑ Treat consecutive delimiters as one

Text qualifier: "

Data preview

Full	Name
Maria	Anders
Ana	Trujillo
Antonio	Moreno
Thomas	Hardy



Convert Text to Columns Wizard - Step 3 of 3

This screen lets you select each column and set the Data Format.

Column data format
○ General
● Text
○ Date: MDY
○ Do not import column (skip)

'General' converts numeric values to numbers, date values to dates, and all remaining values to text.

Destination: $A$1

Data preview

Text	General
Full	Name
Maria	Anders
Ana	Trujillo
Antonio	Moreno
Thomas	Hardy

TIPS

What do I do if my column contains fixed-width text?

Follow steps 1 to 4 to start the Convert Text to Columns Wizard. Click the **Fixed width** radio button (○ changes to ●). Click **Next**, and then click and drag a break line to set the width of each column. Click **Next**, and then follow steps 9 to 13 to complete the wizard.

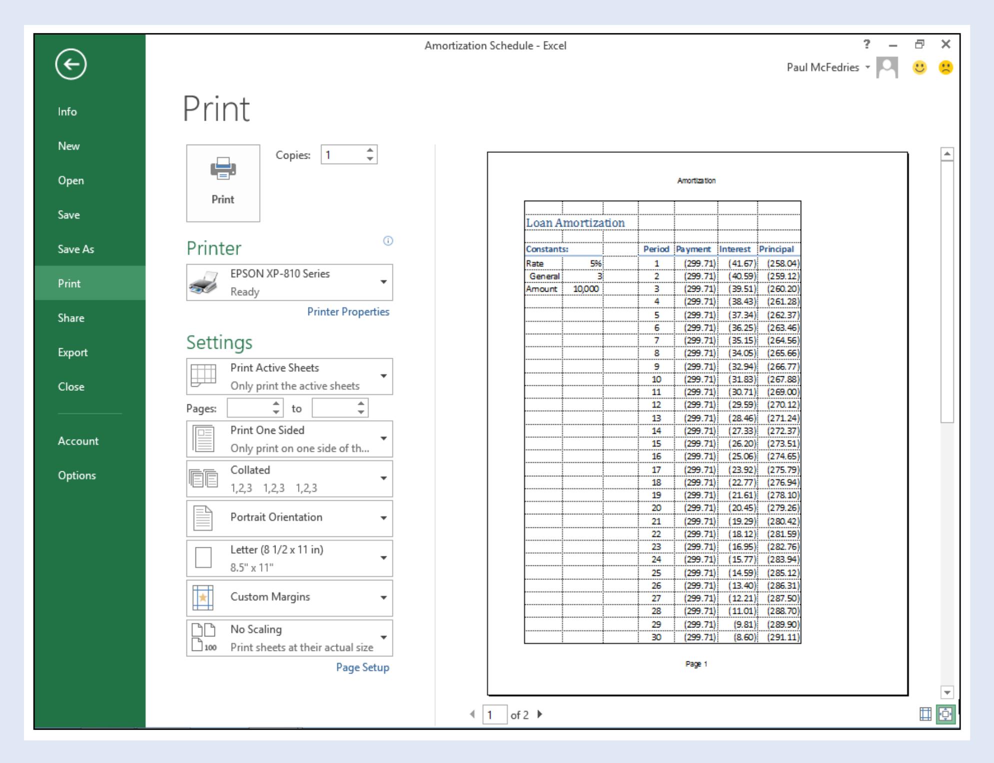
Does Excel always create only one extra column from the data?

No, not always. For example, in a column of contact names, if any of those names use three words, Excel assumes that you want to create two extra columns for all the data. Unfortunately, this might cause Excel to overwrite some of your existing data. Therefore, before separating data into columns, check the data to see exactly how many columns Excel will create.

CHAPTER 9

Printing Workbooks

If you want to distribute hard copies of one or more worksheets or an entire workbook, you can use the Excel Print feature. Before you print, you can adjust print-related options such as the margins, page orientation, and paper size.


Amortization Schedule - Excel
?
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Print
Print
Printer
Printer Properties
Settings
Page Setup

Copies: 1

EPSON XP-810 Series
Ready

Print Active Sheets
Only print the active sheets

Pages: to

Print One Sided
Only print on one side of th...

Collated
1,2,3 1,2,3 1,2,3

Portrait Orientation

Letter (8 1/2 x 11 in)
8.5" x 11"

Custom Margins

No Scaling
Print sheets at their actual size

Amortization

Loan Amortization

Constants:			Period	Payment	Interest	Principal
Rate	5%		1	(299.71)	(41.67)	(258.04)
General	3		2	(299.71)	(40.59)	(259.12)
Amount	10,000		3	(299.71)	(39.51)	(260.20)
			4	(299.71)	(38.43)	(261.28)
			5	(299.71)	(37.34)	(262.37)
			6	(299.71)	(36.25)	(263.46)
			7	(299.71)	(35.15)	(264.56)
			8	(299.71)	(34.05)	(265.66)
			9	(299.71)	(32.94)	(266.77)
			10	(299.71)	(31.83)	(267.88)
			11	(299.71)	(30.71)	(269.00)
			12	(299.71)	(29.59)	(270.12)
			13	(299.71)	(28.46)	(271.24)
			14	(299.71)	(27.33)	(272.37)
			15	(299.71)	(26.20)	(273.51)
			16	(299.71)	(25.06)	(274.65)
			17	(299.71)	(23.92)	(275.79)
			18	(299.71)	(22.77)	(276.94)
			19	(299.71)	(21.61)	(278.10)
			20	(299.71)	(20.45)	(279.26)
			21	(299.71)	(19.29)	(280.42)
			22	(299.71)	(18.12)	(281.59)
			23	(299.71)	(16.95)	(282.76)
			24	(299.71)	(15.77)	(283.94)
			25	(299.71)	(14.59)	(285.12)
			26	(299.71)	(13.40)	(286.31)
			27	(299.71)	(12.21)	(287.50)
			28	(299.71)	(11.01)	(288.70)
			29	(299.71)	(9.81)	(289.90)
			30	(299.71)	(8.60)	(291.11)

Page 1

1 of 2

Adjust the Workbook Margins. 190
Change the Page Orientation 192
Insert a Page Break 193
Choose a Paper Size 194
Set the Print Area 196
Configure Titles to Print on Each Page. 198
Preview the Printout 200
Print a Workbook 202

Adjust the Workbook Margins

You can get more space on the printed page to display your worksheet data by using smaller page margins. The *margins* are the blank areas that surround the printed data. For example, if you find that Excel is printing extra pages because your data is a bit too wide or a bit too long to fit on a single page, you can reduce either the left and right margins or the top and bottom margins.

If you or another person will be writing notes on the printouts, consider using wider margins to allow more room for the notes.

Adjust the Workbook Margins

Use the Ribbon

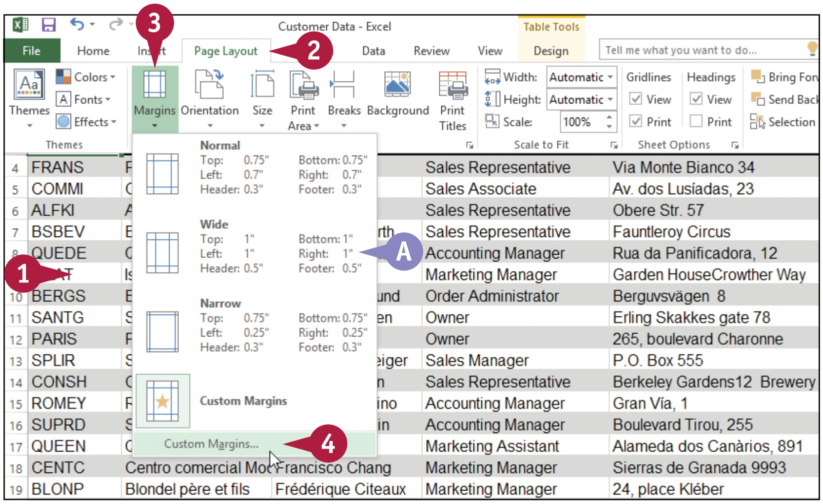
1. Open the workbook you want to print.
2. Click the **Page Layout** tab.
3. Click **Margins** (▥).
   - Ⓐ If you see a margin setting you want to use, click the setting and skip the rest of these steps.
4. Click **Custom Margins**.

   The Page Setup dialog box appears with the Margins tab selected.
5. Use the spin boxes to specify the margin sizes in inches.

Note: Do not make the margins too small or your document may not print properly. Most printers cannot handle margins smaller than about 0.25 inch, although you should consult your printer manual to confirm this. In particular, see if your printer offers a "borderless" printing option.

6. Click **OK**.

   Excel adjusts the margin sizes.

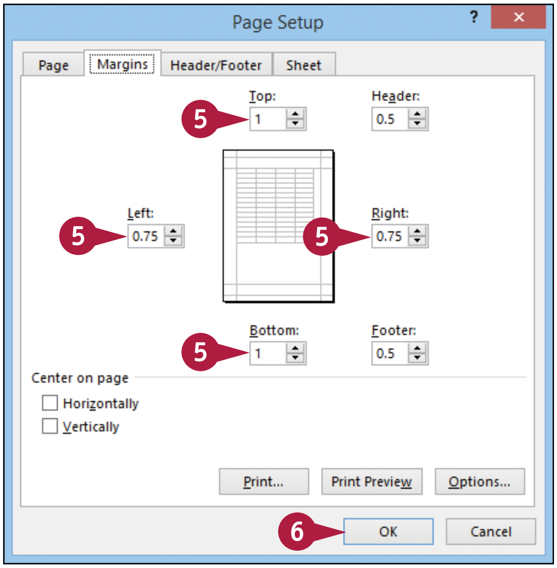

Customer Data - Excel
Table Tools
File
Home
Insert
Page Layout
Data
Review
View
Design
Tell me what you want to do...
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection
Custom Margins
Custom Margins...
1
2
3
4
A

Normal — Top: 0.75" Bottom: 0.75" Left: 0.7" Right: 0.7" Header: 0.3" Footer: 0.3"

Wide — Top: 1" Bottom: 1" Left: 1" Right: 1" Header: 0.5" Footer: 0.5"

Narrow — Top: 0.75" Bottom: 0.75" Left: 0.25" Right: 0.25" Header: 0.3" Footer: 0.3"

4	FRANS	F		Sales Representative	Via Monte Bianco 34
5	COMMI	C		Sales Associate	Av. dos Lusíadas, 23
6	ALFKI	A		Sales Representative	Obere Str. 57
7	BSBEV	E	rth	Sales Representative	Fauntleroy Circus
8	QUEDE	C		Accounting Manager	Rua da Panificadora, 12
9	T	Is		Marketing Manager	Garden HouseCrowther Way
10	BERGS	E	und	Order Administrator	Berguvsvägen 8
11	SANTG	S	en	Owner	Erling Skakkes gate 78
12	PARIS	F		Owner	265, boulevard Charonne
13	SPLIR	S	eiger	Sales Manager	P.O. Box 555
14	CONSH	C	n	Sales Representative	Berkeley Gardens12 Brewery
15	ROMEY	F	ino	Accounting Manager	Gran Vía, 1
16	SUPRD	S	in	Accounting Manager	Boulevard Tirou, 255
17	QUEEN	C		Marketing Assistant	Alameda dos Canàrios, 891
18	CENTC	Centro comercial Mo	Francisco Chang	Marketing Manager	Sierras de Granada 9993
19	BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber


Page Setup
?
×
Page
Margins
Header/Footer
Sheet
Center on page
Print...
Print Preview
Options...
OK
Cancel
5
5
5
5
6

Top: 1

Header: 0.5

Left: 0.75

Right: 0.75

Bottom: 1

Footer: 0.5

☐ Horizontally

☐ Vertically

Use the Ruler

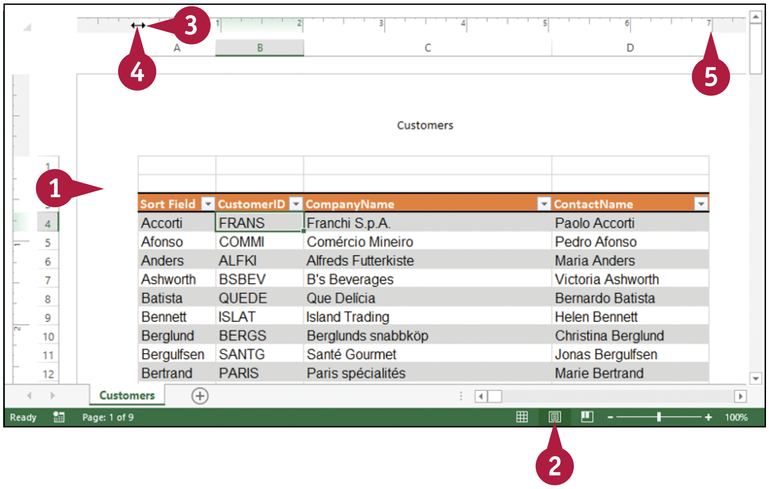
① Open the workbook you want to print.

② Click **Page Layout** (▤).

③ Move the ↖ over the right edge of the ruler's left margin area (↖ changes to ↔).

④ Click and drag the edge of the margin to set the left margin width.

⑤ Click and drag the left edge of the right margin area to set the margin width.



Customers

Sort Field	CustomerID	CompanyName	ContactName
Accorti	FRANS	Franchi S.p.A.	Paolo Accorti
Afonso	COMMI	Comércio Mineiro	Pedro Afonso
Anders	ALFKI	Alfreds Futterkiste	Maria Anders
Ashworth	BSBEV	B's Beverages	Victoria Ashworth
Batista	QUEDE	Que Delícia	Bernardo Batista
Bennett	ISLAT	Island Trading	Helen Bennett
Berglund	BERGS	Berglunds snabbköp	Christina Berglund
Bergulfsen	SANTG	Santé Gourmet	Jonas Bergulfsen
Bertrand	PARIS	Paris spécialités	Marie Bertrand

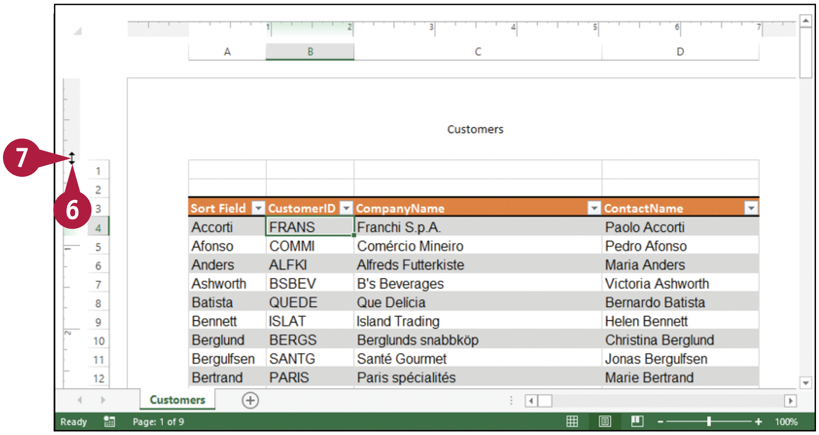
⑥ Move the ↖ over the bottom edge of the ruler's top margin area (↖ changes to ↕).

⑦ Click and drag the edge of the margin to set the top margin width.

⑧ Click and drag the top edge of the bottom margin area (not shown) to set the bottom margin width.

Note: You need to scroll down to the bottom of the page to see the bottom margin.

Excel adjusts the margin sizes.



Customers

Sort Field	CustomerID	CompanyName	ContactName
Accorti	FRANS	Franchi S.p.A.	Paolo Accorti
Afonso	COMMI	Comércio Mineiro	Pedro Afonso
Anders	ALFKI	Alfreds Futterkiste	Maria Anders
Ashworth	BSBEV	B's Beverages	Victoria Ashworth
Batista	QUEDE	Que Delícia	Bernardo Batista
Bennett	ISLAT	Island Trading	Helen Bennett
Berglund	BERGS	Berglunds snabbköp	Christina Berglund
Bergulfsen	SANTG	Santé Gourmet	Jonas Bergulfsen
Bertrand	PARIS	Paris spécialités	Marie Bertrand

TIPS

I increased my margin sizes to get more room around the text. Is there a way to center the text on the page?
Yes. This is a good idea if you want to ensure that you have the same amount of whitespace above and below the text, and to the left and right of the text. Follow steps 1 to 4 in the "Use the Ribbon" subsection to open the Page Setup dialog box with the Margins tab selected. Click **Horizontally** (☐ changes to ☑), click **Vertically** (☐ changes to ☑), and then click **OK**.

What are the header and footer margins?
The header margin is the space between the workbook header and the top of the page, and the footer margin is the space between the workbook footer and the bottom of the page. (See Chapter 7 to learn how to add a header and footer to your workbook.) In the Margins tab of the Page Setup dialog box, use the **Header** and **Footer** spin boxes to set these margins.

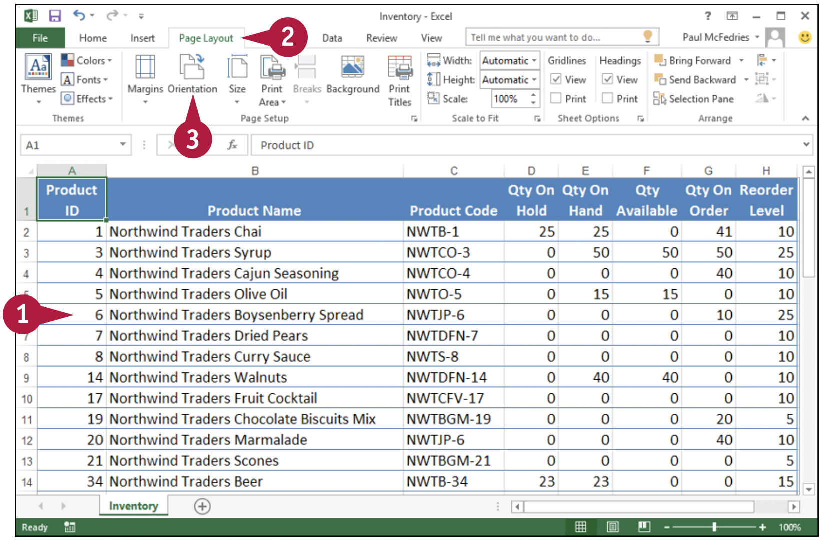
Change the Page Orientation

You can improve the look of your printout by changing the page orientation to suit your data. The page orientation determines whether Excel prints more rows or columns on a page. Portrait orientation is taller, so it prints more rows; landscape orientation is wider, so it prints more columns.

Choose the orientation based on your worksheet data. If your worksheet has many rows and only a few columns, choose portrait; if your worksheet has many columns but just a few rows, choose landscape.

Change the Page Orientation

1. Open the workbook you want to print.
2. Click the **Page Layout** tab.
3. Click **Orientation** (📄).

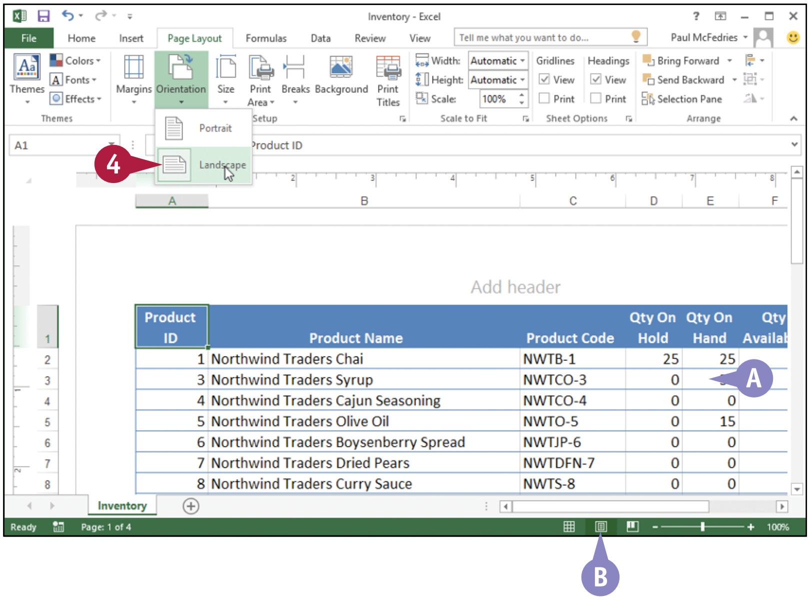


Inventory - Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
☑ View
☐ Print
Headings
☑ View
☐ Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Arrange
A1
Product ID
Inventory
Ready
100%
1
2
3

Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
1	Northwind Traders Chai	NWTB-1	25	25	0	41	10
3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10
8	Northwind Traders Curry Sauce	NWTS-8	0	0	0	0	10
14	Northwind Traders Walnuts	NWTDFN-14	0	40	40	0	10
17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	0	0	10
19	Northwind Traders Chocolate Biscuits Mix	NWTBGM-19	0	0	0	20	5
20	Northwind Traders Marmalade	NWTJP-6	0	0	0	40	10
21	Northwind Traders Scones	NWTBGM-21	0	0	0	0	5
34	Northwind Traders Beer	NWTB-34	23	23	0	0	15

4. Click the orientation you want to use.

- **A** Excel adjusts the orientation.
- **B** Click ▦ to see the orientation.



Inventory - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
☑ View
☐ Print
Headings
☑ View
☐ Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Arrange
Portrait
Landscape
A1
Product ID
Add header
Inventory
Ready
Page: 1 of 4
100%
4
A
B

Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand
1	Northwind Traders Chai	NWTB-1	25	25
3	Northwind Traders Syrup	NWTCO-3	0	
4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0
5	Northwind Traders Olive Oil	NWTO-5	0	15
6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0
7	Northwind Traders Dried Pears	NWTDFN-7	0	0
8	Northwind Traders Curry Sauce	NWTS-8	0	0

Insert a Page Break

You can control what data appears on each printed page by inserting a page break in your worksheet. A *page break* is a location within a worksheet where Excel begins a new printed page. Excel normally inserts its own page breaks based on the number and height of rows in the sheet, the number and width of the sheet columns, the margin widths, and the page orientation.

A vertical page break starts a new page at a particular column; a horizontal page break starts a new page at a particular row.

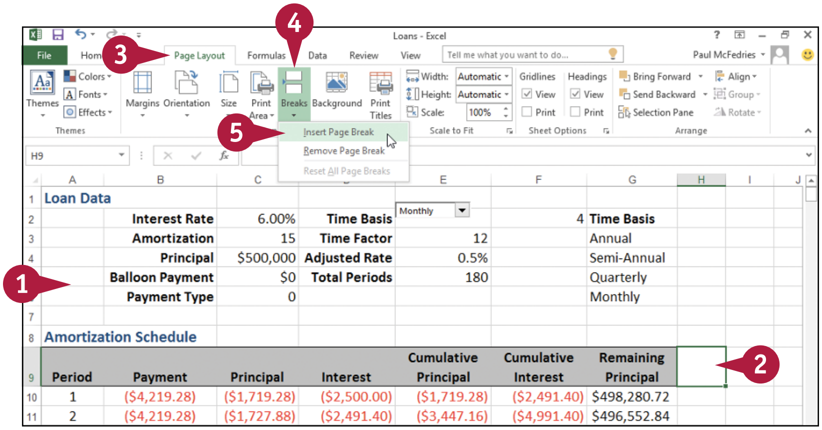
Insert a Page Break

1. Open the workbook you want to print.
2. Select the cell to the right of and below where you want the vertical and horizontal page breaks to appear.

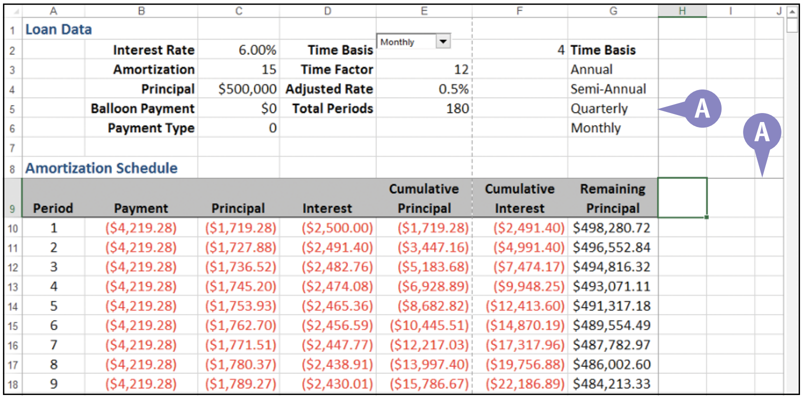
Note: Select a cell in row 1 to create just a vertical page break; select a cell in column A to create just a horizontal page break.

3. Click the **Page Layout** tab.
4. Click **Breaks** (⊟).
5. Click **Insert Page Break**.

Ⓐ Excel inserts the page breaks and indicates the breaks with thicker horizontal and vertical lines.


Loans - Excel
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
View
Print
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Align
Group
Rotate
Arrange
Insert Page Break
Remove Page Break
Reset All Page Breaks
H9
1
2
3
4
5

	A	B	C	D	E	F	G	H
1	Loan Data							
2		Interest Rate	6.00%	Time Basis	Monthly	4	Time Basis	
3		Amortization	15	Time Factor	12		Annual	
4		Principal	$500,000	Adjusted Rate	0.5%		Semi-Annual	
5		Balloon Payment	$0	Total Periods	180		Quarterly	
6		Payment Type	0				Monthly	
7								
8	Amortization Schedule							
9	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal	
10	1	($4,219.28)	($1,719.28)	($2,500.00)	($1,719.28)	($2,491.40)	$498,280.72	
11	2	($4,219.28)	($1,727.88)	($2,491.40)	($3,447.16)	($4,991.40)	$496,552.84	



	A	B	C	D	E	F	G	H
1	Loan Data							
2		Interest Rate	6.00%	Time Basis	Monthly	4	Time Basis	
3		Amortization	15	Time Factor	12		Annual	
4		Principal	$500,000	Adjusted Rate	0.5%		Semi-Annual	
5		Balloon Payment	$0	Total Periods	180		Quarterly	
6		Payment Type	0				Monthly	
7								
8	Amortization Schedule							
9	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal	
10	1	($4,219.28)	($1,719.28)	($2,500.00)	($1,719.28)	($2,491.40)	$498,280.72	
11	2	($4,219.28)	($1,727.88)	($2,491.40)	($3,447.16)	($4,991.40)	$496,552.84	
12	3	($4,219.28)	($1,736.52)	($2,482.76)	($5,183.68)	($7,474.17)	$494,816.32	
13	4	($4,219.28)	($1,745.20)	($2,474.08)	($6,928.89)	($9,948.25)	$493,071.11	
14	5	($4,219.28)	($1,753.93)	($2,465.36)	($8,682.82)	($12,413.60)	$491,317.18	
15	6	($4,219.28)	($1,762.70)	($2,456.59)	($10,445.51)	($14,870.19)	$489,554.49	
16	7	($4,219.28)	($1,771.51)	($2,447.77)	($12,217.03)	($17,317.96)	$487,782.97	
17	8	($4,219.28)	($1,780.37)	($2,438.91)	($13,997.40)	($19,756.88)	$486,002.60	
18	9	($4,219.28)	($1,789.27)	($2,430.01)	($15,786.67)	($22,186.89)	$484,213.33	

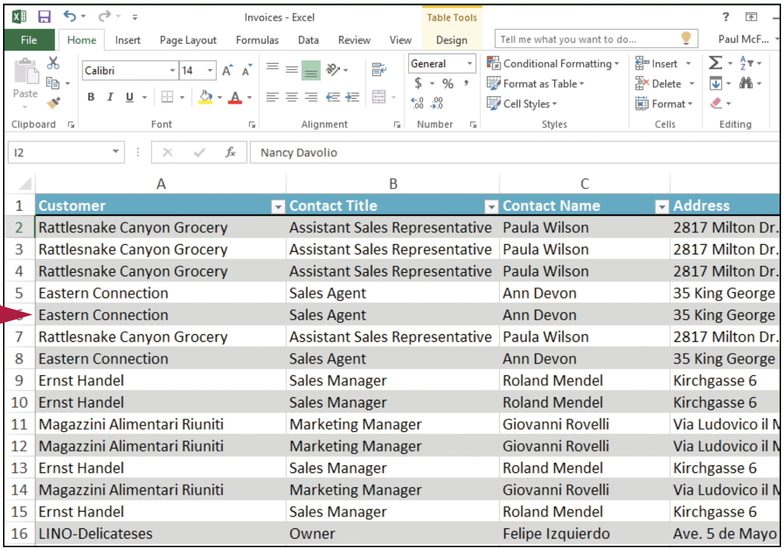
Choose a Paper Size

You can customize your print job by choosing a paper size that is appropriate for your printout. For example, if your worksheet has many rows, you might prefer to print it on a longer sheet of paper, such as a legal-size page (8½ inches wide by 14 inches long). Similarly, if your worksheet has many columns, you might also want to use a longer sheet of paper, but switch to landscape mode, as described in the “Change the Page Orientation” section earlier in the chapter.

Check your printer manual to make sure your printer can handle the paper size you select.

Choose a Paper Size

① Open the workbook you want to print.


Invoices - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McF...
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
1

I2 Nancy Davolio

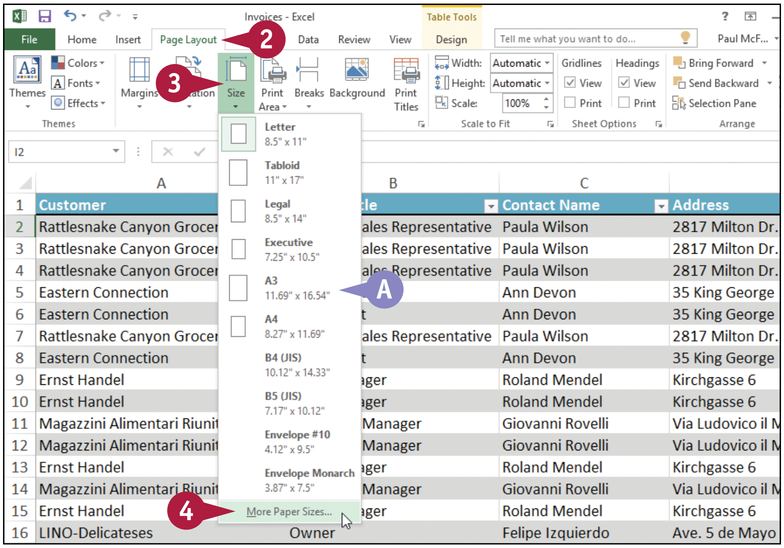
	Customer	Contact Title	Contact Name	Address
2	Rattlesnake Canyon Grocery	Assistant Sales Representative	Paula Wilson	2817 Milton Dr.
3	Rattlesnake Canyon Grocery	Assistant Sales Representative	Paula Wilson	2817 Milton Dr.
4	Rattlesnake Canyon Grocery	Assistant Sales Representative	Paula Wilson	2817 Milton Dr.
5	Eastern Connection	Sales Agent	Ann Devon	35 King George
6	Eastern Connection	Sales Agent	Ann Devon	35 King George
7	Rattlesnake Canyon Grocery	Assistant Sales Representative	Paula Wilson	2817 Milton Dr.
8	Eastern Connection	Sales Agent	Ann Devon	35 King George
9	Ernst Handel	Sales Manager	Roland Mendel	Kirchgasse 6
10	Ernst Handel	Sales Manager	Roland Mendel	Kirchgasse 6
11	Magazzini Alimentari Riuniti	Marketing Manager	Giovanni Rovelli	Via Ludovico il M
12	Magazzini Alimentari Riuniti	Marketing Manager	Giovanni Rovelli	Via Ludovico il M
13	Ernst Handel	Sales Manager	Roland Mendel	Kirchgasse 6
14	Magazzini Alimentari Riuniti	Marketing Manager	Giovanni Rovelli	Via Ludovico il M
15	Ernst Handel	Sales Manager	Roland Mendel	Kirchgasse 6
16	LINO-Delicateses	Owner	Felipe Izquierdo	Ave. 5 de Mayo

② Click the **Page Layout** tab.

③ Click **Size** (📄).

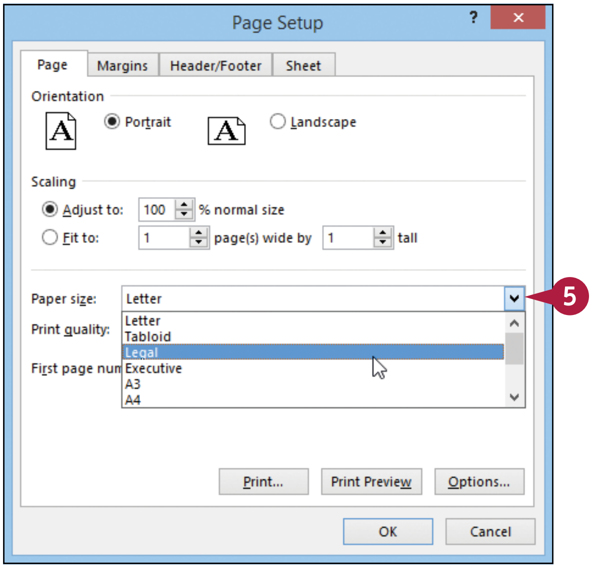
Ⓐ If you see a page size you want to use, click the size and skip the rest of these steps.

④ Click **More Paper Sizes**.


Invoices - Excel
Table Tools
File
Home
Insert
Page Layout
Data
Review
View
Design
Themes
Colors
Fonts
Effects
Margins
Size
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Arrange
Letter
8.5" x 11"
Tabloid
11" x 17"
Legal
8.5" x 14"
Executive
7.25" x 10.5"
A3
11.69" x 16.54"
A4
8.27" x 11.69"
B4 (JIS)
10.12" x 14.33"
B5 (JIS)
7.17" x 10.12"
Envelope #10
4.12" x 9.5"
Envelope Monarch
3.87" x 7.5"
More Paper Sizes...
2
3
A
4

The Page Setup dialog box appears with the Page tab selected.

5 Click the **Paper size** ▼ and then click the size you want to use.


Page Setup
?
×
Page
Margins
Header/Footer
Sheet
Orientation
Scaling
Print quality:
First page num
Print...
Print Preview
Options...
OK
Cancel
5

● Portrait ○ Landscape

● Adjust to: 100 % normal size

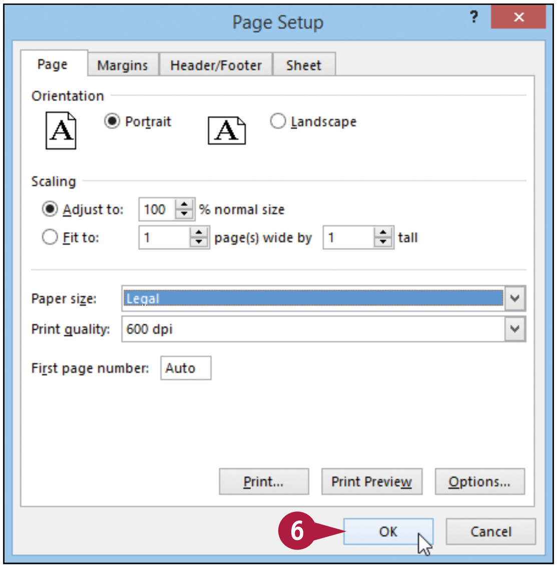
○ Fit to: 1 page(s) wide by 1 tall

Paper size: Letter

Letter
Tabloid
Legal
Executive
A3
A4

6 Click **OK**.

Excel uses the new paper size option when you print the workbook.


Page Setup
?
×
Page
Margins
Header/Footer
Sheet
Orientation
Scaling
Print...
Print Preview
Options...
6
OK
Cancel

● Portrait ○ Landscape

● Adjust to: 100 % normal size

○ Fit to: 1 page(s) wide by 1 tall

Paper size: Legal

Print quality: 600 dpi

First page number: Auto

TIP

Is there a way to ensure that all my worksheet columns fit onto a single page?

Yes. First, try selecting a wider page size as described in this section. You can also try reducing the left and right margins, as described in the "Adjust the Workbook Margins" section earlier in the chapter. Alternatively, switch to the landscape orientation, as described in the "Change the Page Orientation" section earlier in the chapter. You can also follow steps 1 to 4 to display the Page Setup dialog box with the Page tab selected. Click **Fit to** (○ changes to ●), and set the **page(s) wide by** spin box to 1. Set the **tall** spin box to a number large enough that all your printed rows will fit on a single page. (If you are not sure about the correct number, you can click **Print Preview** to check.) Click **OK**.

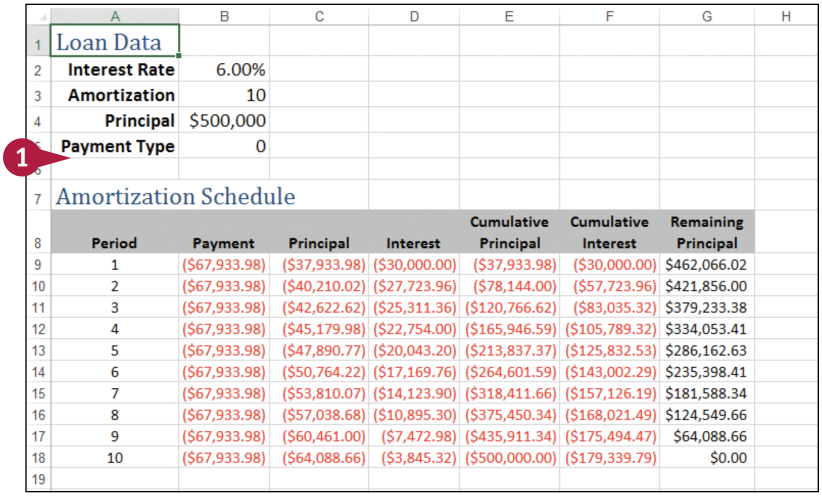
Set the Print Area

You can control the cells that Excel includes in the printout by setting the print area for the worksheet. The print area is a range of cells that you select. When Excel prints the workbook, it prints only the cells within the print area.

You normally define a single range of cells as the print area, but it is possible to set up two or more ranges as the print area. See the first tip for more information.

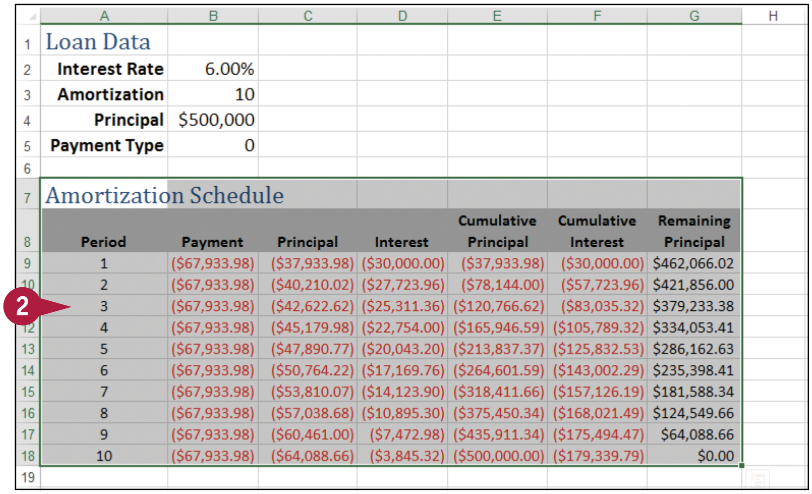
Set the Print Area

1. Open the workbook you want to print.



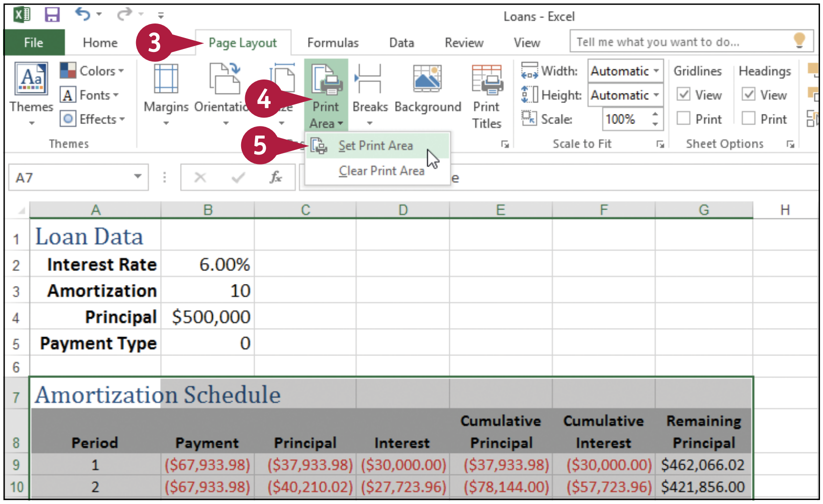
	A	B	C	D	E	F	G	H
1	Loan Data							
2	**Interest Rate**	6.00%						
3	**Amortization**	10						
4	**Principal**	$500,000						
5	**Payment Type**	0						
6								
7	Amortization Schedule							
8	**Period**	**Payment**	**Principal**	**Interest**	**Cumulative Principal**	**Cumulative Interest**	**Remaining Principal**	
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02	
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00	
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38	
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41	
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63	
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41	
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34	
16	8	($67,933.98)	($57,038.68)	($10,895.30)	($375,450.34)	($168,021.49)	$124,549.66	
17	9	($67,933.98)	($60,461.00)	($7,472.98)	($435,911.34)	($175,494.47)	$64,088.66	
18	10	($67,933.98)	($64,088.66)	($3,845.32)	($500,000.00)	($179,339.79)	$0.00	
19								

2. Select the range that you want to print.



	A	B	C	D	E	F	G	H
1	Loan Data							
2	**Interest Rate**	6.00%						
3	**Amortization**	10						
4	**Principal**	$500,000						
5	**Payment Type**	0						
6								
7	Amortization Schedule							
8	**Period**	**Payment**	**Principal**	**Interest**	**Cumulative Principal**	**Cumulative Interest**	**Remaining Principal**	
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02	
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00	
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38	
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41	
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63	
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41	
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34	
16	8	($67,933.98)	($57,038.68)	($10,895.30)	($375,450.34)	($168,021.49)	$124,549.66	
17	9	($67,933.98)	($60,461.00)	($7,472.98)	($435,911.34)	($175,494.47)	$64,088.66	
18	10	($67,933.98)	($64,088.66)	($3,845.32)	($500,000.00)	($179,339.79)	$0.00	
19								

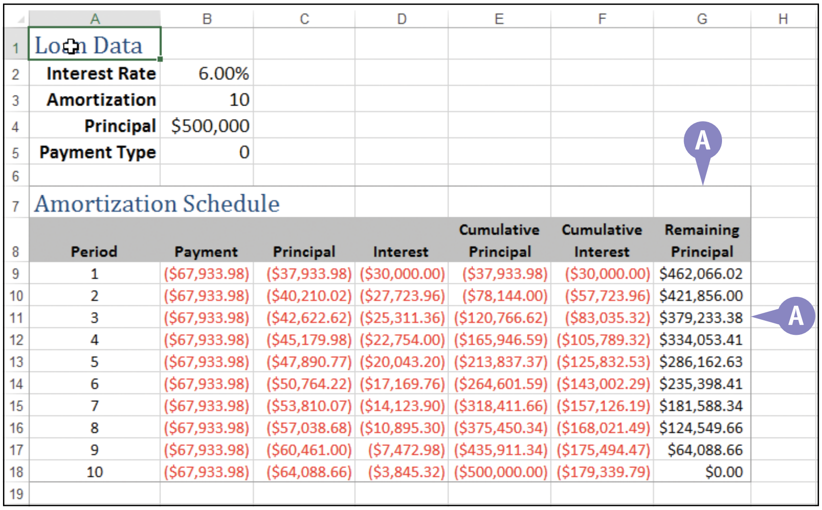
3. Click the **Page Layout** tab.
4. Click **Print Area** (🖨).
5. Click **Set Print Area**.


Loans - Excel
File
Home
3
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Themes
Colors
Fonts
Effects
Margins
Orientation
4
Print Area
Breaks
Background
Print Titles
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
☑ View
☐ Print
Headings
☑ View
☐ Print
Sheet Options
5
Set Print Area
Clear Print Area
A7

	A	B	C	D	E	F	G	H
1	Loan Data							
2	Interest Rate	6.00%						
3	Amortization	10						
4	Principal	$500,000						
5	Payment Type	0						
6								
7	Amortization Schedule							
8	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal	
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02	
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00	

Ⓐ Excel displays a border around the print area.

When you print the worksheet, Excel prints only the cells within the print area.



	A	B	C	D	E	F	G	H
1	Loan Data							
2	Interest Rate	6.00%						
3	Amortization	10						
4	Principal	$500,000						
5	Payment Type	0						
6								
7	Amortization Schedule							
8	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal	
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02	
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00	
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38	
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41	
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63	
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41	
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34	
16	8	($67,933.98)	($57,038.68)	($10,895.30)	($375,450.34)	($168,021.49)	$124,549.66	
17	9	($67,933.98)	($60,461.00)	($7,472.98)	($435,911.34)	($175,494.47)	$64,088.66	
18	10	($67,933.98)	($64,088.66)	($3,845.32)	($500,000.00)	($179,339.79)	$0.00	
19								

TIPS

Can I define two different ranges as the print area?

Yes. The easiest way to do this is to follow the steps in this section to set the first range as the print area. Next, select the second range, click the **Page Layout** tab, click 🖨, and then click **Add to Print Area.** You can repeat this procedure to add as many ranges as you require to the print area.

How do I remove an existing print area?

First, note that if you just want to set a new print area, you do not need to remove the existing print area first. Instead, select the range you want to use and then follow steps 3 to 5. Excel replaces the original print area with the new one. If you no longer want a print area defined, click the **Page Layout** tab, click 🖨, and then click **Clear Print Area**.

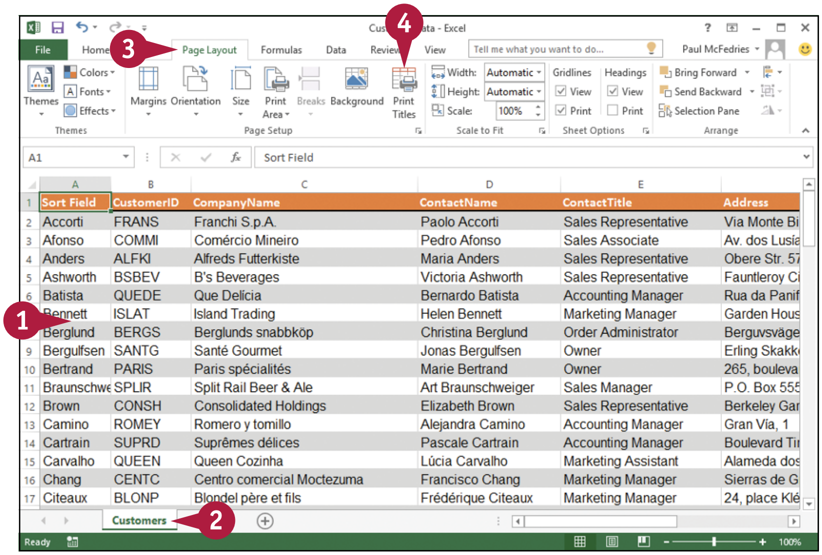
Configure Titles to Print on Each Page

You can make your printout easier to read by configuring the worksheet to print the range titles on each page of the printout. For example, if your data has a row of headings at the top, you can configure the worksheet to display those headings at the top of each printout page.

Similarly, if your data has a column of headings at the left, you can configure the worksheet to display those headings on the left side of each printout page.

Configure Titles to Print on Each Page

1. Open the workbook you want to print.
2. Click the tab of the worksheet you want to configure.
3. Click the **Page Layout** tab.
4. Click **Print Titles** (🖶).

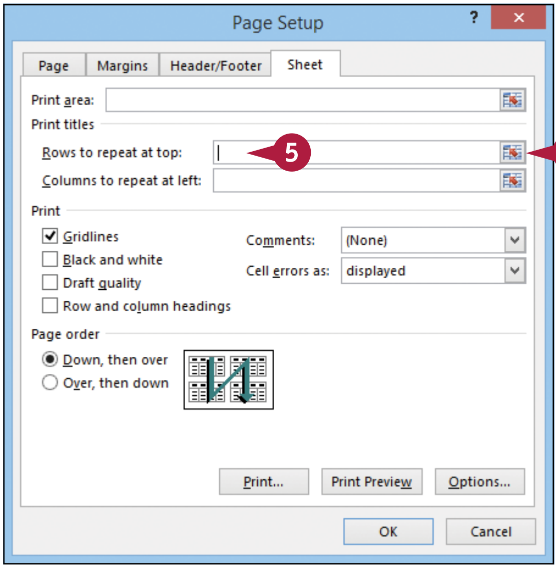


Cus
ata - Excel
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Width: Automatic
Height: Automatic
Scale: 100%
Scale to Fit
Gridlines
Headings
View
Print
Sheet Options
Bring Forward
Send Backward
Selection Pane
Arrange
A1
Sort Field
Customers
Ready
100%
1
2
3
4

Sort Field	CustomerID	CompanyName	ContactName	ContactTitle	Address
Accorti	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bi
Afonso	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusía
Anders	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
Ashworth	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Ci
Batista	QUEDE	Que Delícia	Bernardo Batista	Accounting Manager	Rua da Panif
Bennett	ISLAT	Island Trading	Helen Bennett	Marketing Manager	Garden Hous
Berglund	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsväge
Bergulfsen	SANTG	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakk
Bertrand	PARIS	Paris spécialités	Marie Bertrand	Owner	265, bouleva
Braunschwe	SPLIR	Split Rail Beer & Ale	Art Braunschweiger	Sales Manager	P.O. Box 555
Brown	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gar
Camino	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Vía, 1
Cartrain	SUPRD	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Ti
Carvalho	QUEEN	Queen Cozinha	Lúcia Carvalho	Marketing Assistant	Alameda dos
Chang	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de G
Citeaux	BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Klé

Excel opens the Page Setup dialog box with the Sheet tab displayed.

5. Click inside the **Rows to repeat at top** range box.
6. Click **Collapse Dialog** (▣).



Page Setup
?
×
Page
Margins
Header/Footer
Sheet
Print area:
Print titles
Rows to repeat at top:
Columns to repeat at left:
Print
Page order
Print...
Print Preview
Options...
OK
Cancel
5
6

☑ Gridlines

☐ Black and white

☐ Draft quality

☐ Row and column headings

Comments: (None)

Cell errors as: displayed

● Down, then over

○ Over, then down

- **A** Excel collapses the Page Setup dialog box.

  The mouse pointer changes from ⇖ to ➡.

7. Use the mouse ➡ to click the row that you want to appear at the top of each printed page.

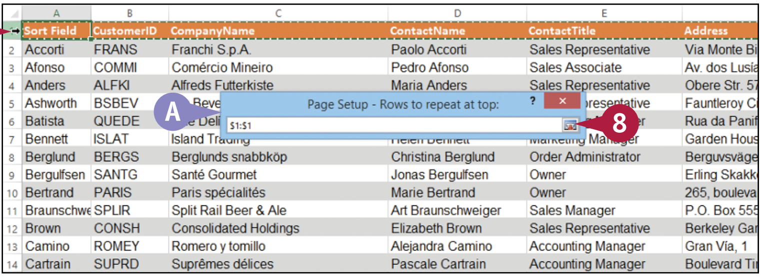
   If you want more than one row to repeat at the top of each page, use the mouse ➡ to click the last row that you want to repeat.

8. Click **Restore Dialog** (▣).

- **B** The address of the row appears in the **Rows to repeat at top** box.

9. Click **OK**.

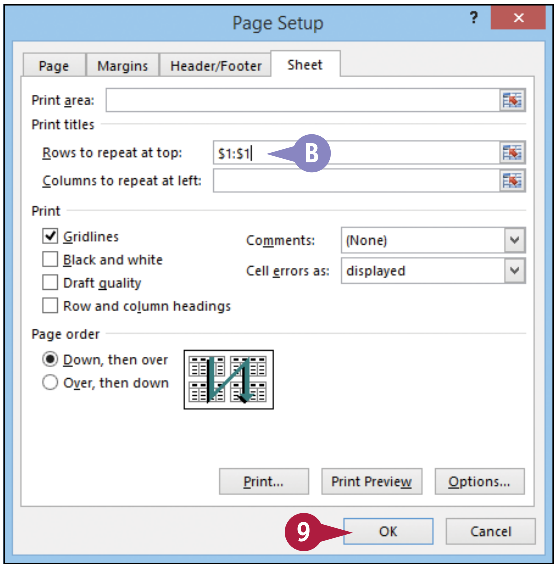
   When you print this worksheet, Excel displays the selected row at the top of each page.



	A	B	C	D	E	
1	Sort Field	CustomerID	CompanyName	ContactName	ContactTitle	Address
2	Accorti	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bi
3	Afonso	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusía
4	Anders	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
5	Ashworth	BSBEV	Beve		presentative	Fauntleroy Ci
6	Batista	QUEDE	e Deli		er	Rua da Panif
7	Bennett	ISLAT	Island Trading	Helen Bennett	Marketing Manager	Garden Hous
8	Berglund	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsväge
9	Bergulfsen	SANTG	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakk
10	Bertrand	PARIS	Paris spécialités	Marie Bertrand	Owner	265, bouleva
11	Braunschwe	SPLIR	Split Rail Beer & Ale	Art Braunschweiger	Sales Manager	P.O. Box 555
12	Brown	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gar
13	Camino	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Vía, 1
14	Cartrain	SUPRD	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Ti

Page Setup - Rows to repeat at top:

$1:$1



Page Setup

Sheet

Print area:

Print titles

Rows to repeat at top: $1:$1

Columns to repeat at left:

Print

☑ Gridlines

☐ Black and white

☐ Draft quality

☐ Row and column headings

Comments: (None)

Cell errors as: displayed

Page order

● Down, then over

○ Over, then down

TIP

How do I configure my worksheet to print a column of headings on each page?

If your headings appear in a column rather than a row, you can still configure the sheet to print them on each page. Follow these steps:

1. Follow steps 1 to 4 to open the Page Setup dialog box with the Sheet tab displayed.
2. Click inside the **Columns to repeat at left** range box.
3. Click ▣.
4. Use the mouse ⬇ to click the column that you want to appear on the left of each printed page.
5. Click ▣.
6. Click **OK**.

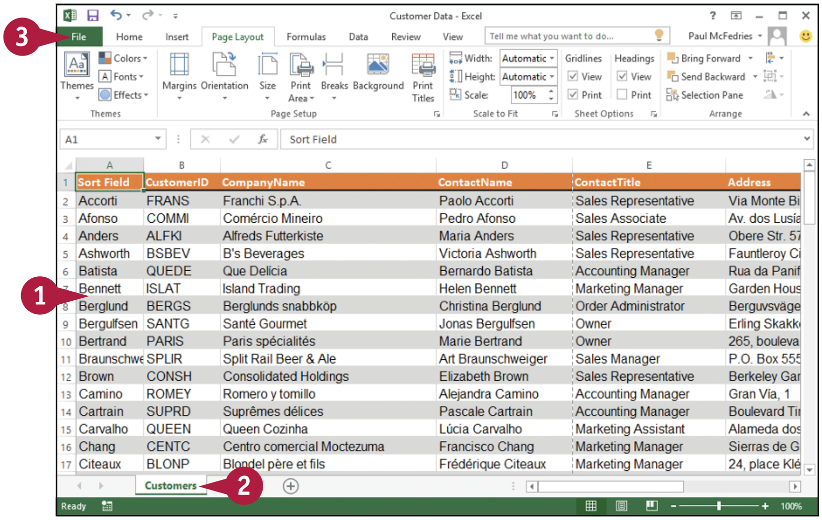
Preview the Printout

You can save time and paper by using the Print Preview feature to examine your printout on-screen before you send it to the printer. You can use Print Preview to make sure settings such as margins, page orientation, page breaks, print areas, and sheet titles all result in the printout you want.

If you see a problem in the preview, you can use the Print Preview screen to make adjustments to some printout options.

Preview the Printout

1. Open the workbook you want to print.
2. Click the tab of the worksheet you want to preview.
3. Click the **File** tab.


Customer Data - Excel
Paul McFedries
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Themes
Colors
Fonts
Effects
Margins
Orientation
Size
Print Area
Breaks
Background
Print Titles
Page Setup
Scale to Fit
Sheet Options
Arrange
Bring Forward
Send Backward
Selection Pane
Customers
Ready
100%
3
1
2

Width: Automatic
Height: Automatic
Scale: 100%
Gridlines ☑ View ☑ Print
Headings ☑ View ☐ Print

A1 | Sort Field

	A	B	C	D	E	
1	Sort Field	CustomerID	CompanyName	ContactName	ContactTitle	Address
2	Accorti	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bi
3	Afonso	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusía
4	Anders	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
5	Ashworth	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Ci
6	Batista	QUEDE	Que Delícia	Bernardo Batista	Accounting Manager	Rua da Panif
7	Bennett	ISLAT	Island Trading	Helen Bennett	Marketing Manager	Garden Hous
8	Berglund	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsväge
9	Bergulfsen	SANTG	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakk
10	Bertrand	PARIS	Paris spécialités	Marie Bertrand	Owner	265, bouleva
11	Braunschwe	SPLIR	Split Rail Beer & Ale	Art Braunschweiger	Sales Manager	P.O. Box 555
12	Brown	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gar
13	Camino	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Via, 1
14	Cartrain	SUPRD	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Ti
15	Carvalho	QUEEN	Queen Cozinha	Lúcia Carvalho	Marketing Assistant	Alameda dos
16	Chang	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de G
17	Citeaux	BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Klé

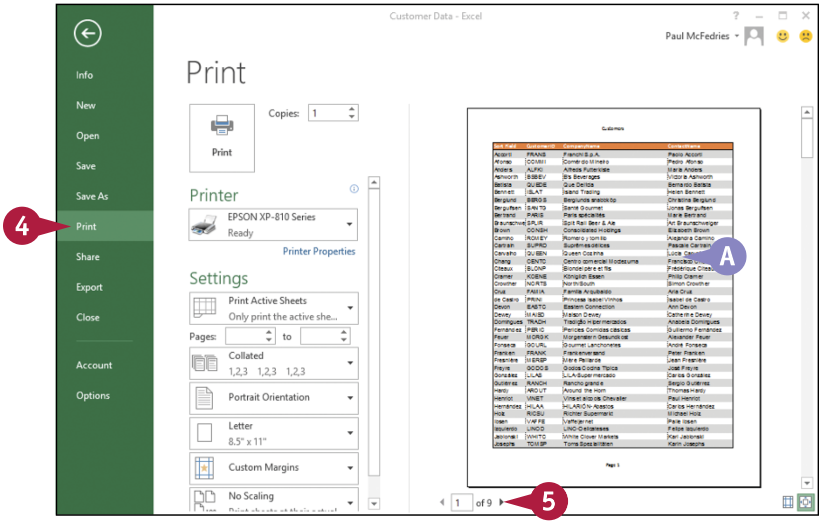
4. Click **Print**.

   The Print window appears.

   Ⓐ Excel displays a preview of the printout.

Note: If you do not see the preview, click **Show Print Preview**.

5. Click **Print Preview Next Page** (▶) to scroll through the printout pages.


Customer Data - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Print
Printer
Printer Properties
Settings
4
A
5

Copies: 1

EPSON XP-810 Series
Ready

Print Active Sheets
Only print the active she...

Pages: to

Collated
1,2,3 1,2,3 1,2,3

Portrait Orientation

Letter
8.5" x 11"

Custom Margins

No Scaling

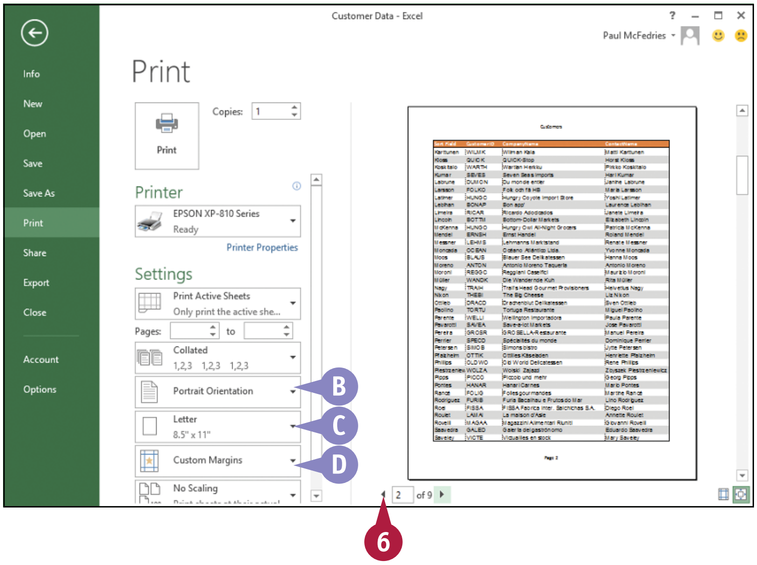
1 of 9

6 Click **Print Preview Previous Page** (◀) to return to a printout page.

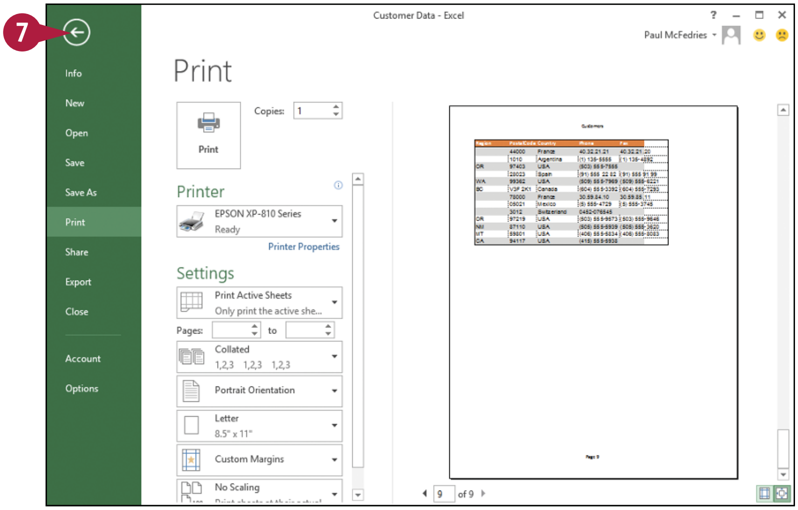
B You can click the **Page Orientation** ▼ to change the page orientation.

C You can click the **Page Size** ▼ to change the page size.

D You can click the **Margins** ▼ to change the margins.


Customer Data - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Print
Copies: 1
Print
Printer
EPSON XP-810 Series
Ready
Printer Properties
Settings
Print Active Sheets
Only print the active she...
Pages: to
Collated
1,2,3 1,2,3 1,2,3
Portrait Orientation
Letter
8.5" x 11"
Custom Margins
No Scaling
2 of 9
B
C
D
6

7 When you are done, click **Back** (⊖) to return to the workbook.


7
Customer Data - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Print
Copies: 1
Print
Printer
EPSON XP-810 Series
Ready
Printer Properties
Settings
Print Active Sheets
Only print the active she...
Pages: to
Collated
1,2,3 1,2,3 1,2,3
Portrait Orientation
Letter
8.5" x 11"
Custom Margins
No Scaling
9 of 9

TIP

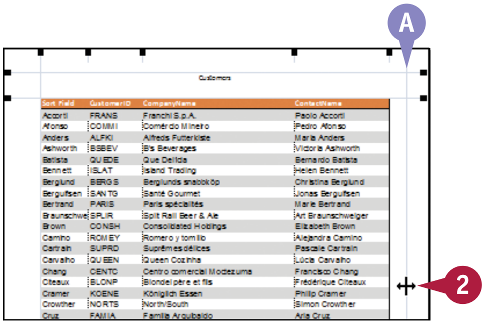
Can I fine-tune the margins in Print Preview?

Yes. The Margins list only offers a few predefined margin sets. To define custom margins in Print Preview, follow these steps:

1 Click **Show Margins** (▦).

A Print Preview augments the preview with lines that indicate the margins.

2 Click and drag a line to adjust that margin.



Print a Workbook

When you need a hard copy of your document, either for your files or to distribute to someone else, you can send the document to your printer.

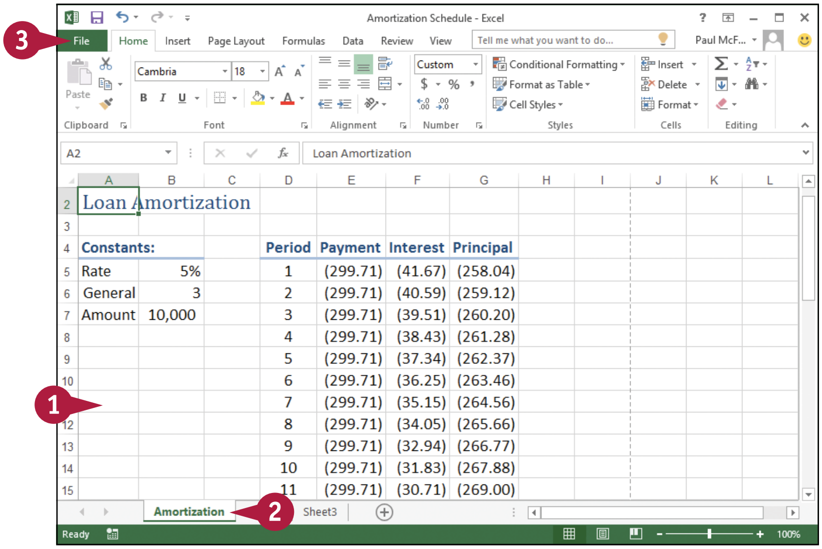
This section assumes that you have a printer connected to your computer and that the printer is turned on. Also, before printing you should check that your printer has enough paper to complete the print job.

Print a Workbook

1. Open the workbook you want to print.
2. If you only want to print a single worksheet, click the tab of that worksheet.

Note: To print multiple worksheets, hold down Ctrl and click the tab of each sheet you want to print.

3. Click the **File** tab.

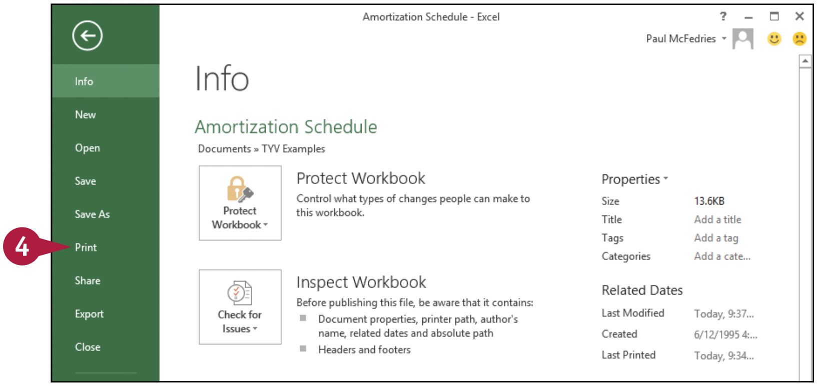

3
Amortization Schedule - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McF...
Paste
Cambria
18
B
I
U
Custom
$
%
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
1
2
Amortization
Sheet3
Ready
100%

A2 | Loan Amortization

	A	B	C	D	E	F	G
2	Loan Amortization						
3							
4	Constants:			Period	Payment	Interest	Principal
5	Rate	5%		1	(299.71)	(41.67)	(258.04)
6	General	3		2	(299.71)	(40.59)	(259.12)
7	Amount	10,000		3	(299.71)	(39.51)	(260.20)
8				4	(299.71)	(38.43)	(261.28)
9				5	(299.71)	(37.34)	(262.37)
10				6	(299.71)	(36.25)	(263.46)
				7	(299.71)	(35.15)	(264.56)
12				8	(299.71)	(34.05)	(265.66)
13				9	(299.71)	(32.94)	(266.77)
14				10	(299.71)	(31.83)	(267.88)
15				11	(299.71)	(30.71)	(269.00)

4. Click **Print**.

Note: You can also press Ctrl + P.


Amortization Schedule - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
4
Protect Workbook
Check for Issues

Info

Amortization Schedule

Documents » TYV Examples

Protect Workbook

Control what types of changes people can make to this workbook.

Inspect Workbook

Before publishing this file, be aware that it contains:

- Document properties, printer path, author's name, related dates and absolute path
- Headers and footers

Properties

Size	13.6KB
Title	Add a title
Tags	Add a tag
Categories	Add a cate...

Related Dates

Last Modified	Today, 9:37...
Created	6/12/1995 4:...
Last Printed	Today, 9:34...

The Print window appears.

5 Type the number of copies you want to print in the **Copies** text box.

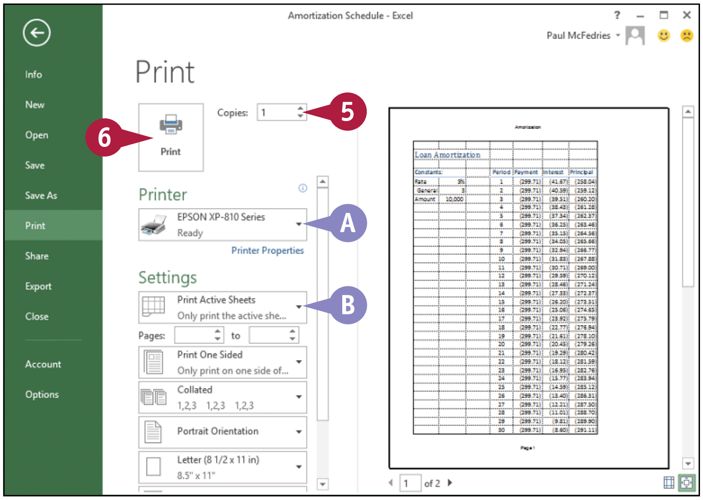
A If you have more than one printer, click the **Printer** ▼ and then click the printer that you want to use.

B By default, Print Active Sheets appears in the Print What list, which tells Excel to print only the selected sheets. If you want to print all the sheets in the workbook, click the **Print What** ▼ and then click **Print Entire Workbook**.

6 Click **Print**.

Excel prints the document.

C The printer icon (🖨) appears in the taskbar's notification area while the document prints.



Print

Copies: 1

Print

Printer

EPSON XP-810 Series
Ready

Printer Properties

Settings

Print Active Sheets
Only print the active she...

Pages: to

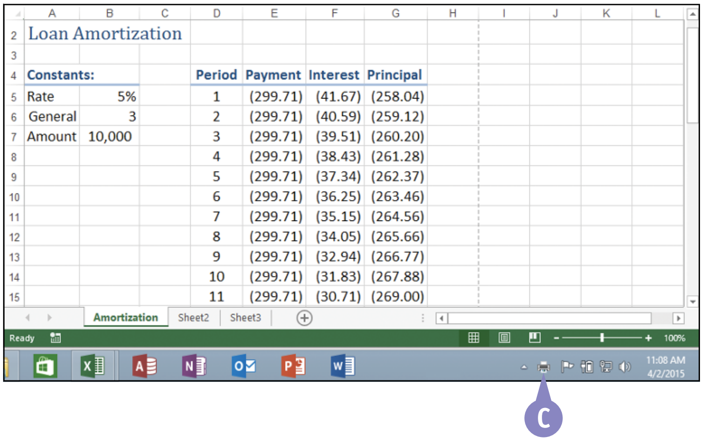
Print One Sided
Only print on one side of...

Collated
1,2,3 1,2,3 1,2,3

Portrait Orientation

Letter (8 1/2 x 11 in)
8.5" x 11"

1 of 2

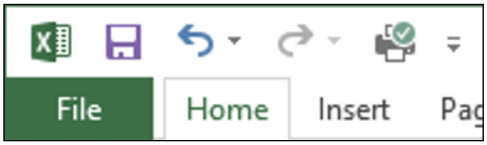


	A	B	C	D	E	F	G
2	Loan Amortization						
3							
4	Constants:			Period	Payment	Interest	Principal
5	Rate	5%		1	(299.71)	(41.67)	(258.04)
6	General	3		2	(299.71)	(40.59)	(259.12)
7	Amount	10,000		3	(299.71)	(39.51)	(260.20)
8				4	(299.71)	(38.43)	(261.28)
9				5	(299.71)	(37.34)	(262.37)
10				6	(299.71)	(36.25)	(263.46)
11				7	(299.71)	(35.15)	(264.56)
12				8	(299.71)	(34.05)	(265.66)
13				9	(299.71)	(32.94)	(266.77)
14				10	(299.71)	(31.83)	(267.88)
15				11	(299.71)	(30.71)	(269.00)

TIPS

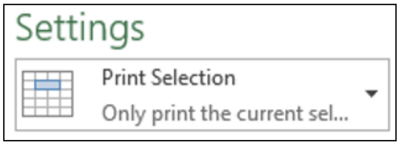
Is there a faster way to print?

Yes. To print a single copy of the selected worksheet, you can use the Excel Quick Print command to send the worksheet directly to your default printer. Click ▼ in the Quick Access Toolbar, and then click **Quick Print** to add this command to the toolbar. You can then click **Quick Print** (🖨) to print the current worksheet without having to go through the Print window.



Can I print just part of a worksheet?

Yes, you can tell Excel to print just a range. Begin by selecting the range or ranges you want to print. (See Chapter 1 to learn how to select a range.) Follow steps 3 and 4 to open the Print window and choose the number of copies. Click the **Print What** ▼ and then click **Print Selection**. Click **Print**.



Settings

Print Selection
Only print the current sel...

CHAPTER 10

Working with Tables

The forte of Excel is spreadsheet work, of course, but its row-and-column layout also makes it a natural flat-file database manager. That is, instead of entering data and then using the Excel tools to build formulas and analyze that data, you can also use Excel simply to store data in a special structure called a table.

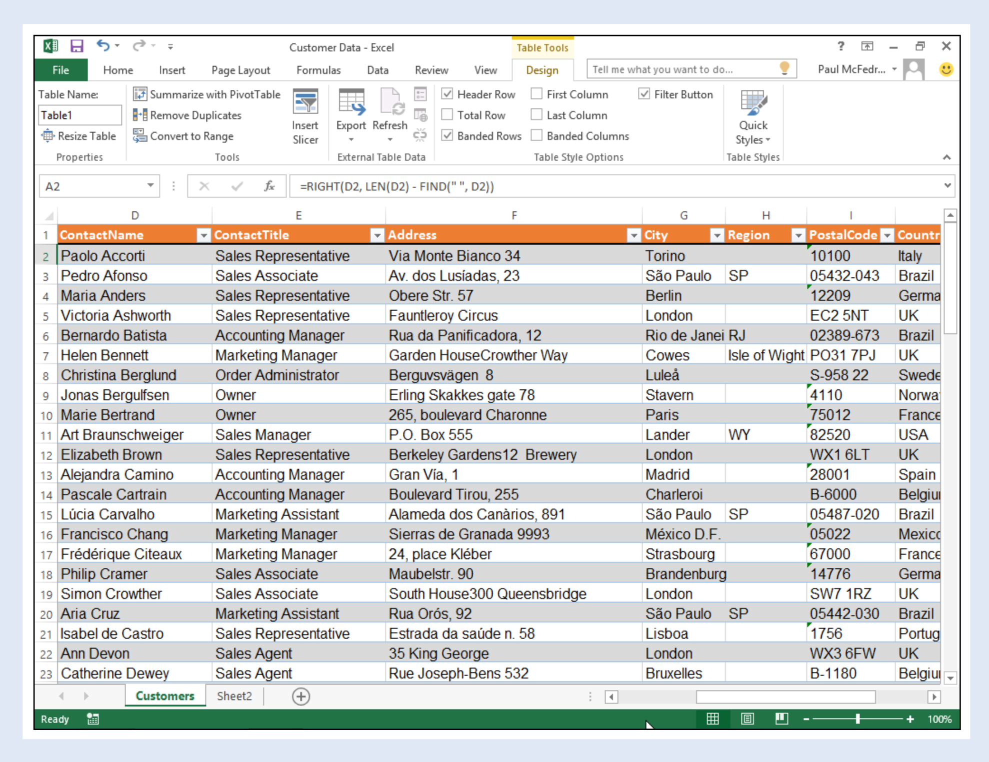

Customer Data - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McFedr...
Summarize with PivotTable
Remove Duplicates
Convert to Range
Resize Table
Properties
Tools
Insert Slicer
Export
Refresh
External Table Data
Table Style Options
Quick Styles
Table Styles
Customers
Sheet2
Ready
100%

Table Name: Table1

☑ Header Row
☐ Total Row
☑ Banded Rows
☐ First Column
☐ Last Column
☐ Banded Columns
☑ Filter Button

A2

=RIGHT(D2, LEN(D2) - FIND(" ", D2))

	D	E	F	G	H	I	
1	ContactName	ContactTitle	Address	City	Region	PostalCode	Countr
2	Paolo Accorti	Sales Representative	Via Monte Bianco 34	Torino		10100	Italy
3	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23	São Paulo	SP	05432-043	Brazil
4	Maria Anders	Sales Representative	Obere Str. 57	Berlin		12209	Germa
5	Victoria Ashworth	Sales Representative	Fauntleroy Circus	London		EC2 5NT	UK
6	Bernardo Batista	Accounting Manager	Rua da Panificadora, 12	Rio de Janei	RJ	02389-673	Brazil
7	Helen Bennett	Marketing Manager	Garden HouseCrowther Way	Cowes	Isle of Wight	PO31 7PJ	UK
8	Christina Berglund	Order Administrator	Berguvsvägen 8	Luleå		S-958 22	Swede
9	Jonas Bergulfsen	Owner	Erling Skakkes gate 78	Stavern		4110	Norwa
10	Marie Bertrand	Owner	265, boulevard Charonne	Paris		75012	France
11	Art Braunschweiger	Sales Manager	P.O. Box 555	Lander	WY	82520	USA
12	Elizabeth Brown	Sales Representative	Berkeley Gardens12 Brewery	London		WX1 6LT	UK
13	Alejandra Camino	Accounting Manager	Gran Vía, 1	Madrid		28001	Spain
14	Pascale Cartrain	Accounting Manager	Boulevard Tirou, 255	Charleroi		B-6000	Belgiu
15	Lúcia Carvalho	Marketing Assistant	Alameda dos Canàrios, 891	São Paulo	SP	05487-020	Brazil
16	Francisco Chang	Marketing Manager	Sierras de Granada 9993	México D.F.		05022	Mexic
17	Frédérique Citeaux	Marketing Manager	24, place Kléber	Strasbourg		67000	France
18	Philip Cramer	Sales Associate	Maubelstr. 90	Brandenburg		14776	Germa
19	Simon Crowther	Sales Associate	South House300 Queensbridge	London		SW7 1RZ	UK
20	Aria Cruz	Marketing Assistant	Rua Orós, 92	São Paulo	SP	05442-030	Brazil
21	Isabel de Castro	Sales Representative	Estrada da saúde n. 58	Lisboa		1756	Portug
22	Ann Devon	Sales Agent	35 King George	London		WX3 6FW	UK
23	Catherine Dewey	Sales Agent	Rue Joseph-Bens 532	Bruxelles		B-1180	Belgiu

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Select Table Data. 210
Insert a Table Row 212
Insert a Table Column 213
Delete a Table Row. 214
Delete a Table Column 215
Add a Column Subtotal 216
Convert a Table to a Range 218
Apply a Table Style. 219
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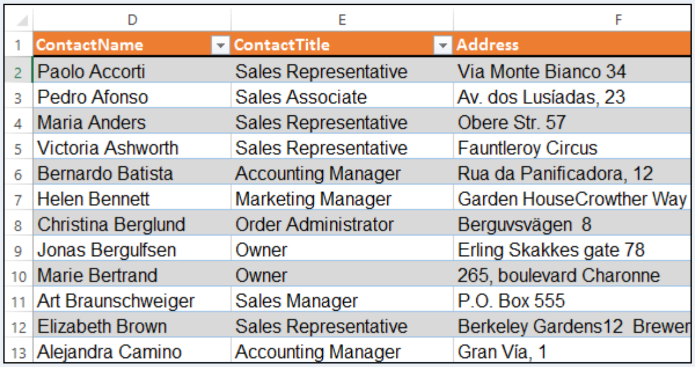
Understanding Tables

In Excel, a *table* is a rectangular range of cells used to store data. The table is a collection of related information with an organizational structure that makes it easy to find or extract data from its contents. To get the most out of Excel tables, you need to understand a few basic concepts, such as how a table is like a database, the advantages of tables, and how tables help with data analysis.

A Table Is a Database

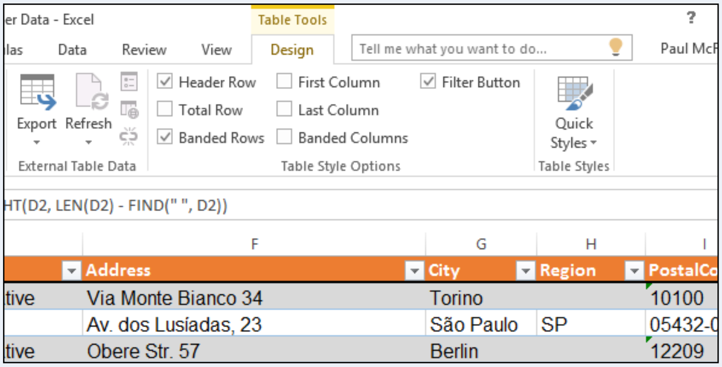
A table is a type of database where the data is organized into rows and columns: Each column represents a database field, which is a single type of information, such as a name, address, or phone number; each row represents a database record, which is a collection of associated field values, such as the information for a specific contact.



	D	E	F
1	ContactName	ContactTitle	Address
2	Paolo Accorti	Sales Representative	Via Monte Bianco 34
3	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23
4	Maria Anders	Sales Representative	Obere Str. 57
5	Victoria Ashworth	Sales Representative	Fauntleroy Circus
6	Bernardo Batista	Accounting Manager	Rua da Panificadora, 12
7	Helen Bennett	Marketing Manager	Garden HouseCrowther Way
8	Christina Berglund	Order Administrator	Berguvsvägen 8
9	Jonas Bergulfsen	Owner	Erling Skakkes gate 78
10	Marie Bertrand	Owner	265, boulevard Charonne
11	Art Braunschweiger	Sales Manager	P.O. Box 555
12	Elizabeth Brown	Sales Representative	Berkeley Gardens12 Brewer
13	Alejandra Camino	Accounting Manager	Gran Vía, 1

Advantages of a Table

A table differs from a regular Excel range in that Excel offers a set of tools that makes it easier for you to work with the data within a table. As you see in this chapter, these tools make it easy to convert existing worksheet data into a table, add new records and fields to a table, delete existing records and fields, insert rows to show totals, and apply styles.


er Data - Excel
Table Tools
?
las
Data
Review
View
Design
Tell me what you want to do...
Paul McF
Export
Refresh
External Table Data
Table Style Options
Quick Styles
Table Styles

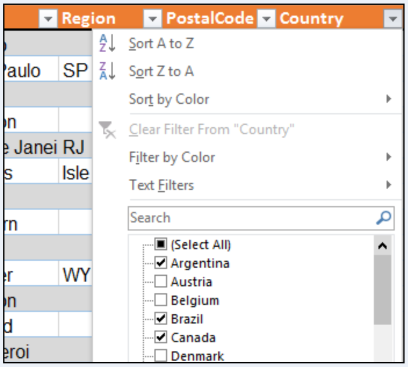
☑ Header Row
☐ Total Row
☑ Banded Rows
☐ First Column
☐ Last Column
☐ Banded Columns
☑ Filter Button

HT(D2, LEN(D2) - FIND(" ", D2))

	F	G	H	I
	Address	City	Region	PostalCo
tive	Via Monte Bianco 34	Torino		10100
	Av. dos Lusíadas, 23	São Paulo	SP	05432-
tive	Obere Str. 57	Berlin		12209

Data Analysis

Tables are also useful tools for analyzing your data. For example, as you see later in this chapter in the "Create a PivotTable" section, you can easily use a table as the basis of a PivotTable, which is a special object for summarizing and analyzing data. In Chapter 11, you also learn how to sort table records and how to filter table data to show only specific records.

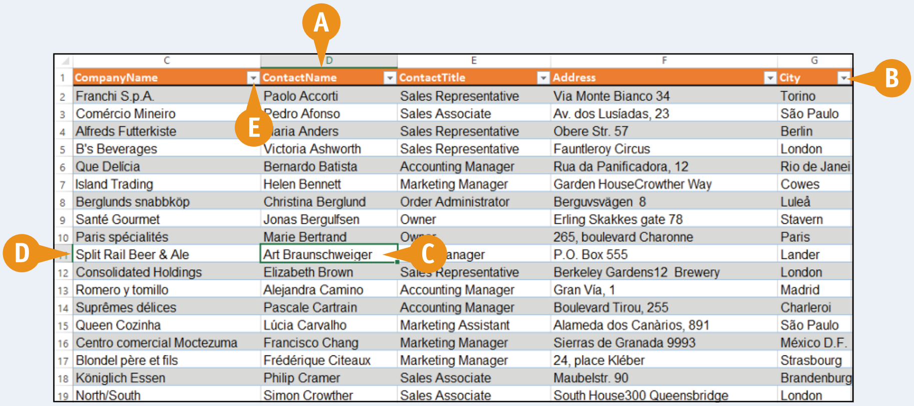

Region
PostalCode
Country
aulo
SP
n
Janei RJ
s
Isle
n
r
WY
n
d
eroi
Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Country"
Filter by Color
Text Filters
Search

■ (Select All)
☑ Argentina
☐ Austria
☐ Belgium
☑ Brazil
☑ Canada
☐ Denmark

CHAPTER 10

Get to Know Table Features

Although a table looks much like a regular Excel range, it offers a number of features that differentiate it from a range. To understand these differences and make it as easy as possible to learn how to build and use tables, you need to know the various features in a typical table, such as the table rows and columns, the table headers, and the filter buttons.



	C	D	E	F	G
1	CompanyName	ContactName	ContactTitle	Address	City
2	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bianco 34	Torino
3	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23	São Paulo
4	Alfreds Futterkiste	aria Anders	Sales Representative	Obere Str. 57	Berlin
5	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus	London
6	Que Delícia	Bernardo Batista	Accounting Manager	Rua da Panificadora, 12	Rio de Janei
7	Island Trading	Helen Bennett	Marketing Manager	Garden HouseCrowther Way	Cowes
8	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8	Luleå
9	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakkes gate 78	Stavern
10	Paris spécialités	Marie Bertrand	Ow	265, boulevard Charonne	Paris
11	Split Rail Beer & Ale	Art Braunschweiger	anager	P.O. Box 555	Lander
12	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gardens12 Brewery	London
13	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Vía, 1	Madrid
14	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Tirou, 255	Charleroi
15	Queen Cozinha	Lúcia Carvalho	Marketing Assistant	Alameda dos Canàrios, 891	São Paulo
16	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993	México D.F.
17	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber	Strasbourg
18	Königlich Essen	Philip Cramer	Sales Associate	Maubelstr. 90	Brandenburg
19	North/South	Simon Crowther	Sales Associate	South House300 Queensbridge	London

A Table Column

A single type of information, such as names, addresses, or phone numbers. In an Excel table, each column is the equivalent of a database field.

B Column Headers

The unique names you assign to every table column that serve to label the type of data in each column. These names are always found in the first row of the table.

C Table Cell

An item in a table column that represents a single instance of that column's data, such as a name, address, or phone number. In an Excel table, each cell is equivalent to a database field value.

D Table Row

A collection of associated table cells, such as the data for a single contact. In Excel tables, each row is the equivalent of a database record.

E Column Filter Button

A feature that gives you access to a set of commands that perform various actions on a column, such as sorting or filtering the column data.

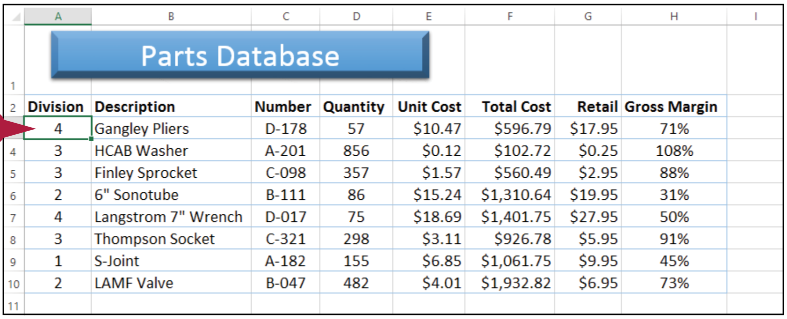
Convert a Range to a Table

In Excel 2016, you cannot create a table from scratch and then fill that table with data. Instead, you must first create a range that includes at least some of the data you want in your table and then convert that range to a table.

Note that you do not need to enter all your data before converting the range to a table. Once you have the table, you can add new rows and columns as needed, as described later in this chapter. However, it is best to decide up front whether you want your table to have column headers.

Convert a Range to a Table

1. Click a cell within the range that you want to convert to a table.

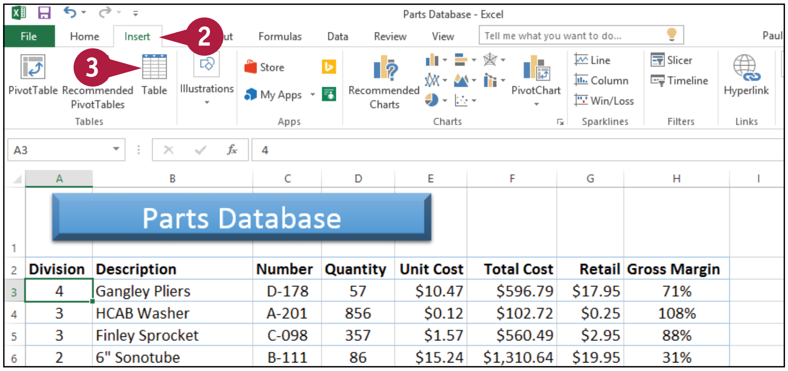


Parts Database

Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

2. Click the **Insert** tab.
3. Click **Table** (▦).

Note: You can also choose the Table command by pressing Ctrl + T.


Parts Database - Excel
File
Home
Insert
2
Formulas
Data
Review
View
Tell me what you want to do...
Paul
PivotTable
3
Recommended PivotTables
Table
Tables
Illustrations
Store
My Apps
Apps
Recommended Charts
Charts
PivotChart
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
Hyperlink
Links
A3
4

Parts Database

Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%

The Create Table dialog box appears.

A Excel selects the range that it will convert to a table.

B If you want to change the range, click ▦, drag the mouse ✚ over the new range, and then click ▦.

4 If your range has labels that you want to use as column headers, click **My table has headers** (☐ changes to ☑).

5 Click **OK**.

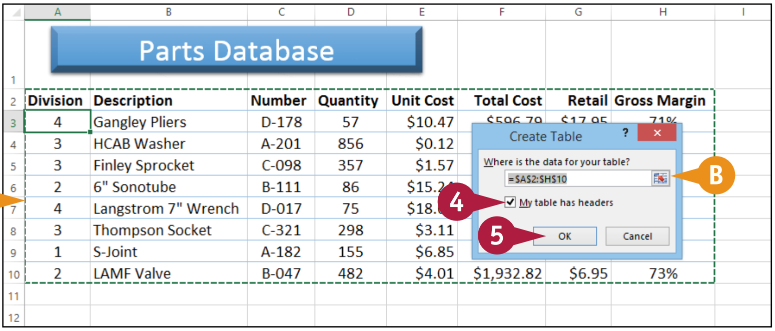
Excel converts the range to a table.

C Excel applies a table format to the range.

D The Table Tools contextual tab appears.

E Filter buttons appear in each column heading.

6 Click the **Design** tab to see the Excel table design tools.


A
B
4
5
Parts Database

	A	B	C	D	E	F	G	H
2	Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
3	4	Gangley Pliers	D-178	57	$10.47			
4	3	HCAB Washer	A-201	856	$0.12			
5	3	Finley Sprocket	C-098	357	$1.57			
6	2	6" Sonotube	B-111	86				
7	4	Langstrom 7" Wrench	D-017	75				
8	3	Thompson Socket	C-321	298	$3.11			
9	1	S-Joint	A-182	155	$6.85			
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

Create Table

Where is the data for your table?

=$A$2:$H$10

☑ My table has headers

OK Cancel

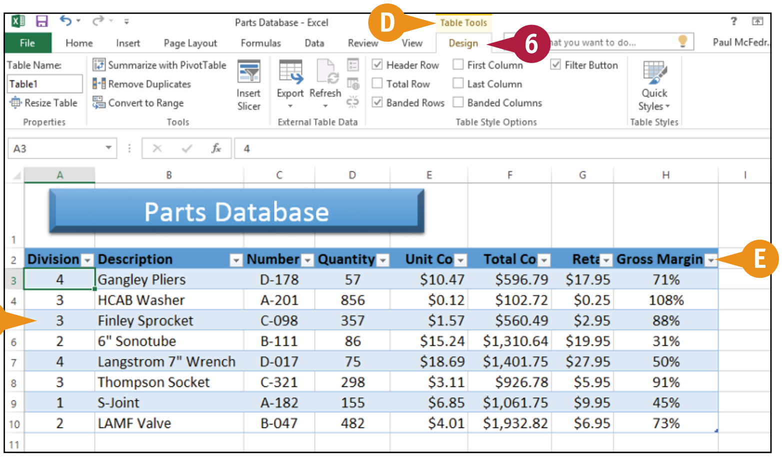

D
6
E
C
Parts Database - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Paul McFedr.
Summarize with PivotTable
Remove Duplicates
Convert to Range
Resize Table
Properties
Tools
Insert Slicer
Export
Refresh
External Table Data
Table Style Options
Quick Styles
Table Styles
Parts Database

Table Name: Table1

☑ Header Row ☐ First Column ☑ Filter Button
☐ Total Row ☐ Last Column
☑ Banded Rows ☐ Banded Columns

A3 4

	A	B	C	D	E	F	G	H
2	Division	Description	Number	Quantity	Unit Co	Total Co	Reta	Gross Margin
3	4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
4	3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
5	3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
6	2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
7	4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
8	3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
9	1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

TIPS

Do I need to add labels to the top of each column before converting my range to a table?

No, you do not need to add labels before performing the conversion. In this case, follow steps 1 to 3 to display the Create Table dialog box, then click **My table has headers** (☑ changes to ☐). After you click **OK**, Excel converts the range to a table and automatically adds headers to each column. These headers use the generic names Column1, Column2, and so on.

If I selected the wrong range for my table, is there a way to tell Excel the correct range?

Yes, although you cannot change the location of the headers. To redefine the range used in the table, first select any cell in the table. Under the Table Tools contextual tab, click the **Design** tab and then click **Resize Table** (▦) to open the Resize Table dialog box. Drag the mouse ✚ over the new range and then click **OK**.

Select Table Data

If you want to work with part of a table, you first need to select that part of the table. For example, if you want to apply a format to an entire column or copy an entire row, you first need to select that column or row.

The normal range-selection techniques in Excel often do not work well with a table. For example, selecting an entire worksheet column or row does not work because no table uses up an entire worksheet column or row. Instead, Excel provides several tools for selecting a table column (just the data or the data and the header), a table row, or the entire table.

Select Table Data

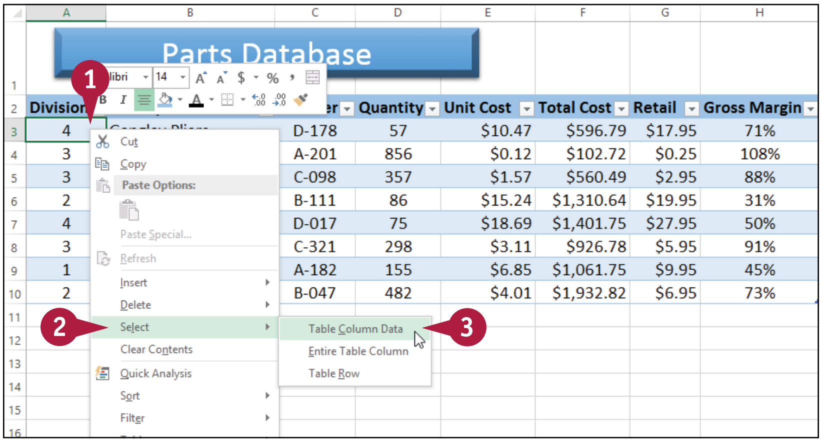
Select a Table Column

① Right-click any cell in the column you want to select.

② Click **Select**.

③ Click **Table Column Data**.

Excel selects all the column's data cells.



Parts Database

Division		…er	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
4		D-178	57	$10.47	$596.79	$17.95	71%
3		A-201	856	$0.12	$102.72	$0.25	108%
3		C-098	357	$1.57	$560.49	$2.95	88%
2		B-111	86	$15.24	$1,310.64	$19.95	31%
4		D-017	75	$18.69	$1,401.75	$27.95	50%
3		C-321	298	$3.11	$926.78	$5.95	91%
1		A-182	155	$6.85	$1,061.75	$9.95	45%
2		B-047	482	$4.01	$1,932.82	$6.95	73%

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Table Column Data
Entire Table Column
Table Row
3

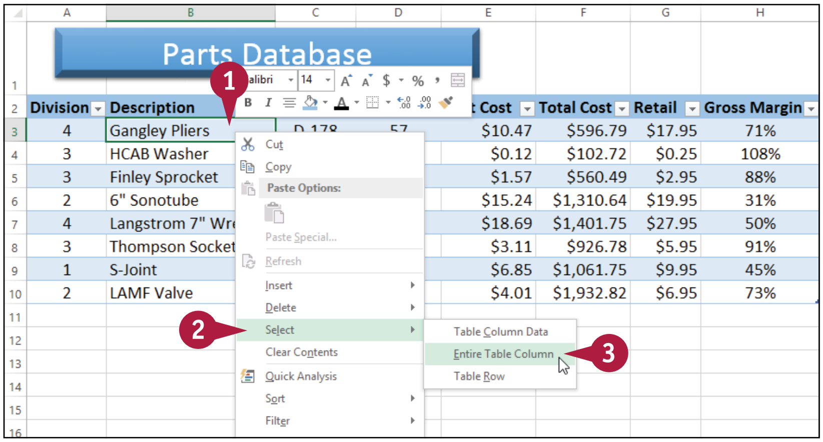
Select a Table Column and Header

① Right-click any cell in the column you want to select.

② Click **Select**.

③ Click **Entire Table Column**.

Excel selects the column's data and header.



Parts Database

Division	Description			…Cost	Total Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer			$0.12	$102.72	$0.25	108%
3	Finley Sprocket			$1.57	$560.49	$2.95	88%
2	6" Sonotube			$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wre			$18.69	$1,401.75	$27.95	50%
3	Thompson Socket			$3.11	$926.78	$5.95	91%
1	S-Joint			$6.85	$1,061.75	$9.95	45%
2	LAMF Valve			$4.01	$1,932.82	$6.95	73%

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Quick Analysis
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Table Column Data
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Select a Table Row

1. Right-click any cell in the row you want to select.
2. Click **Select**.
3. Click **Table Row**.

Excel selects all the data within the row.

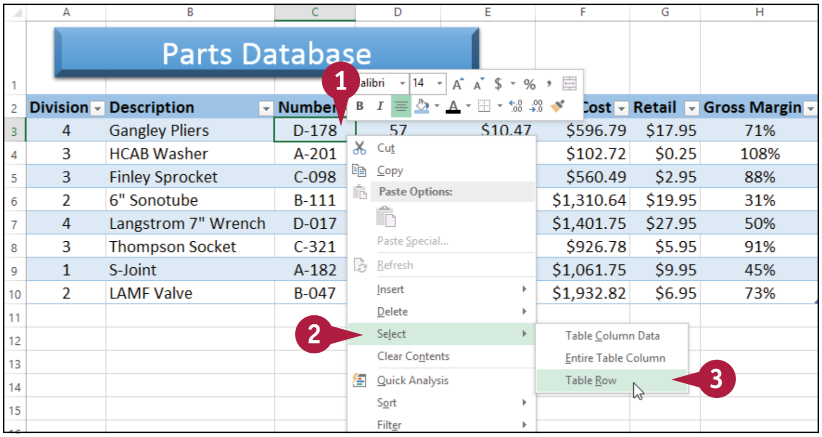
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Table Column Data
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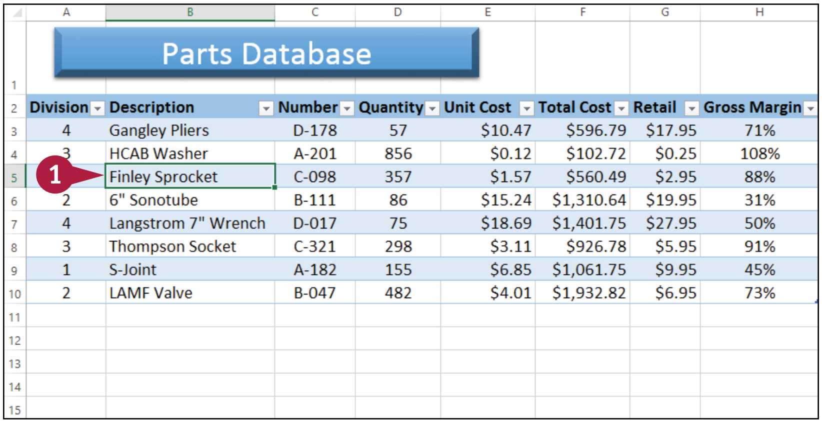
Table Row

Division	Description	Number	Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	$596.79	$17.95	71%
3	HCAB Washer	A-201	$102.72	$0.25	108%
3	Finley Sprocket	C-098	$560.49	$2.95	88%
2	6" Sonotube	B-111	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	$926.78	$5.95	91%
1	S-Joint	A-182	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	$1,932.82	$6.95	73%

Select the Entire Table

1. Click any cell within the table.
2. Press Ctrl + A.

Excel selects the entire table.


Parts Database
1

Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

TIP

Can I select multiple columns or rows in a table?

Yes. To select two or more table columns, first select one cell in each of the columns that you want to include in your selection. If the columns are not side-by-side, click the first cell and then hold down Ctrl as you click each of the other cells. Right-click any selected cell, click **Select**, and then click **Table Column Data** (or **Entire Table Column** if you also want to include the column headers in the selection).

To select two or more table rows, first select one cell in each of the rows that you want to include in your selection. Again, if the rows are not adjacent, click the first cell and then hold down Ctrl as you click each of the other cells. Right-click any selected cell, click **Select**, and then click **Table Row**.

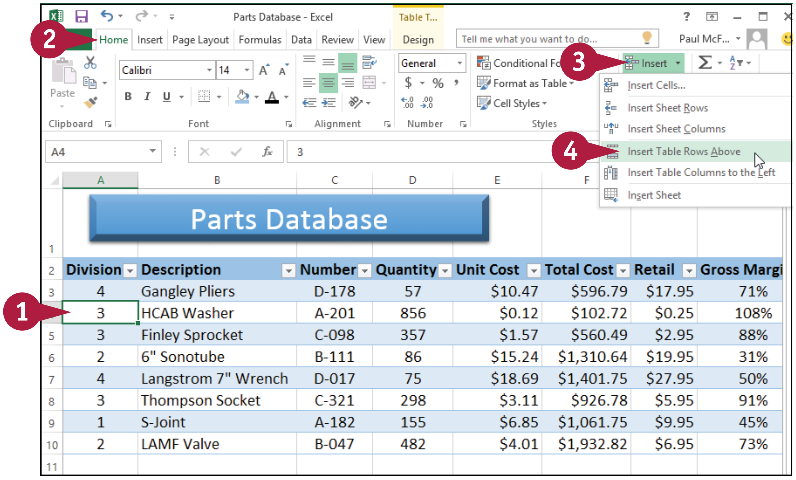
Insert a Table Row

You can add a new record to your Excel table by inserting a new row. You can insert a row either within the table or at the end of the table.

Once you have entered the initial set of data into your table, you will likely add most new records within the table by inserting a new row above a current row. However, when you are in the initial data entry phase, you will most likely prefer to add new records by adding a row to the end of the table.

Insert a Table Row

1. Select a cell in the row below which you want to insert the new row.
2. Click the **Home** tab.
3. Click **Insert** ( ).
4. Click **Insert Table Rows Above**.



Parts Database - Excel
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Parts Database
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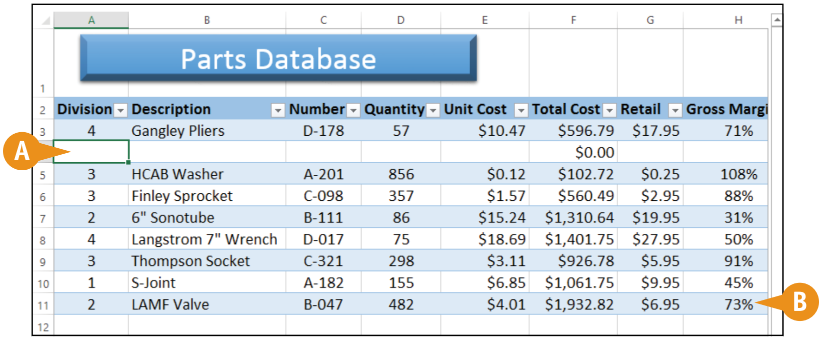
Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margi
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

- **A** Excel inserts the new row.
- **B** To insert a new row at the end of the table, select the lower-right table cell and then press Tab.



Parts Database
A
B

Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margi
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
					$0.00		
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

Insert a Table Column

You can add a new field to your Excel table by inserting a new column. You can insert a column either within the table or at the end of the table.

To make data entry easier and more efficient, you should decide in advance all the fields you want to include in the table. However, if later on you realize you forgot a particular field, you can still add it to the table. Inserting a table column is also useful if you imported or inherited the data from elsewhere and you see that the data is missing a field that you require.

Insert a Table Column

1. Select a cell in the column to the left of which you want to insert the new column.

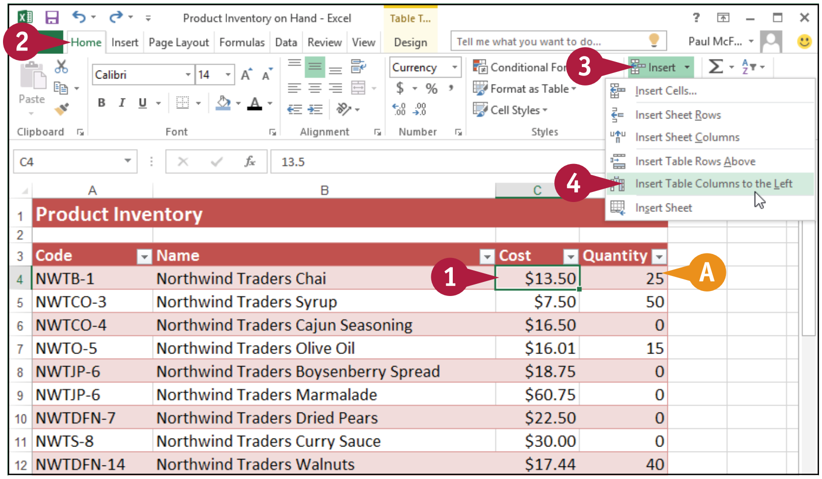
- A If you want to insert the new column at the end of the table, select a cell in the last table column.

2. Click the **Home** tab.
3. Click **Insert** (▦).
4. Click **Insert Table Columns to the Left**.

   To insert a column at the end of the table instead, click **Insert Table Columns to the Right** (not shown).

- B Excel inserts the new column.

5. Name the new field by editing the column header.


Product Inventory on Hand - Excel
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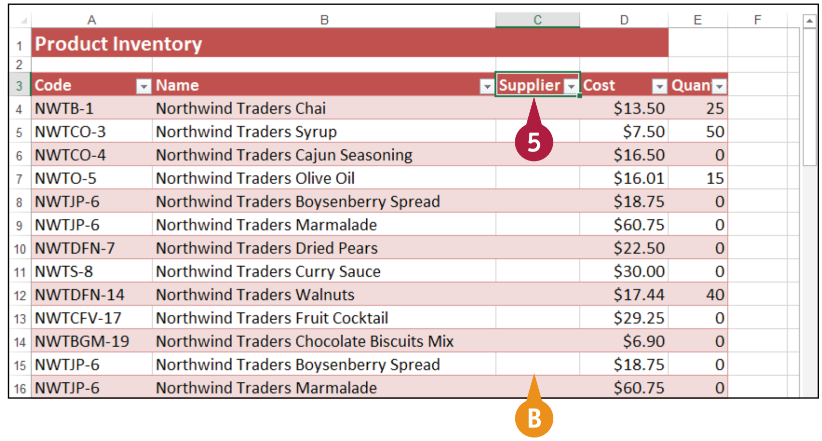
Product Inventory

Code	Name	Cost	Quantity
NWTB-1	Northwind Traders Chai	$13.50	25
NWTCO-3	Northwind Traders Syrup	$7.50	50
NWTCO-4	Northwind Traders Cajun Seasoning	$16.50	0
NWTO-5	Northwind Traders Olive Oil	$16.01	15
NWTJP-6	Northwind Traders Boysenberry Spread	$18.75	0
NWTJP-6	Northwind Traders Marmalade	$60.75	0
NWTDFN-7	Northwind Traders Dried Pears	$22.50	0
NWTS-8	Northwind Traders Curry Sauce	$30.00	0
NWTDFN-14	Northwind Traders Walnuts	$17.44	40



Product Inventory

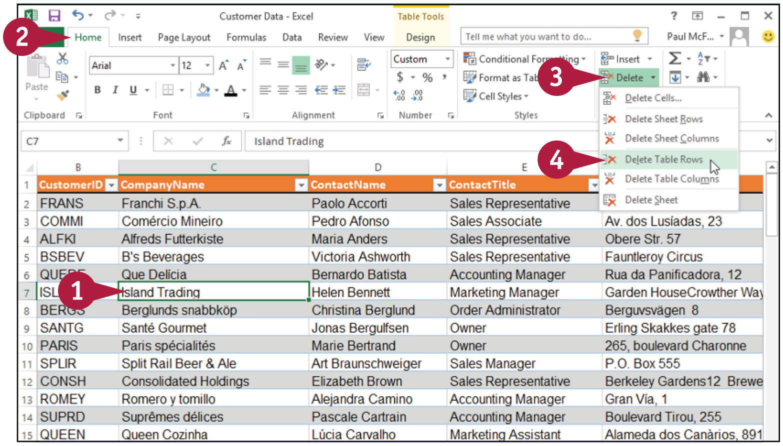
Code	Name	Supplier	Cost	Quan
NWTB-1	Northwind Traders Chai		$13.50	25
NWTCO-3	Northwind Traders Syrup		$7.50	50
NWTCO-4	Northwind Traders Cajun Seasoning		$16.50	0
NWTO-5	Northwind Traders Olive Oil		$16.01	15
NWTJP-6	Northwind Traders Boysenberry Spread		$18.75	0
NWTJP-6	Northwind Traders Marmalade		$60.75	0
NWTDFN-7	Northwind Traders Dried Pears		$22.50	0
NWTS-8	Northwind Traders Curry Sauce		$30.00	0
NWTDFN-14	Northwind Traders Walnuts		$17.44	40
NWTCFV-17	Northwind Traders Fruit Cocktail		$29.25	0
NWTBGM-19	Northwind Traders Chocolate Biscuits Mix		$6.90	0
NWTJP-6	Northwind Traders Boysenberry Spread		$18.75	0
NWTJP-6	Northwind Traders Marmalade		$60.75	0

Delete a Table Row

If your table contains a record that includes inaccurate, outdated, or unnecessary data, you should delete that row to preserve your table's data integrity.

An Excel table is a repository of data that you can use as a reference source or to analyze or summarize the data. However you use the table, it is only as beneficial as its data is accurate, so you should take extra care to ensure the data you enter is correct. If you find that an entire record is inaccurate or no longer needed, Excel enables you to quickly delete that row.

Delete a Table Row


Customer Data - Excel
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1

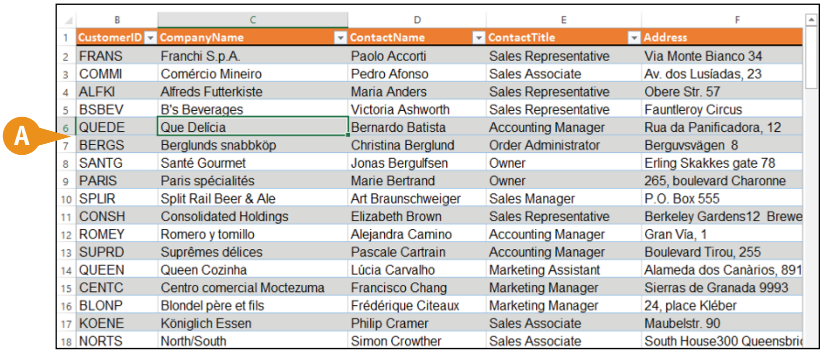
Island Trading

	CustomerID	CompanyName	ContactName	ContactTitle	
2	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	
3	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23
4	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
5	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
6	QUE	Que Delícia	Bernardo Batista	Accounting Manager	Rua da Panificadora, 12
7	ISL	Island Trading	Helen Bennett	Marketing Manager	Garden HouseCrowther Way
8	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
9	SANTG	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakkes gate 78
10	PARIS	Paris spécialités	Marie Bertrand	Owner	265, boulevard Charonne
11	SPLIR	Split Rail Beer & Ale	Art Braunschweiger	Sales Manager	P.O. Box 555
12	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gardens12 Brewe
13	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Vía, 1
14	SUPRD	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Tirou, 255
15	QUEEN	Queen Cozinha	Lúcia Carvalho	Marketing Assistant	Alameda dos Canàrios, 891

1. Select a cell in the row you want to delete.

Note: To delete multiple rows, select a cell in each row you want to delete.

2. Click the **Home** tab.
3. Click **Delete** (☒).
4. Click **Delete Table Rows**.



	CustomerID	CompanyName	ContactName	ContactTitle	Address
2	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bianco 34
3	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23
4	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
5	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
6	QUEDE	Que Delícia	Bernardo Batista	Accounting Manager	Rua da Panificadora, 12
7	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
8	SANTG	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakkes gate 78
9	PARIS	Paris spécialités	Marie Bertrand	Owner	265, boulevard Charonne
10	SPLIR	Split Rail Beer & Ale	Art Braunschweiger	Sales Manager	P.O. Box 555
11	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gardens12 Brewe
12	ROMEY	Romero y tomillo	Alejandra Camino	Accounting Manager	Gran Vía, 1
13	SUPRD	Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Tirou, 255
14	QUEEN	Queen Cozinha	Lúcia Carvalho	Marketing Assistant	Alameda dos Canàrios, 891
15	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993
16	BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber
17	KOENE	Königlich Essen	Philip Cramer	Sales Associate	Maubelstr. 90
18	NORTS	North/South	Simon Crowther	Sales Associate	South House300 Queensbri

Ⓐ Excel deletes the row.

Delete a Table Column

If your table contains a field that you do not require, you should delete that column to make your table easier to work with and manage.

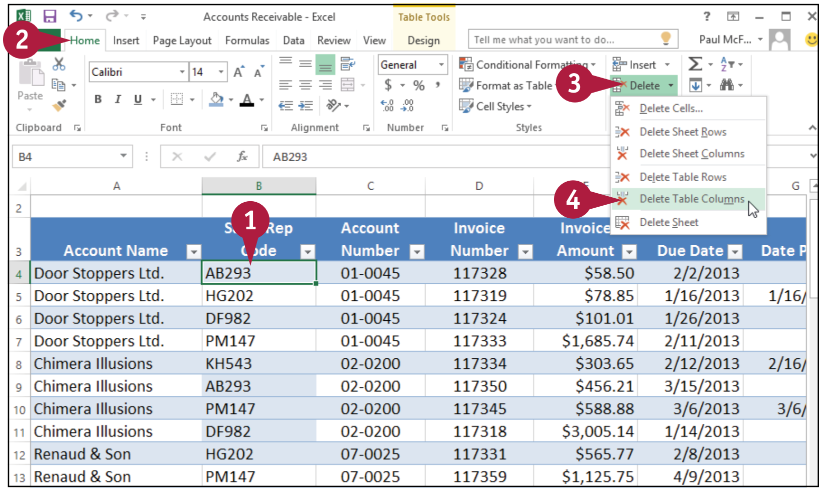
As you see later in this chapter and in Chapter 11, you analyze and summarize your table information based on the data in one or more fields. If your table contains a field that you never look at and that you never use for analysis or summaries, consider deleting that column to reduce table clutter and make your table easier to navigate.

Delete a Table Column

1. Select a cell in the column you want to delete.

Note: To delete multiple columns, select a cell in each column you want to delete.

2. Click the **Home** tab.
3. Click **Delete** (⊠).
4. Click **Delete Table Columns**.


Accounts Receivable - Excel
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	A	B	C	D	E	G
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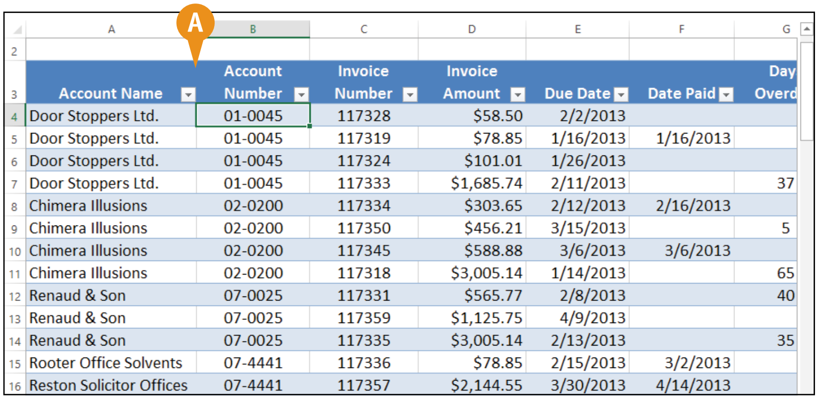
3	Account Name	Sales Rep Code	Account Number	Invoice Number	Invoice Amount	Due Date	Date P
4	Door Stoppers Ltd.	AB293	01-0045	117328	$58.50	2/2/2013	
5	Door Stoppers Ltd.	HG202	01-0045	117319	$78.85	1/16/2013	1/16/
6	Door Stoppers Ltd.	DF982	01-0045	117324	$101.01	1/26/2013	
7	Door Stoppers Ltd.	PM147	01-0045	117333	$1,685.74	2/11/2013	
8	Chimera Illusions	KH543	02-0200	117334	$303.65	2/12/2013	2/16/
9	Chimera Illusions	AB293	02-0200	117350	$456.21	3/15/2013	
10	Chimera Illusions	PM147	02-0200	117345	$588.88	3/6/2013	3/6/
11	Chimera Illusions	DF982	02-0200	117318	$3,005.14	1/14/2013	
12	Renaud & Son	HG202	07-0025	117331	$565.77	2/8/2013	
13	Renaud & Son	PM147	07-0025	117359	$1,125.75	4/9/2013	

Ⓐ Excel deletes the column.



	A	B	C	D	E	F	G
2							
3	Account Name	Account Number	Invoice Number	Invoice Amount	Due Date	Date Paid	Day Overd
4	Door Stoppers Ltd.	01-0045	117328	$58.50	2/2/2013		
5	Door Stoppers Ltd.	01-0045	117319	$78.85	1/16/2013	1/16/2013	
6	Door Stoppers Ltd.	01-0045	117324	$101.01	1/26/2013		
7	Door Stoppers Ltd.	01-0045	117333	$1,685.74	2/11/2013		37
8	Chimera Illusions	02-0200	117334	$303.65	2/12/2013	2/16/2013	
9	Chimera Illusions	02-0200	117350	$456.21	3/15/2013		5
10	Chimera Illusions	02-0200	117345	$588.88	3/6/2013	3/6/2013	
11	Chimera Illusions	02-0200	117318	$3,005.14	1/14/2013		65
12	Renaud & Son	07-0025	117331	$565.77	2/8/2013		40
13	Renaud & Son	07-0025	117359	$1,125.75	4/9/2013		
14	Renaud & Son	07-0025	117335	$3,005.14	2/13/2013		35
15	Rooter Office Solvents	07-4441	117336	$78.85	2/15/2013	3/2/2013	
16	Reston Solicitor Offices	07-4441	117357	$2,144.55	3/30/2013	4/14/2013	

Add a Column Subtotal

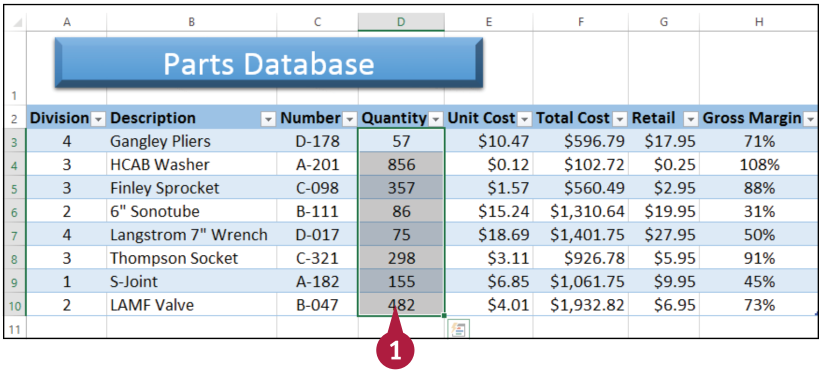
You can get more out of your table data by summarizing a field with a subtotal that appears at the bottom of the column.

Although the word *subtotal* implies that you are summing the numeric values in a column, Excel uses the term more broadly. That is, a subtotal can be not only a numeric sum, but also an average, a maximum or minimum, or a count of the values in the field. You can also choose more esoteric subtotals such as a standard deviation or a variance.

Add a Column Subtotal

1. Select all the data in the column you want to total.

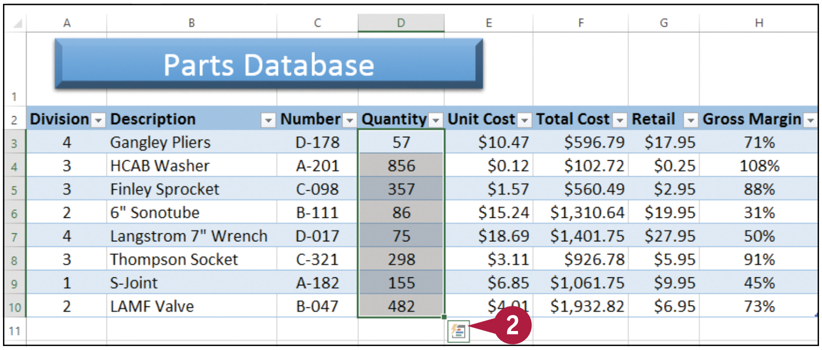
Note: See the “Select Table Data” section earlier in the chapter to learn how to select column data.



Parts Database

Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

2. Click the **Quick Analysis** smart tag (☰).

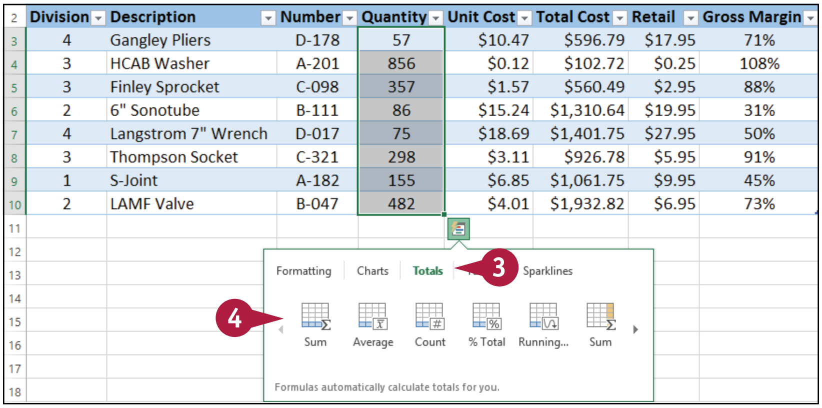


Parts Database

Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

The Quick Analysis options appear.

3. Click **Totals**.
4. Click the type of calculation you want to use.



	Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
3	4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
4	3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
5	3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
6	2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
7	4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
8	3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
9	1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

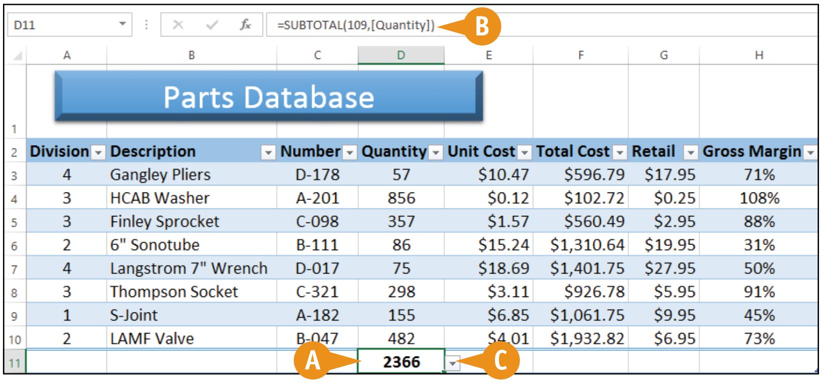
Formatting
Charts
Totals
Sparklines
3
4
Sum
Average
Count
% Total
Running...
Sum

Formulas automatically calculate totals for you.

A. Excel adds a Total row to the bottom of the table.

B. Excel inserts a SUBTOTAL function to perform the calculation you chose in step **4**.

C. Click the cell's ▼ to choose a different type of subtotal.



D11

=SUBTOTAL(109,[Quantity])

B
Parts Database
A
C

	Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
3	4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
4	3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
5	3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
6	2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
7	4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
8	3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
9	1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
10	2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%
11				2366				

TIP

Is there a quick way to insert a total row in my table?

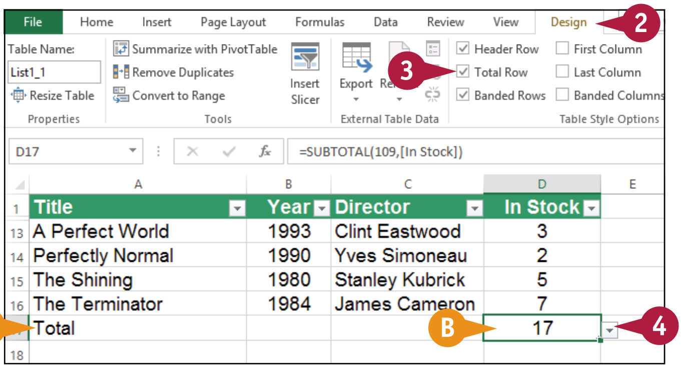
Yes. If the column you want to total is the last column in the table, you can add the total row and include a SUBTOTAL function for that column with just a few mouse clicks:

1. Click any cell within the table.
2. Click the **Design** tab.
3. Select the **Total Row** check box (☐ changes to ☑).

A. Excel automatically inserts a row named Total at the bottom of the table.

B. Excel adds a SUBTOTAL function below the last column.

4. Click the cell's ▼ and then click the type of subtotal you want to use.



File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
2
Summarize with PivotTable
Remove Duplicates
Convert to Range
Resize Table
Properties
Tools
Insert Slicer
Export
External Table Data
Table Style Options
3
A
B
4

Table Name: List1_1

☑ Header Row ☐ First Column
☑ Total Row ☐ Last Column
☑ Banded Rows ☐ Banded Columns

D17

=SUBTOTAL(109,[In Stock])

	Title	Year	Director	In Stock
13	A Perfect World	1993	Clint Eastwood	3
14	Perfectly Normal	1990	Yves Simoneau	2
15	The Shining	1980	Stanley Kubrick	5
16	The Terminator	1984	James Cameron	7
17	Total			17

Convert a Table to a Range

If you no longer require the Excel table tools, you can convert a table to a normal range.

Tables are extremely useful Excel features, but they can occasionally be bothersome. For example, if you click a table cell, click the Design tab, and then click a cell outside the table, Excel automatically switches to the Home tab. If you then click a table cell again, Excel automatically switches back to the Design tab. If you are not using the table features in the Design tab, this behavior can be annoying, but you can prevent it from happening by converting the table to a normal range.

Convert a Table to a Range

1. Click a cell inside the table.
2. Click the **Design** tab.
3. Click **Convert to Range** ().

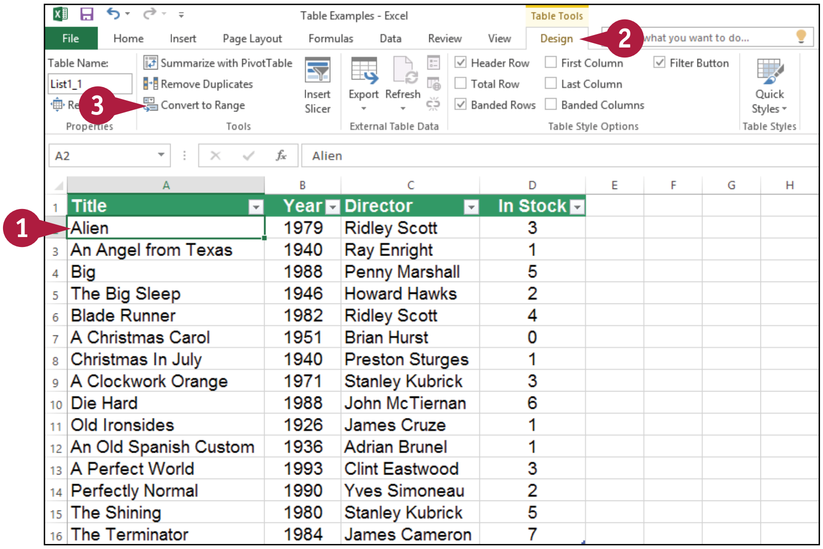


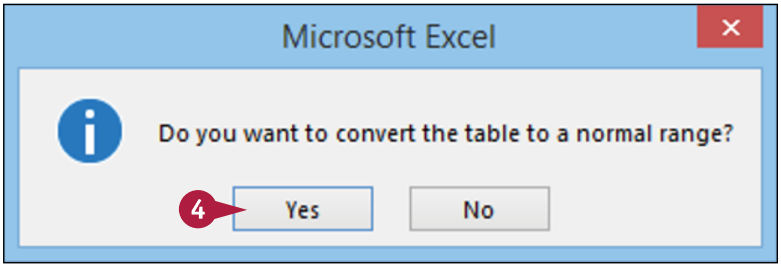
Table Examples - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
what you want to do...
Table Name:
List1_1
Properties
Summarize with PivotTable
Remove Duplicates
Convert to Range
Tools
Insert Slicer
Export
Refresh
External Table Data
☑ Header Row
☐ Total Row
☑ Banded Rows
☐ First Column
☐ Last Column
☐ Banded Columns
☑ Filter Button
Table Style Options
Quick Styles
Table Styles
A2
Alien
1
2
3

Title	Year	Director	In Stock
Alien	1979	Ridley Scott	3
An Angel from Texas	1940	Ray Enright	1
Big	1988	Penny Marshall	5
The Big Sleep	1946	Howard Hawks	2
Blade Runner	1982	Ridley Scott	4
A Christmas Carol	1951	Brian Hurst	0
Christmas In July	1940	Preston Sturges	1
A Clockwork Orange	1971	Stanley Kubrick	3
Die Hard	1988	John McTiernan	6
Old Ironsides	1926	James Cruze	1
An Old Spanish Custom	1936	Adrian Brunel	1
A Perfect World	1993	Clint Eastwood	3
Perfectly Normal	1990	Yves Simoneau	2
The Shining	1980	Stanley Kubrick	5
The Terminator	1984	James Cameron	7

Excel asks you to confirm.

4. Click **Yes**.

Excel converts the table to a normal range.


Microsoft Excel
Yes
No
4

Do you want to convert the table to a normal range?

Apply a Table Style

You can give an Excel table more visual appeal and make it easier to read by applying a table style.

A table style is a combination of formatting options that Excel applies to 13 different table elements, including the first and last columns, the header row, the total row, and the entire table. For each element, Excel applies one or more of the following formatting options: the font, including the typeface, style, size, color, and text effects; the border; and the background color and fill effects.

Apply a Table Style

1. Click a cell inside the table.
2. Click the **Design** tab.
3. Click **Table Quick Styles**.

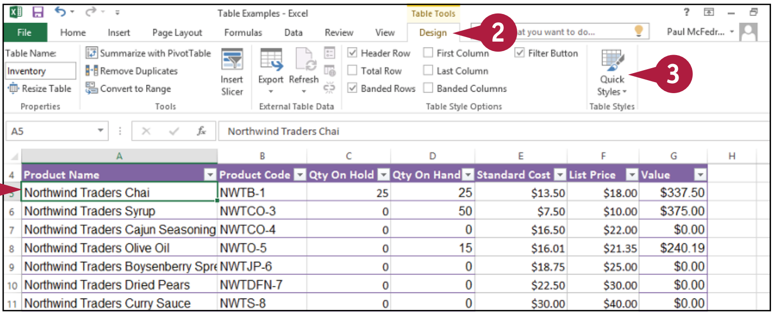


Table Examples - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Paul McFedr...
Table Name:
Summarize with PivotTable
Remove Duplicates
Convert to Range
Resize Table
Properties
Tools
Insert Slicer
Export
Refresh
External Table Data
First Column
Total Row
Last Column
Banded Columns
Table Style Options
Quick Styles
Table Styles
1
2
3

Table Name: Inventory

☑ Header Row
☑ Banded Rows
☑ Filter Button

A5 Northwind Traders Chai

	A	B	C	D	E	F	G
4	Product Name	Product Code	Qty On Hold	Qty On Hand	Standard Cost	List Price	Value
5	Northwind Traders Chai	NWTB-1	25	25	$13.50	$18.00	$337.50
6	Northwind Traders Syrup	NWTCO-3	0	50	$7.50	$10.00	$375.00
7	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	$16.50	$22.00	$0.00
8	Northwind Traders Olive Oil	NWTO-5	0	15	$16.01	$21.35	$240.19
9	Northwind Traders Boysenberry Spre	NWTJP-6	0	0	$18.75	$25.00	$0.00
10	Northwind Traders Dried Pears	NWTDFN-7	0	0	$22.50	$30.00	$0.00
11	Northwind Traders Curry Sauce	NWTS-8	0	0	$30.00	$40.00	$0.00

The Table Quick Styles gallery appears.

4. Click the table style you want to use.

Ⓐ Excel applies the style to the table.

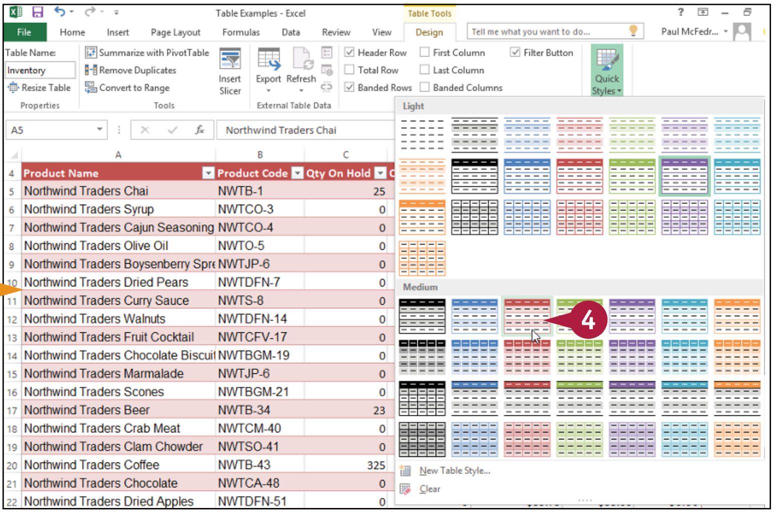


Table Examples - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McFedr...
Table Name:
Summarize with PivotTable
Remove Duplicates
Convert to Range
Resize Table
Properties
Tools
Insert Slicer
Export
Refresh
External Table Data
First Column
Total Row
Last Column
Banded Columns
Quick Styles
Light
Medium
New Table Style...
Clear
A
4

Table Name: Inventory

☑ Header Row
☑ Banded Rows
☑ Filter Button

A5 Northwind Traders Chai

	A	B	C
4	Product Name	Product Code	Qty On Hold
5	Northwind Traders Chai	NWTB-1	25
6	Northwind Traders Syrup	NWTCO-3	0
7	Northwind Traders Cajun Seasoning	NWTCO-4	0
8	Northwind Traders Olive Oil	NWTO-5	0
9	Northwind Traders Boysenberry Spre	NWTJP-6	0
10	Northwind Traders Dried Pears	NWTDFN-7	0
11	Northwind Traders Curry Sauce	NWTS-8	0
12	Northwind Traders Walnuts	NWTDFN-14	0
13	Northwind Traders Fruit Cocktail	NWTCFV-17	0
14	Northwind Traders Chocolate Biscuit	NWTBGM-19	0
15	Northwind Traders Marmalade	NWTJP-6	0
16	Northwind Traders Scones	NWTBGM-21	0
17	Northwind Traders Beer	NWTB-34	23
18	Northwind Traders Crab Meat	NWTCM-40	0
19	Northwind Traders Clam Chowder	NWTSO-41	0
20	Northwind Traders Coffee	NWTB-43	325
21	Northwind Traders Chocolate	NWTCA-48	0
22	Northwind Traders Dried Apples	NWTDFN-51	0

Build a Custom Table Style

You can make it easier to format tables the way you prefer by creating a custom table style.

Excel comes with dozens of predefined table styles, all of which vary with the document theme. If none of the predefined table styles is right for your needs, you can use the Format Cells dialog box to apply your own formatting to the various table elements. If you want to reuse this formatting in other workbooks, you can save the formatting options as a custom table style.

Build a Custom Table Style

1. Click a cell inside the table.
2. Click the **Design** tab.
3. Click **Table Quick Styles**.

A. The Table Styles gallery appears.

4. Click **New Table Style**.

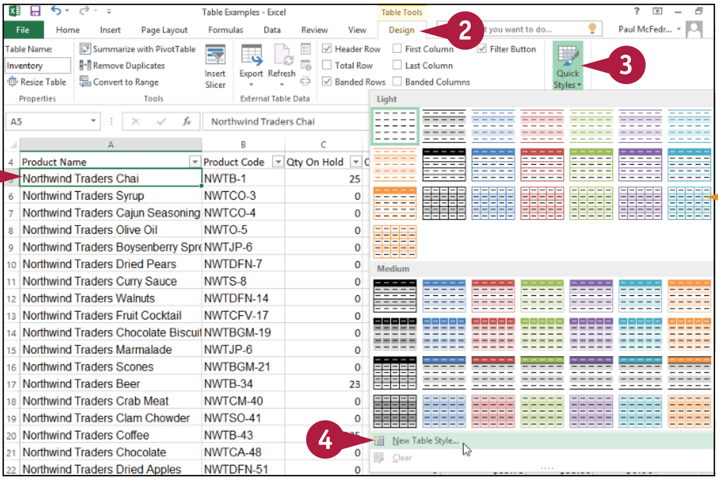
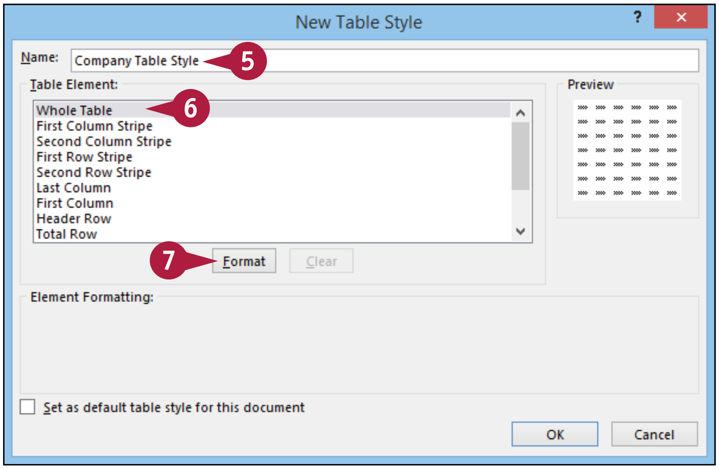


Table Examples - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Paul McFedr...
Table Name:
Inventory
Resize Table
Properties
Summarize with PivotTable
Remove Duplicates
Convert to Range
Tools
Insert Slicer
Export
Refresh
External Table Data
☑ Header Row
☐ Total Row
☑ Banded Rows
☐ First Column
☐ Last Column
☐ Banded Columns
☑ Filter Button
Quick Styles
Light
Medium
New Table Style...
Clear
A5
Northwind Traders Chai
1
2
3
4
A

	A	B	C
4	Product Name	Product Code	Qty On Hold
5	Northwind Traders Chai	NWTB-1	25
6	Northwind Traders Syrup	NWTCO-3	0
7	Northwind Traders Cajun Seasoning	NWTCO-4	0
8	Northwind Traders Olive Oil	NWTO-5	0
9	Northwind Traders Boysenberry Spre	NWTJP-6	0
10	Northwind Traders Dried Pears	NWTDFN-7	0
11	Northwind Traders Curry Sauce	NWTS-8	0
12	Northwind Traders Walnuts	NWTDFN-14	0
13	Northwind Traders Fruit Cocktail	NWTCFV-17	0
14	Northwind Traders Chocolate Biscui	NWTBGM-19	0
15	Northwind Traders Marmalade	NWTJP-6	0
16	Northwind Traders Scones	NWTBGM-21	0
17	Northwind Traders Beer	NWTB-34	23
18	Northwind Traders Crab Meat	NWTCM-40	0
19	Northwind Traders Clam Chowder	NWTSO-41	0
20	Northwind Traders Coffee	NWTB-43	[illegible]
21	Northwind Traders Chocolate	NWTCA-48	0
22	Northwind Traders Dried Apples	NWTDFN-51	0

The New Table Style dialog box appears.

5. Type a name for the style.
6. Click the table element you want to format.
7. Click **Format**.


New Table Style
?
×
Table Element:
Whole Table
First Column Stripe
Second Column Stripe
First Row Stripe
Second Row Stripe
Last Column
First Column
Header Row
Total Row
Format
Clear
Preview
Element Formatting:
OK
Cancel
5
6
7

Name: Company Table Style

☐ Set as default table style for this document

The Format Cells dialog box appears.

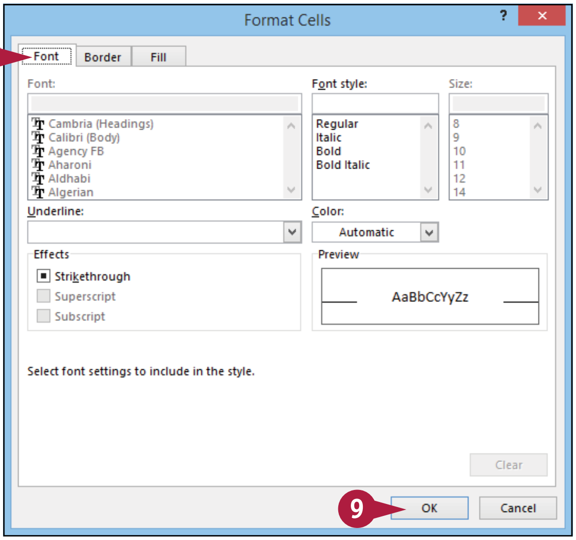
8 Use the tabs to select the formatting options you want in your cell style.

Note: Depending on the table element you are working with, some of the formatting options may be disabled.

9 Click **OK**.

10 Repeat steps 5 to 8 to set the formatting for the other table elements, as needed.

11 Click **OK** in the New Table Style dialog box (not shown).


Format Cells
?
8
Font
Border
Fill
Font:
Font style:
Size:
Cambria (Headings)
Calibri (Body)
Agency FB
Aharoni
Aldhabi
Algerian
Regular
Italic
Bold
Bold Italic
8
9
10
11
12
14
Underline:
Color:
Automatic
Effects
☒ Strikethrough
☐ Superscript
☐ Subscript
Preview
AaBbCcYyZz
Select font settings to include in the style.
Clear
9
OK
Cancel

12 Click **Table Quick Styles**.

B Your table style appears in the Custom section of the Table Styles gallery.

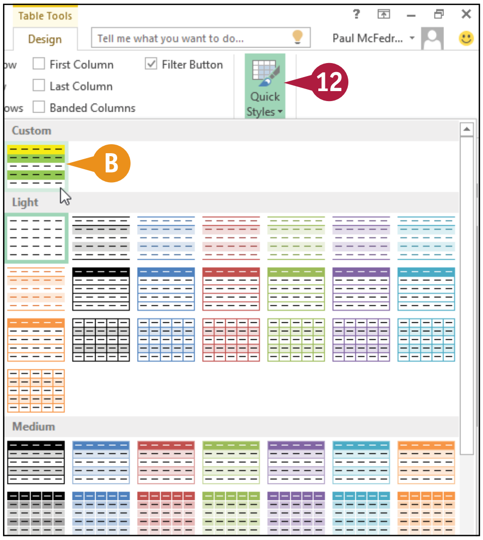


Table Tools
Design
Tell me what you want to do...
Paul McFedr...
☐ First Column
☑ Filter Button
☐ Last Column
☐ Banded Columns
Quick Styles
12
Custom
B
Light
Medium

TIPS

Is there an easy way to use the custom style for all the tables I create?

Yes. If you want to use your custom table style for all or most of the tables you create, you should set the custom style as the default. When you are creating a new custom table style, follow steps 1 to 10 and then select the **Set as default table style for this document** check box (☐ changes to ☑). For an existing custom table style, click a table cell, click the **Design** tab, click the **Table Styles** ▼, right-click the custom style, and then click **Set As Default**.

How do I make changes to a custom table style?

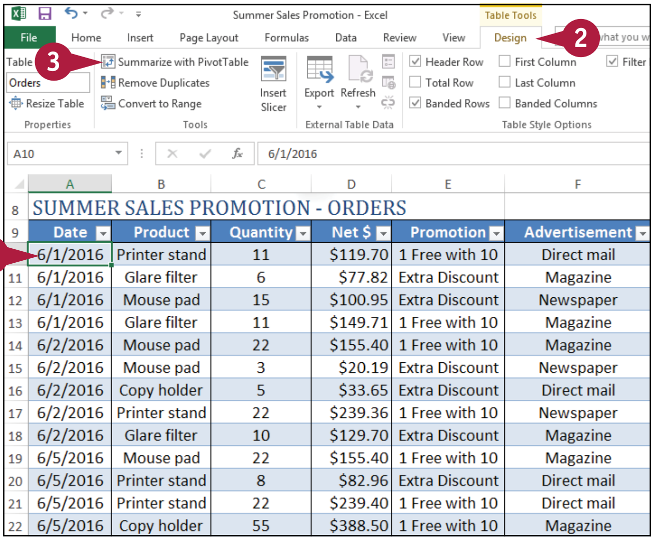
To change the formatting for a custom table style, click a table cell, click the **Design** tab, and then click the **Table Styles** ▼ to display the Table Styles gallery. Right-click the custom style, click **Modify**, and then follow steps 6 to 11.

Create a PivotTable

You can more easily analyze a large amount of data by creating a PivotTable from that data. A PivotTable is a powerful data analysis tool because it automatically groups large amounts of data into smaller, more manageable categories, and it displays summary calculations for each group.

You can also manipulate the layout of — or *pivot* — the PivotTable to see different views of your data. Although you can create a PivotTable from a normal range, for best results, you should convert your range to a table before creating the PivotTable (see the "Convert a Range to a Table" section earlier in the chapter).

Create a PivotTable

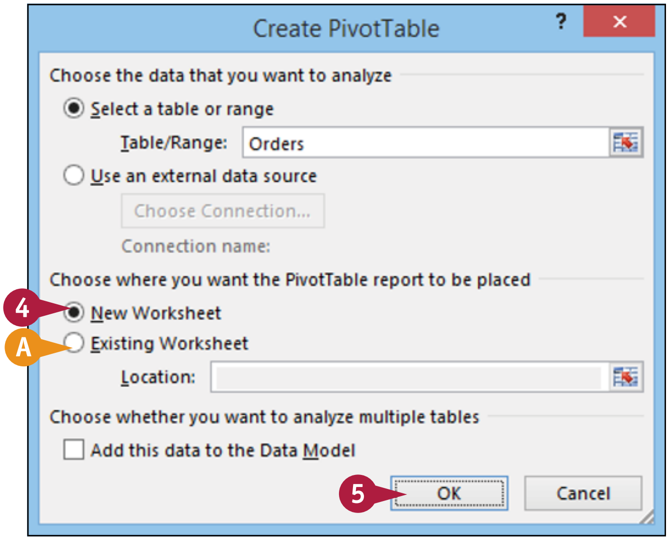

Summer Sales Promotion - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
what you w
Table
Orders
Resize Table
Properties
Summarize with PivotTable
Remove Duplicates
Convert to Range
Insert Slicer
Tools
Export
Refresh
External Table Data
☑ Header Row
☐ Total Row
☑ Banded Rows
☐ First Column
☐ Last Column
☐ Banded Columns
☑ Filter
Table Style Options
A10
6/1/2016
1
2
3

SUMMER SALES PROMOTION - ORDERS

Date	Product	Quantity	Net $	Promotion	Advertisement
6/1/2016	Printer stand	11	$119.70	1 Free with 10	Direct mail
6/1/2016	Glare filter	6	$77.82	Extra Discount	Magazine
6/1/2016	Mouse pad	15	$100.95	Extra Discount	Newspaper
6/1/2016	Glare filter	11	$149.71	1 Free with 10	Magazine
6/2/2016	Mouse pad	22	$155.40	1 Free with 10	Magazine
6/2/2016	Mouse pad	3	$20.19	Extra Discount	Newspaper
6/2/2016	Copy holder	5	$33.65	Extra Discount	Direct mail
6/2/2016	Printer stand	22	$239.36	1 Free with 10	Newspaper
6/2/2016	Glare filter	10	$129.70	Extra Discount	Magazine
6/5/2016	Mouse pad	22	$155.40	1 Free with 10	Magazine
6/5/2016	Printer stand	8	$82.96	Extra Discount	Direct mail
6/5/2016	Printer stand	22	$239.40	1 Free with 10	Direct mail
6/5/2016	Copy holder	55	$388.50	1 Free with 10	Magazine

1. Click a cell within the table that you want to use as the source data.
2. Click the **Design** tab.
3. Click **Summarize with PivotTable** (▣).

The Create PivotTable dialog box appears.


Create PivotTable
?
×
Choose Connection...
Connection name:
OK
Cancel
4
A
5

Choose the data that you want to analyze

● Select a table or range

Table/Range: Orders

○ Use an external data source

Choose where you want the PivotTable report to be placed

● New Worksheet

○ Existing Worksheet

Location:

Choose whether you want to analyze multiple tables

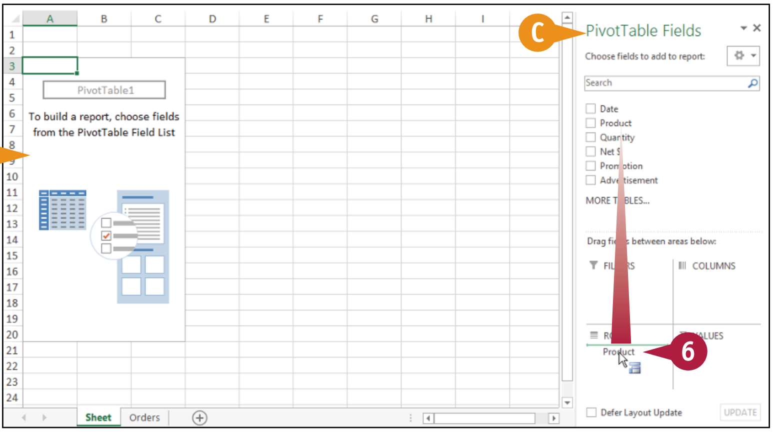
☐ Add this data to the Data Model

4. Click **New Worksheet** (○ changes to ●).

A. If you want to place the PivotTable in an existing location, click **Existing Worksheet** (○ changes to ●) and then use the **Location** range box to select the worksheet and cell where you want the PivotTable to appear.

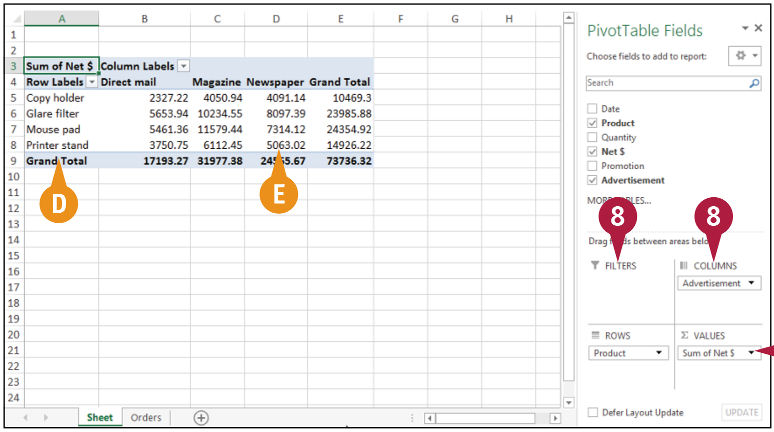
5. Click **OK**.

- **B** Excel creates a blank PivotTable.
- **C** Excel displays the PivotTable Fields list.
- **6** Click and drag a field and drop it inside the ROWS area.


C
B
6
PivotTable1
To build a report, choose fields from the PivotTable Field List
PivotTable Fields
Choose fields to add to report:
Search
☐ Date
☐ Product
☐ Quantity
☐ Net $
☐ Promotion
☐ Advertisement
MORE TABLES...
Drag fields between areas below:
FILTERS
COLUMNS
ROWS
VALUES
Product
☐ Defer Layout Update
UPDATE
Sheet
Orders

- **D** Excel adds the field's unique values to the PivotTable's row area.
- **7** Click and drag a numeric field and drop it inside the VALUES area.
- **E** Excel sums the numeric values based on the row values.
- **8** If desired, click and drag fields and drop them in the COLUMNS area and the FILTERS area.

  Each time you drop a field in an area, Excel updates the PivotTable to include the new data.



Sum of Net $	Column Labels			
Row Labels	Direct mail	Magazine	Newspaper	Grand Total
Copy holder	2327.22	4050.94	4091.14	10469.3
Glare filter	5653.94	10234.55	8097.39	23985.88
Mouse pad	5461.36	11579.44	7314.12	24354.92
Printer stand	3750.75	6112.45	5063.02	14926.22
Grand Total	**17193.27**	**31977.38**	**24[illegible]5.67**	**73736.32**

COLUMNS: Advertisement
ROWS: Product
VALUES: Sum of Net $

D
E
8
8
7
PivotTable Fields
Choose fields to add to report:
Search
☐ Date
☑ Product
☐ Quantity
☑ Net $
☐ Promotion
☑ Advertisement
MORE TABLES...
Drag fields between areas below:
FILTERS
COLUMNS
ROWS
VALUES
☐ Defer Layout Update
UPDATE
Sheet
Orders

TIPS

Are there faster ways to build a PivotTable?

Yes. In the PivotTable Fields list, if you select a check box for a text or date field (☐ changes to ☑), Excel adds the field to the ROWS area; if you select a check box for a numeric field (○ changes to ●), Excel adds the field to the VALUES area. You can also right-click a field and then click the area you want to use.

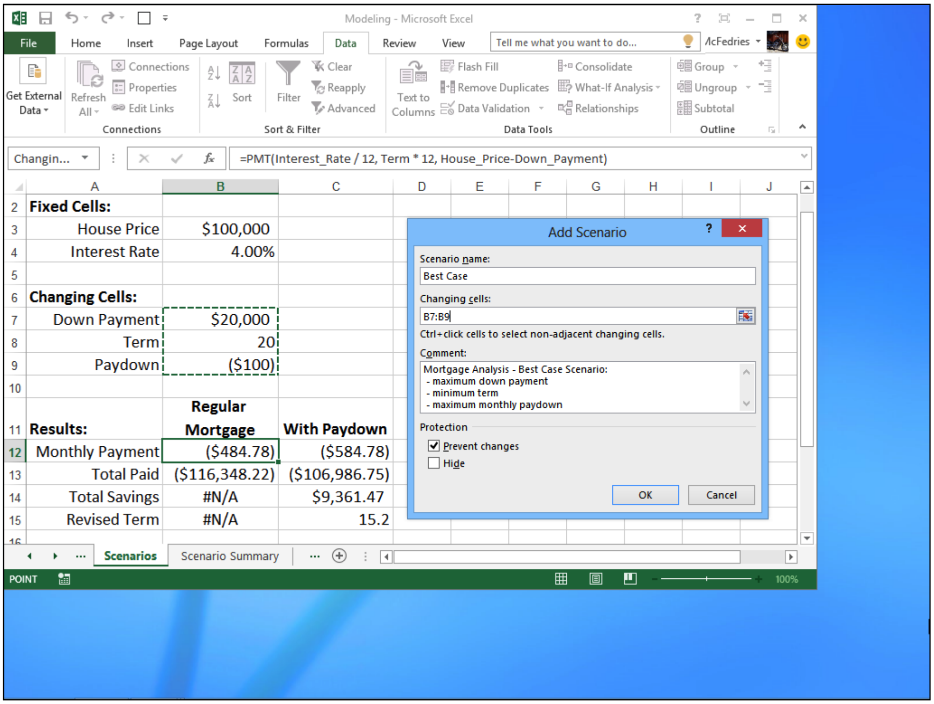
Can I add multiple fields to each area?

Yes. You can add as many fields as you like to each area. You can also move a PivotTable's fields from one area of the PivotTable to another. This enables you to view your data from different perspectives, which can greatly enhance the analysis of the data. Moving a field within a PivotTable is called *pivoting* the data. To move a field, use the PivotTable Fields list to click and drag a field from one area and drop it on another.

CHAPTER 11

Analyzing Data

You can get more out of Excel by performing *data analysis*, which is the application of tools and techniques to organize, study, and reach conclusions about a specific collection of information. In this chapter, you learn data analysis techniques such as sorting and filtering a range, setting validation rules, and using subtotals and scenarios.


Modeling - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Consolidate
What-If Analysis
Relationships
Data Tools
Group
Ungroup
Subtotal
Outline
Changin...
Scenarios
Scenario Summary
POINT
100%

=PMT(Interest_Rate / 12, Term * 12, House_Price-Down_Payment)

	A	B	C
2	**Fixed Cells:**		
3	House Price	$100,000	
4	Interest Rate	4.00%	
5			
6	**Changing Cells:**		
7	Down Payment	$20,000	
8	Term	20	
9	Paydown	($100)	
10			
11	**Results:**	**Regular Mortgage**	**With Paydown**
12	Monthly Payment	($484.78)	($584.78)
13	Total Paid	($116,348.22)	($106,986.75)
14	Total Savings	#N/A	$9,361.47
15	Revised Term	#N/A	15.2

Add Scenario

Scenario name: Best Case

Changing cells: B7:B9

Ctrl+click cells to select non-adjacent changing cells.

Comment:

Mortgage Analysis - Best Case Scenario:
- maximum down payment
- minimum term
- maximum monthly paydown

Protection

☑ Prevent changes

☐ Hide

OK Cancel

Sort a Range or Table 226
Filter a Range or Table 228
Set Data Validation Rules 230
Create a Data Table 232
Summarize Data with Subtotals 234
Group Related Data 236
Analyze Data with Goal Seek 238
Analyze Data with Scenarios 240
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Highlight Cells That Meet Some Criteria 246
Highlight the Top or Bottom Values in a Range 248
Analyze Cell Values with Data Bars 250
Analyze Cell Values with Color Scales 252
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Create a Custom Conditional Formatting Rule 256
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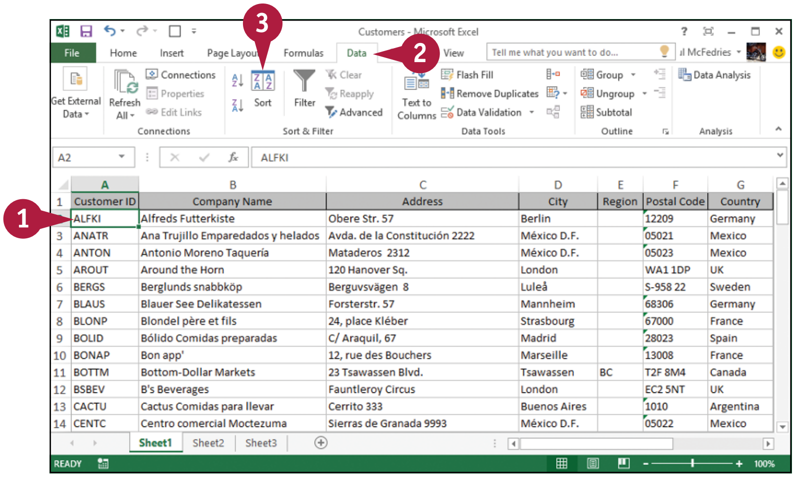
Sort a Range or Table

You can make a range or table easier to read and analyze by sorting the data based on the values in one or more columns.

You can sort the data in either ascending or descending order. An ascending sort arranges the values alphabetically from A to Z, or numerically from 0 to 9; a descending sort arranges the values alphabetically from Z to A, or numerically from 9 to 0.

Sort a Range or Table

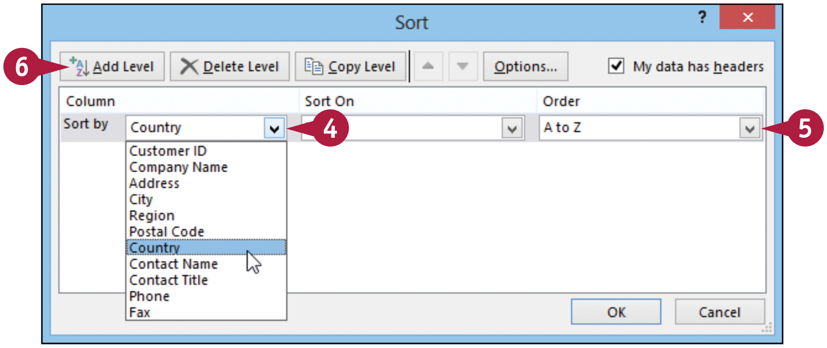
1. Click any cell in the range you want to sort.
2. Click the **Data** tab.
3. Click **Sort** (ZA AZ).


Customers - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Paul McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Sort
Filter
Clear
Reapply
Advanced
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Group
Ungroup
Subtotal
Data Analysis
Connections
Sort & Filter
Data Tools
Outline
Analysis
A2
ALFKI
Sheet1
Sheet2
Sheet3
READY
100%
1
2
3

	A	B	C	D	E	F	G
1	Customer ID	Company Name	Address	City	Region	Postal Code	Country
2	ALFKI	Alfreds Futterkiste	Obere Str. 57	Berlin		12209	Germany
3	ANATR	Ana Trujillo Emparedados y helados	Avda. de la Constitución 2222	México D.F.		05021	Mexico
4	ANTON	Antonio Moreno Taquería	Mataderos 2312	México D.F.		05023	Mexico
5	AROUT	Around the Horn	120 Hanover Sq.	London		WA1 1DP	UK
6	BERGS	Berglunds snabbköp	Berguvsvägen 8	Luleå		S-958 22	Sweden
7	BLAUS	Blauer See Delikatessen	Forsterstr. 57	Mannheim		68306	Germany
8	BLONP	Blondel père et fils	24, place Kléber	Strasbourg		67000	France
9	BOLID	Bólido Comidas preparadas	C/ Araquil, 67	Madrid		28023	Spain
10	BONAP	Bon app'	12, rue des Bouchers	Marseille		13008	France
11	BOTTM	Bottom-Dollar Markets	23 Tsawassen Blvd.	Tsawassen	BC	T2F 8M4	Canada
12	BSBEV	B's Beverages	Fauntleroy Circus	London		EC2 5NT	UK
13	CACTU	Cactus Comidas para llevar	Cerrito 333	Buenos Aires		1010	Argentina
14	CENTC	Centro comercial Moctezuma	Sierras de Granada 9993	México D.F.		05022	Mexico

The Sort dialog box appears.

4. Click the **Sort by** ▼ and then click the field you want to use for the main sort level.
5. Click the **Order** ▼ and then click a sort order for the field.
6. To sort on another field, click **Add Level**.

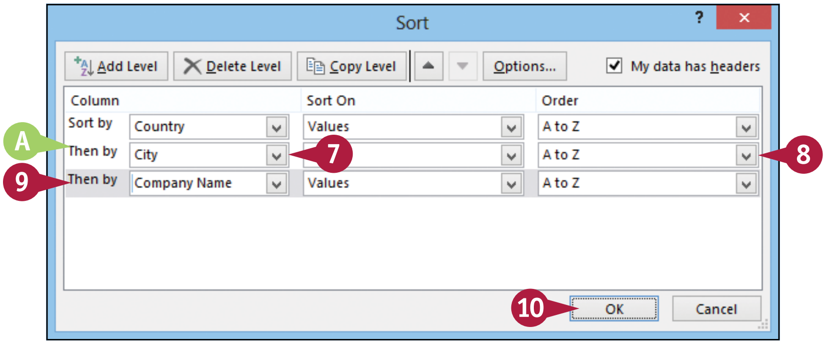

Sort
Add Level
Delete Level
Copy Level
Options...
Column
Sort On
Order
Customer ID
Company Name
Address
City
Region
Postal Code
Country
Contact Name
Contact Title
Phone
Fax
OK
Cancel
4
5
6

☑ My data has headers

Sort by: Country

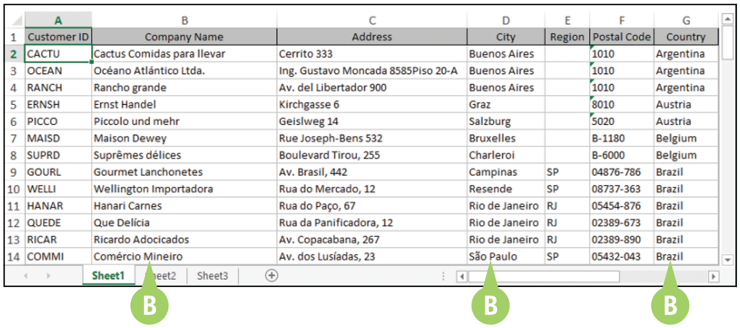
Order: A to Z

- **A** Excel adds another sort level.
- **7** Click the **Then by** ▼ and then click the field you want to use for the sort level.
- **8** Click the **Order** ▼ and then click a sort order for the field.
- **9** Repeat steps **6** to **8** to add more sort levels as needed.
- **10** Click **OK**.
- **B** Excel sorts the range.



☑ My data has headers

Column		Sort On	Order
Sort by	Country	Values	A to Z
Then by	City		A to Z
Then by	Company Name	Values	A to Z



	A	B	C	D	E	F	G
1	Customer ID	Company Name	Address	City	Region	Postal Code	Country
2	CACTU	Cactus Comidas para llevar	Cerrito 333	Buenos Aires		1010	Argentina
3	OCEAN	Océano Atlántico Ltda.	Ing. Gustavo Moncada 8585Piso 20-A	Buenos Aires		1010	Argentina
4	RANCH	Rancho grande	Av. del Libertador 900	Buenos Aires		1010	Argentina
5	ERNSH	Ernst Handel	Kirchgasse 6	Graz		8010	Austria
6	PICCO	Piccolo und mehr	Geislweg 14	Salzburg		5020	Austria
7	MAISD	Maison Dewey	Rue Joseph-Bens 532	Bruxelles		B-1180	Belgium
8	SUPRD	Suprêmes délices	Boulevard Tirou, 255	Charleroi		B-6000	Belgium
9	GOURL	Gourmet Lanchonetes	Av. Brasil, 442	Campinas	SP	04876-786	Brazil
10	WELLI	Wellington Importadora	Rua do Mercado, 12	Resende	SP	08737-363	Brazil
11	HANAR	Hanari Carnes	Rua do Paço, 67	Rio de Janeiro	RJ	05454-876	Brazil
12	QUEDE	Que Delícia	Rua da Panificadora, 12	Rio de Janeiro	RJ	02389-673	Brazil
13	RICAR	Ricardo Adocicados	Av. Copacabana, 267	Rio de Janeiro	RJ	02389-890	Brazil
14	COMMI	Comércio Mineiro	Av. dos Lusíadas, 23	São Paulo	SP	05432-043	Brazil

TIPS

Is there a faster way to sort a range?

Yes, as long as you only need to sort your range on a single column. First, click in any cell inside the column you want to use for the sort. Click the **Data** tab and then click one of the following buttons in the Sort & Filter group:

AZ↓	Click for an ascending sort.
ZA↓	Click for a descending sort.

How do I sort a range using the values in a row instead of a column?

Excel normally sorts a range from top to bottom based on the values in one or more columns. However, you can tell Excel to sort the range from left to right based on the values in one or more rows. Follow steps **1** to **3** to display the Sort dialog box. Click **Options** to display the Sort Options dialog box, select the **Sort left to right** option (○ changes to ●), and then click **OK**.

Filter a Range or Table

You can analyze table data much faster by only viewing those table records that you want to work with. In Excel, this is called *filtering* a range.

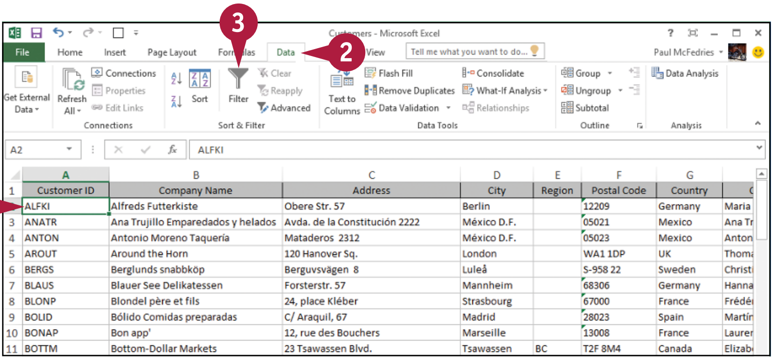
The easiest way to filter a range is to use the Filter buttons, each of which presents you with a list of check boxes for each unique value in a column. You filter the data by selecting the check boxes for the rows you want to see. If you have converted the range to a table, as described in Chapter 10, the Filter buttons for each column are displayed automatically.

Filter a Range or Table

Display the Filter Buttons

Note: If you are filtering a table, you can skip directly to the "Filter the Data" subsection.

1. Click inside the range.
2. Click the **Data** tab.
3. Click **Filter** (▼).


Customers - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Paul McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Consolidate
What-If Analysis
Relationships
Data Tools
Group
Ungroup
Subtotal
Outline
Data Analysis
Analysis
1
2
3

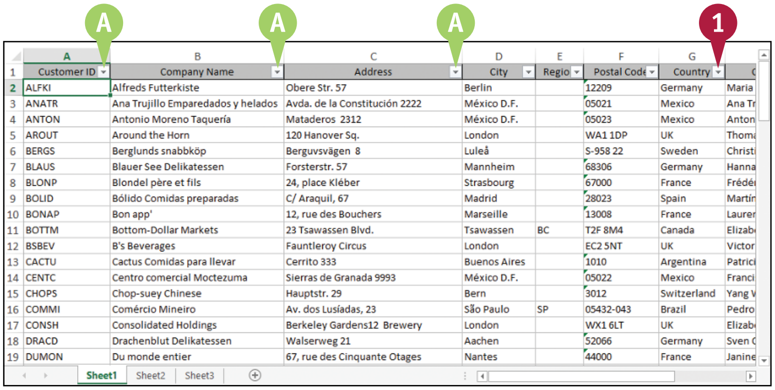
A2 ALFKI

	A	B	C	D	E	F	G	
1	Customer ID	Company Name	Address	City	Region	Postal Code	Country	C
2	ALFKI	Alfreds Futterkiste	Obere Str. 57	Berlin		12209	Germany	Maria
3	ANATR	Ana Trujillo Emparedados y helados	Avda. de la Constitución 2222	México D.F.		05021	Mexico	Ana Tr
4	ANTON	Antonio Moreno Taquería	Mataderos 2312	México D.F.		05023	Mexico	Anton
5	AROUT	Around the Horn	120 Hanover Sq.	London		WA1 1DP	UK	Thoma
6	BERGS	Berglunds snabbköp	Berguvsvägen 8	Luleå		S-958 22	Sweden	Christi
7	BLAUS	Blauer See Delikatessen	Forsterstr. 57	Mannheim		68306	Germany	Hanna
8	BLONP	Blondel père et fils	24, place Kléber	Strasbourg		67000	France	Frédé
9	BOLID	Bólido Comidas preparadas	C/ Araquil, 67	Madrid		28023	Spain	Martín
10	BONAP	Bon app'	12, rue des Bouchers	Marseille		13008	France	Laurer
11	BOTTM	Bottom-Dollar Markets	23 Tsawassen Blvd.	Tsawassen	BC	T2F 8M4	Canada	Elizab

Ⓐ Excel adds a Filter button (▼) to each field.

Filter the Data

1. Click ▼ for the field you want to use as the filter.


A
A
A
1
Sheet1
Sheet2
Sheet3

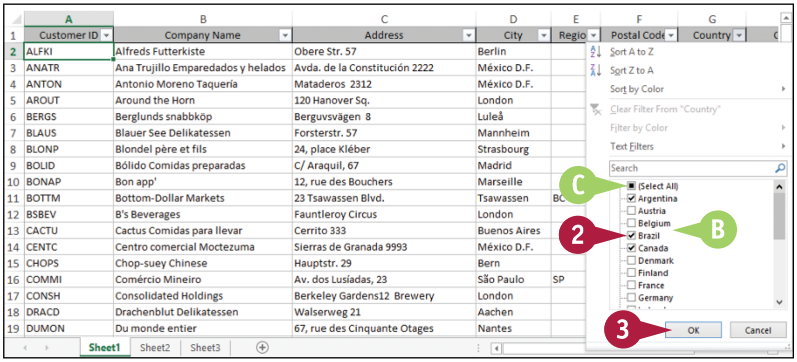
	A	B	C	D	E	F	G	
1	Customer ID ▼	Company Name ▼	Address ▼	City ▼	Regio ▼	Postal Code ▼	Country ▼	C
2	ALFKI	Alfreds Futterkiste	Obere Str. 57	Berlin		12209	Germany	Maria
3	ANATR	Ana Trujillo Emparedados y helados	Avda. de la Constitución 2222	México D.F.		05021	Mexico	Ana Tr
4	ANTON	Antonio Moreno Taquería	Mataderos 2312	México D.F.		05023	Mexico	Anton
5	AROUT	Around the Horn	120 Hanover Sq.	London		WA1 1DP	UK	Thoma
6	BERGS	Berglunds snabbköp	Berguvsvägen 8	Luleå		S-958 22	Sweden	Christi
7	BLAUS	Blauer See Delikatessen	Forsterstr. 57	Mannheim		68306	Germany	Hanna
8	BLONP	Blondel père et fils	24, place Kléber	Strasbourg		67000	France	Frédé
9	BOLID	Bólido Comidas preparadas	C/ Araquil, 67	Madrid		28023	Spain	Martín
10	BONAP	Bon app'	12, rue des Bouchers	Marseille		13008	France	Laurer
11	BOTTM	Bottom-Dollar Markets	23 Tsawassen Blvd.	Tsawassen	BC	T2F 8M4	Canada	Elizab
12	BSBEV	B's Beverages	Fauntleroy Circus	London		EC2 5NT	UK	Victor
13	CACTU	Cactus Comidas para llevar	Cerrito 333	Buenos Aires		1010	Argentina	Patrici
14	CENTC	Centro comercial Moctezuma	Sierras de Granada 9993	México D.F.		05022	Mexico	Franci
15	CHOPS	Chop-suey Chinese	Hauptstr. 29	Bern		3012	Switzerland	Yang V
16	COMMI	Comércio Mineiro	Av. dos Lusíadas, 23	São Paulo	SP	05432-043	Brazil	Pedro
17	CONSH	Consolidated Holdings	Berkeley Gardens12 Brewery	London		WX1 6LT	UK	Elizab
18	DRACD	Drachenblut Delikatessen	Walserweg 21	Aachen		52066	Germany	Sven C
19	DUMON	Du monde entier	67, rue des Cinquante Otages	Nantes		44000	France	Janine

B Excel displays a list of the unique values in the field.

2 Select the check box for each value you want to see (☐ changes to ☑).

C You can toggle all the check boxes on and off by clicking **Select All**.

3 Click **OK**.



	A	B	C	D	E
1	Customer ID	Company Name	Address	City	Regio
2	ALFKI	Alfreds Futterkiste	Obere Str. 57	Berlin	
3	ANATR	Ana Trujillo Emparedados y helados	Avda. de la Constitución 2222	México D.F.	
4	ANTON	Antonio Moreno Taquería	Mataderos 2312	México D.F.	
5	AROUT	Around the Horn	120 Hanover Sq.	London	
6	BERGS	Berglunds snabbköp	Berguvsvägen 8	Luleå	
7	BLAUS	Blauer See Delikatessen	Forsterstr. 57	Mannheim	
8	BLONP	Blondel père et fils	24, place Kléber	Strasbourg	
9	BOLID	Bólido Comidas preparadas	C/ Araquil, 67	Madrid	
10	BONAP	Bon app'	12, rue des Bouchers	Marseille	
11	BOTTM	Bottom-Dollar Markets	23 Tsawassen Blvd.	Tsawassen	BC
12	BSBEV	B's Beverages	Fauntleroy Circus	London	
13	CACTU	Cactus Comidas para llevar	Cerrito 333	Buenos Aires	
14	CENTC	Centro comercial Moctezuma	Sierras de Granada 9993	México D.F.	
15	CHOPS	Chop-suey Chinese	Hauptstr. 29	Bern	
16	COMMI	Comércio Mineiro	Av. dos Lusíadas, 23	São Paulo	SP
17	CONSH	Consolidated Holdings	Berkeley Gardens12 Brewery	London	
18	DRACD	Drachenblut Delikatessen	Walserweg 21	Aachen	
19	DUMON	Du monde entier	67, rue des Cinquante Otages	Nantes	

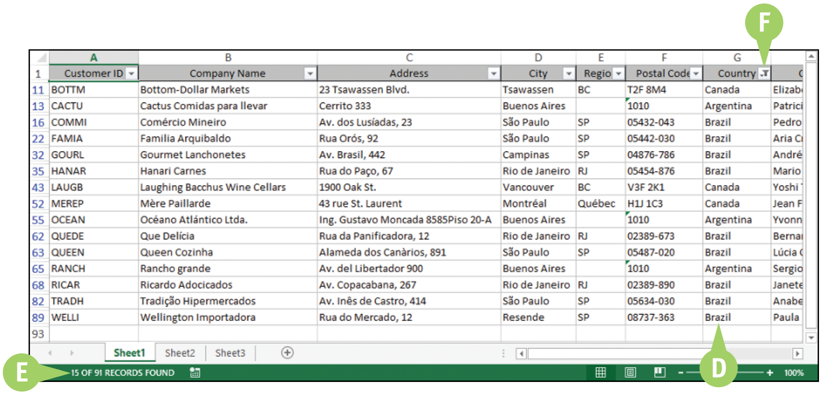
F
Postal Code
G
Country
Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Country"
Filter by Color
Text Filters
Search
■ (Select All)
☑ Argentina
☐ Austria
☐ Belgium
☑ Brazil
☑ Canada
☐ Denmark
☐ Finland
☐ France
☐ Germany
OK
Cancel
Sheet1
Sheet2
Sheet3
C
2
B
3

D Excel filters the table to show only those records that have the field values you selected.

E Excel displays the number of records found.

F The field's drop-down list displays a filter icon (⧩).

To remove the filter, click the **Data** tab and then click **Clear** (⧩; not shown).



	A	B	C	D	E	F	G
1	Customer ID	Company Name	Address	City	Regio	Postal Code	Country
11	BOTTM	Bottom-Dollar Markets	23 Tsawassen Blvd.	Tsawassen	BC	T2F 8M4	Canada
13	CACTU	Cactus Comidas para llevar	Cerrito 333	Buenos Aires		1010	Argentina
16	COMMI	Comércio Mineiro	Av. dos Lusíadas, 23	São Paulo	SP	05432-043	Brazil
22	FAMIA	Familia Arquibaldo	Rua Orós, 92	São Paulo	SP	05442-030	Brazil
32	GOURL	Gourmet Lanchonetes	Av. Brasil, 442	Campinas	SP	04876-786	Brazil
35	HANAR	Hanari Carnes	Rua do Paço, 67	Rio de Janeiro	RJ	05454-876	Brazil
43	LAUGB	Laughing Bacchus Wine Cellars	1900 Oak St.	Vancouver	BC	V3F 2K1	Canada
52	MEREP	Mère Paillarde	43 rue St. Laurent	Montréal	Québec	H1J 1C3	Canada
55	OCEAN	Océano Atlántico Ltda.	Ing. Gustavo Moncada 8585Piso 20-A	Buenos Aires		1010	Argentina
62	QUEDE	Que Delícia	Rua da Panificadora, 12	Rio de Janeiro	RJ	02389-673	Brazil
63	QUEEN	Queen Cozinha	Alameda dos Canàrios, 891	São Paulo	SP	05487-020	Brazil
65	RANCH	Rancho grande	Av. del Libertador 900	Buenos Aires		1010	Argentina
68	RICAR	Ricardo Adocicados	Av. Copacabana, 267	Rio de Janeiro	RJ	02389-890	Brazil
82	TRADH	Tradição Hipermercados	Av. Inês de Castro, 414	São Paulo	SP	05634-030	Brazil
89	WELLI	Wellington Importadora	Rua do Mercado, 12	Resende	SP	08737-363	Brazil
93							

15 OF 91 RECORDS FOUND

F
Sheet1
Sheet2
Sheet3
E
D
100%

TIP

Can I create more sophisticated filters?

Yes, by using a second technique called *quick filters*, which enables you to specify criteria for a field:

1 Click ▼ for the field you want to use as the filter.

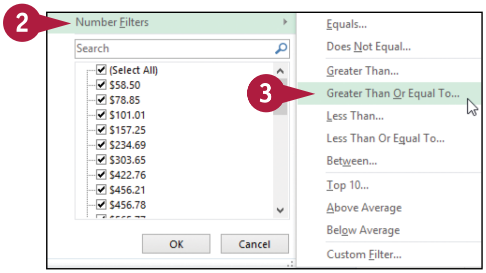
2 Click **Number Filters**.

Note: If the field is a date field, click **Date Filters**; if the field is a text field, click **Text Filters**.

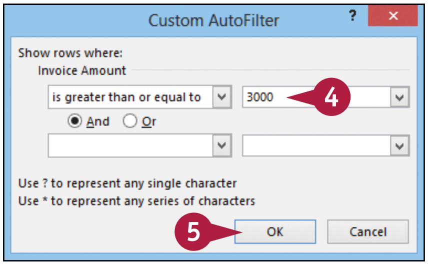
3 Click the filter you want to use.

4 Enter the value you want to use.

5 Click **OK**.



2
Number Filters
Search
☑ (Select All)
☑ $58.50
☑ $78.85
☑ $101.01
☑ $157.25
☑ $234.69
☑ $303.65
☑ $422.76
☑ $456.21
☑ $456.78
OK
Cancel
Equals...
Does Not Equal...
Greater Than...
3
Greater Than Or Equal To...
Less Than...
Less Than Or Equal To...
Between...
Top 10...
Above Average
Below Average
Custom Filter...



Custom AutoFilter

Show rows where:

Invoice Amount

is greater than or equal to | 3000

● And ○ Or

Use ? to represent any single character

Use * to represent any series of characters

?
✕
4
5
OK
Cancel

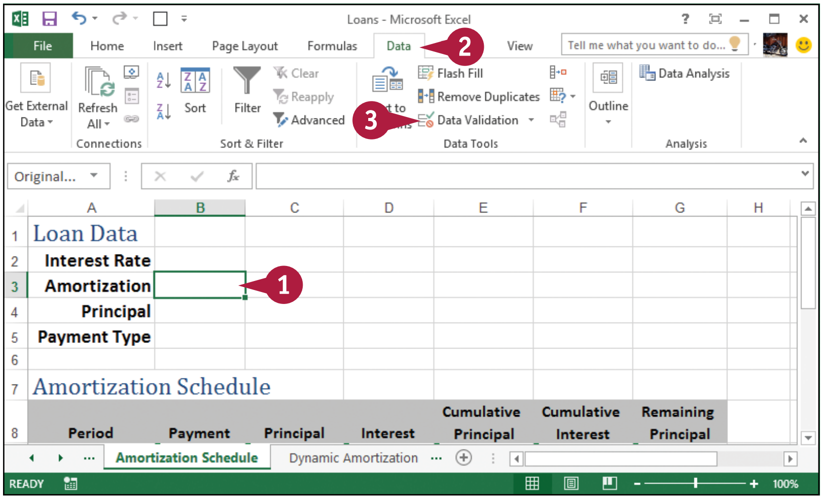
Set Data Validation Rules

You can make Excel data entry more efficient by setting up data entry cells to accept only certain values. To do this, you can set up a cell with data validation criteria that specify the allowed value or values. This is called a *data validation rule*.

Excel also lets you tell the user what to enter by defining an input message that appears when the user selects the cell. You can also configure the data validation rule to display a message when the user tries to enter an invalid value.

Set Data Validation Rules

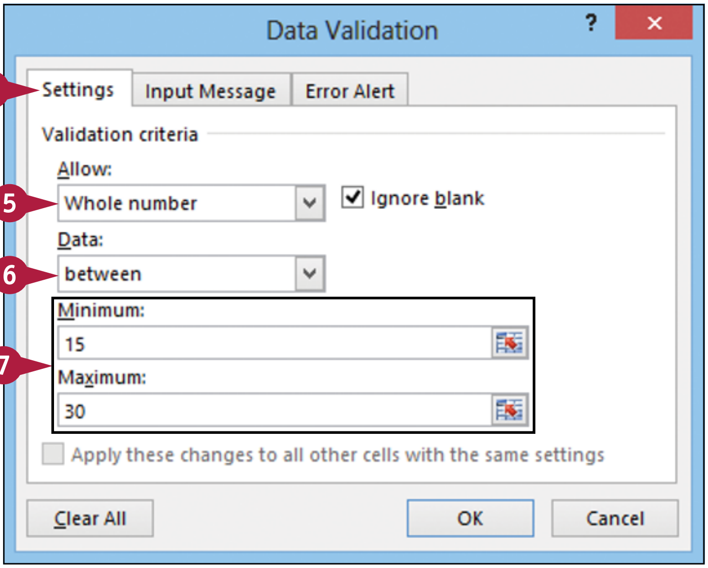
1. Click the cell you want to restrict.
2. Click the **Data** tab.
3. Click **Data Validation** (✓).


Loans - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Get External Data
Refresh All
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Flash Fill
Remove Duplicates
Data Validation
Data Tools
Outline
Data Analysis
Analysis
Original...
fx
A
B
C
D
E
F
G
H
1 Loan Data
2 Interest Rate
3 Amortization
4 Principal
5 Payment Type
6
7 Amortization Schedule
8 Period Payment Principal Interest Cumulative Principal Cumulative Interest Remaining Principal
Amortization Schedule
Dynamic Amortization
READY
100%
1
2
3

The Data Validation dialog box appears.

4. Click the **Settings** tab.
5. In the **Allow** list, click ▼ and select the type of data you want to allow in the cell.
6. In the **Data** list, click ▼ and select the operator you want to use to define the allowable data.
7. Specify the validation criteria, such as the **Maximum** and **Minimum** allowable values shown here.

Note: The criteria boxes you see depend on the operator you chose in step **6**.


Data Validation
?
×
Settings
Input Message
Error Alert
Validation criteria
Clear All
OK
Cancel
4
5
6
7

Allow: Whole number

☑ Ignore blank

Data: between

Minimum: 15

Maximum: 30

☐ Apply these changes to all other cells with the same settings

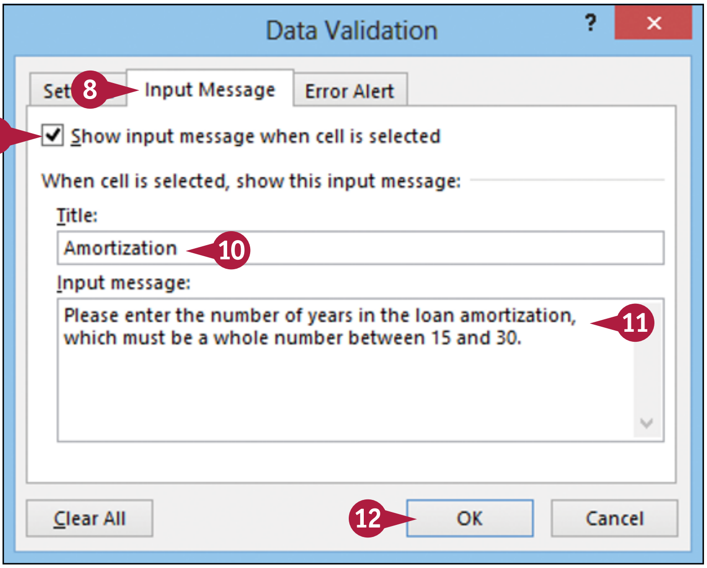
8 Click the **Input Message** tab.

9 Make sure the **Show input message when cell is selected** check box is selected (☑).

10 Type a message title in the **Title** text box.

11 Type the message you want to display in the **Input Message** text box.

12 Click **OK**.



☑ Show input message when cell is selected

When cell is selected, show this input message:

Title:

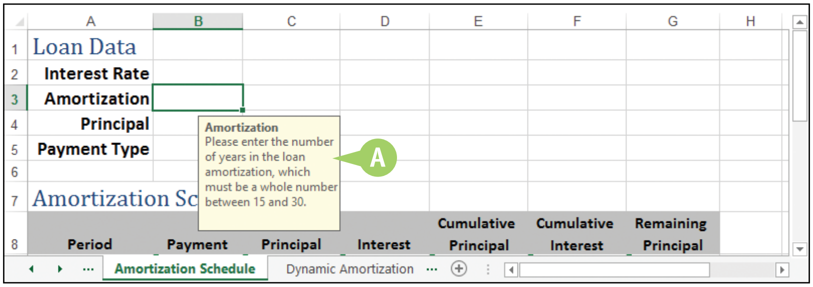
Amortization

Input message:

Please enter the number of years in the loan amortization, which must be a whole number between 15 and 30.

Excel configures the cell to accept only values that meet your criteria.

A When the user selects the cell, the input message appears.



	A	B	C	D	E	F	G	H
1	Loan Data							
2	Interest Rate							
3	Amortization							
4	Principal							
5	Payment Type							
6								
7	Amortization Sc							
8	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal	

Amortization
Please enter the number of years in the loan amortization, which must be a whole number between 15 and 30.

TIPS

Can I configure the cell to display a message if the user tries to enter an invalid value?

Yes. Follow steps 1 to 3 to open the Data Validation dialog box, and then click the **Error Alert** tab. Make sure the **Show error alert after invalid data is entered** check box is selected (☑), and then specify the **Style**, **Title**, and **Error Message**. Click **OK**.

How do I remove data validation from a cell?

If you no longer need to use data validation on a cell, you should clear the settings. Follow steps 1 to 3 to display the Data Validation dialog box and then click **Clear All**. Excel removes all the validation criteria, as well as the input message and the error alert. Click **OK**.

Create a Data Table

If you are interested in studying the effect a range of values has on the formula, you can set up a *data table*. This is a table that consists of the formula you are using, and multiple input values for that formula. Excel automatically creates a solution to the formula for each different input value.

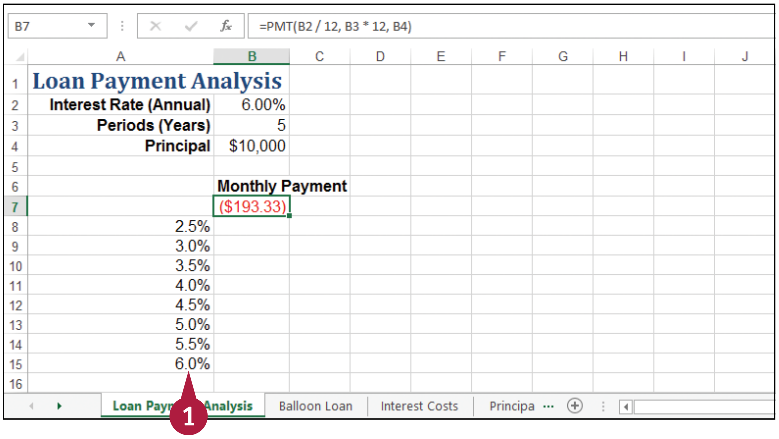
Do not confuse data tables with the Excel tables that you learned about in Chapter 10. A data table is a special range that Excel uses to calculate multiple solutions to a formula.

Create a Data Table

1. Type the input values:

   To enter the values in a column, start the column one cell down and one cell to the left of the cell containing the formula, as shown here.

   To enter the values in a row, start the row one cell up and one cell to the right of the cell containing the formula.

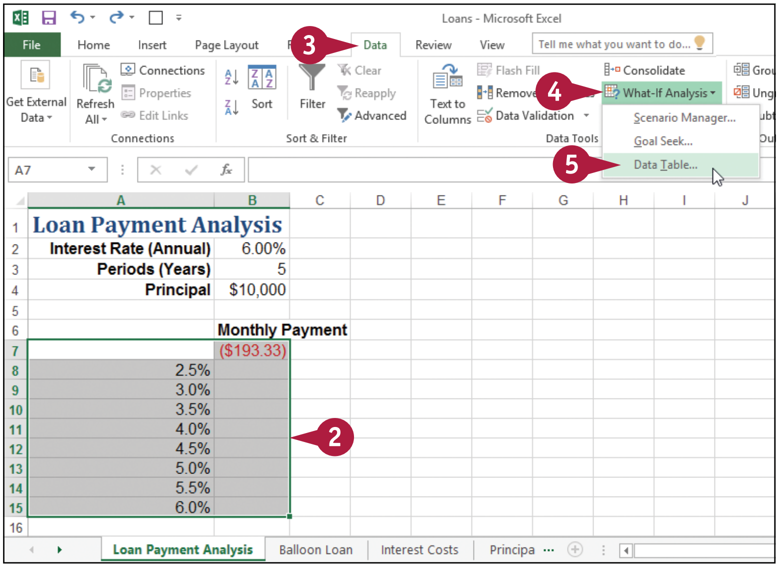


B7 =PMT(B2 / 12, B3 * 12, B4)

	A	B
1	Loan Payment Analysis	
2	Interest Rate (Annual)	6.00%
3	Periods (Years)	5
4	Principal	$10,000
5		
6		Monthly Payment
7		($193.33)
8	2.5%	
9	3.0%	
10	3.5%	
11	4.0%	
12	4.5%	
13	5.0%	
14	5.5%	
15	6.0%	
16		

Loan Payment Analysis
Balloon Loan
Interest Costs
Principa
1

2. Select the range that includes the input values and the formula.
3. Click the **Data** tab.
4. Click **What-If Analysis** (▦).
5. Click **Data Table**.



Loans - Microsoft Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove
Data Validation
Data Tools
Consolidate
What-If Analysis
Scenario Manager...
Goal Seek...
Data Table...
A7
Loan Payment Analysis
Balloon Loan
Interest Costs
Principa
2
3
4
5

	A	B
1	Loan Payment Analysis	
2	Interest Rate (Annual)	6.00%
3	Periods (Years)	5
4	Principal	$10,000
5		
6		Monthly Payment
7		($193.33)
8	2.5%	
9	3.0%	
10	3.5%	
11	4.0%	
12	4.5%	
13	5.0%	
14	5.5%	
15	6.0%	
16		

The Data Table dialog box appears.

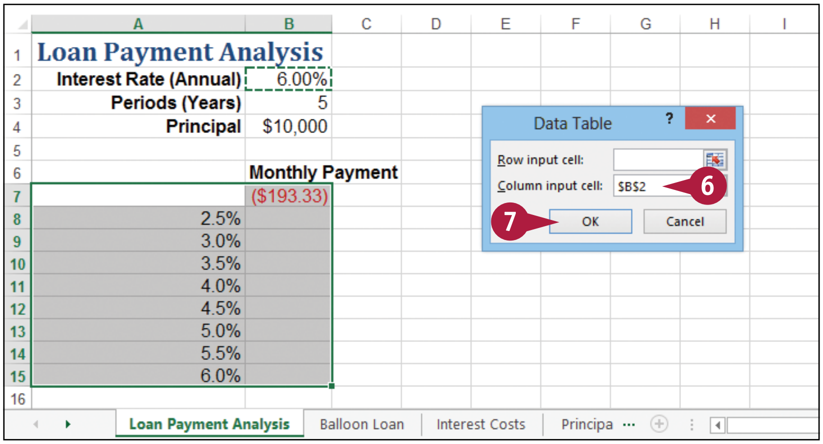
6 Specify the formula cell you want to use as the data table's input cell:

If the input values are in a column, enter the input cell's address in the **Column input cell** text box.

If you entered the input values in a row, enter the input cell's address in the **Row input cell** text box.

7 Click **OK**.

A Excel displays the results.

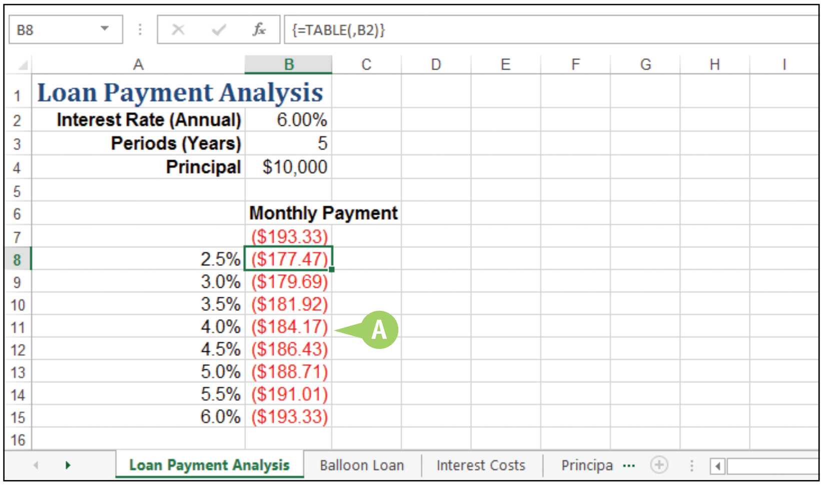


	A	B
1	Loan Payment Analysis	
2	Interest Rate (Annual)	6.00%
3	Periods (Years)	5
4	Principal	$10,000
5		
6		Monthly Payment
7		($193.33)
8	2.5%	
9	3.0%	
10	3.5%	
11	4.0%	
12	4.5%	
13	5.0%	
14	5.5%	
15	6.0%	
16		

Data Table

Row input cell:

Column input cell: $B$2



B8 {=TABLE(,B2)}

	A	B
1	Loan Payment Analysis	
2	Interest Rate (Annual)	6.00%
3	Periods (Years)	5
4	Principal	$10,000
5		
6		Monthly Payment
7		($193.33)
8	2.5%	($177.47)
9	3.0%	($179.69)
10	3.5%	($181.92)
11	4.0%	($184.17)
12	4.5%	($186.43)
13	5.0%	($188.71)
14	5.5%	($191.01)
15	6.0%	($193.33)
16		

TIPS

What is what-if analysis?

The technique called *what-if analysis* is perhaps the most basic method for analyzing worksheet data. With what-if analysis, you first calculate a formula D, based on the input from variables A, B, and C. You then say, "What happens to the result if I change the value of variable A?", "What happens if I change B or C?", and so on.

When I try to delete part of the data table, I get an error. Why?

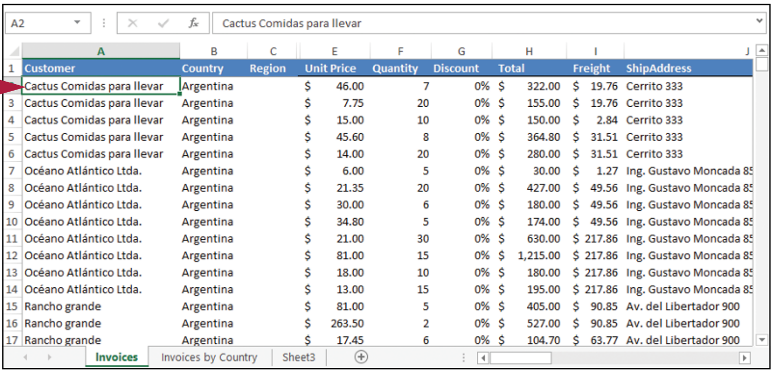
The data table results are created as an *array formula*, which is a special formula that Excel treats as a unit. This means that you cannot move or delete part of the results. If you need to work with the data table results, you must first select the entire results range.

Summarize Data with Subtotals

Although you can use formulas and worksheet functions to summarize your data in various ways, including sums, averages, counts, maximums, and minimums, if you are in a hurry, or if you just need a quick summary of your data, you can get Excel to do most of the work for you. The secret here is a feature called *automatic subtotals*, which are formulas that Excel adds to a worksheet automatically.

Summarize Data with Subtotals

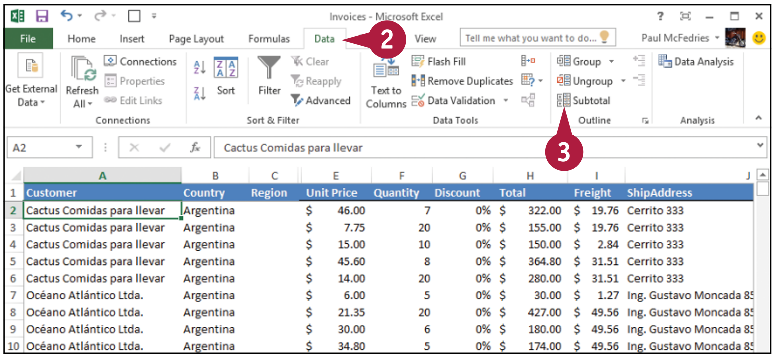
① Click a cell within the range you want to subtotal.


A2
Cactus Comidas para llevar
1
Invoices
Invoices by Country
Sheet3

Customer	Country	Region	Unit Price	Quantity	Discount	Total	Freight	ShipAddress
Cactus Comidas para llevar	Argentina		$ 46.00	7	0%	$ 322.00	$ 19.76	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 7.75	20	0%	$ 155.00	$ 19.76	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 15.00	10	0%	$ 150.00	$ 2.84	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 45.60	8	0%	$ 364.80	$ 31.51	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 14.00	20	0%	$ 280.00	$ 31.51	Cerrito 333
Océano Atlántico Ltda.	Argentina		$ 6.00	5	0%	$ 30.00	$ 1.27	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 21.35	20	0%	$ 427.00	$ 49.56	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 30.00	6	0%	$ 180.00	$ 49.56	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 34.80	5	0%	$ 174.00	$ 49.56	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 21.00	30	0%	$ 630.00	$ 217.86	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 81.00	15	0%	$ 1,215.00	$ 217.86	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 18.00	10	0%	$ 180.00	$ 217.86	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 13.00	15	0%	$ 195.00	$ 217.86	Ing. Gustavo Moncada 85
Rancho grande	Argentina		$ 81.00	5	0%	$ 405.00	$ 90.85	Av. del Libertador 900
Rancho grande	Argentina		$ 263.50	2	0%	$ 527.00	$ 90.85	Av. del Libertador 900
Rancho grande	Argentina		$ 17.45	6	0%	$ 104.70	$ 63.77	Av. del Libertador 900

② Click the **Data** tab.

③ Click **Subtotal** (▦).


Invoices - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Paul McFedries
2
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Data Tools
Group
Ungroup
Subtotal
Outline
Data Analysis
Analysis
3
A2
Cactus Comidas para llevar

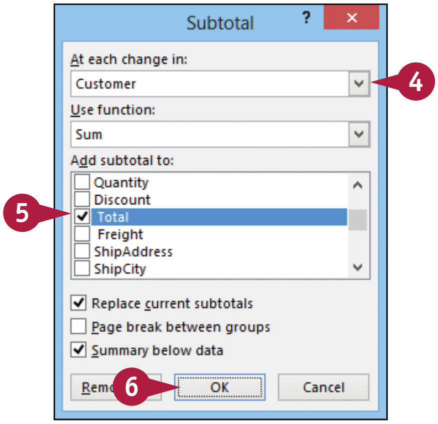
Customer	Country	Region	Unit Price	Quantity	Discount	Total	Freight	ShipAddress
Cactus Comidas para llevar	Argentina		$ 46.00	7	0%	$ 322.00	$ 19.76	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 7.75	20	0%	$ 155.00	$ 19.76	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 15.00	10	0%	$ 150.00	$ 2.84	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 45.60	8	0%	$ 364.80	$ 31.51	Cerrito 333
Cactus Comidas para llevar	Argentina		$ 14.00	20	0%	$ 280.00	$ 31.51	Cerrito 333
Océano Atlántico Ltda.	Argentina		$ 6.00	5	0%	$ 30.00	$ 1.27	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 21.35	20	0%	$ 427.00	$ 49.56	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 30.00	6	0%	$ 180.00	$ 49.56	Ing. Gustavo Moncada 85
Océano Atlántico Ltda.	Argentina		$ 34.80	5	0%	$ 174.00	$ 49.56	Ing. Gustavo Moncada 85

The Subtotal dialog box appears.

4 Click the **At each change in** ▼ and then click the column you want to use to group the subtotals.

5 In the **Add subtotal to** list, select the check box for the column you want to summarize (☐ changes to ☑).

6 Click **OK**.



Subtotal

At each change in: Customer

Use function: Sum

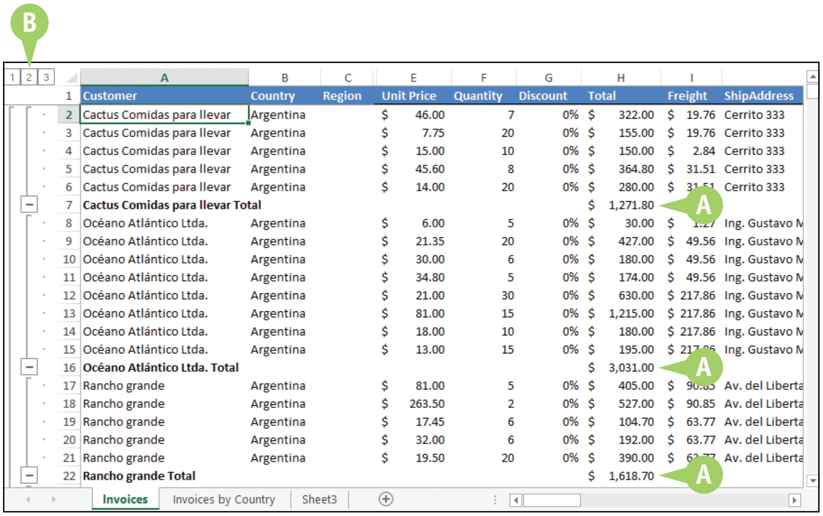
Add subtotal to:
- ☐ Quantity
- ☐ Discount
- ☑ Total
- ☐ Freight
- ☐ ShipAddress
- ☐ ShipCity

☑ Replace current subtotals
☐ Page break between groups
☑ Summary below data

A Excel calculates the subtotals and adds them into the range.

B Excel adds outline symbols to the range.

Note: See the next section, "Group Related Data," to learn more about outlining in Excel.



	A	B	C	E	F	G	H	I	
1	Customer	Country	Region	Unit Price	Quantity	Discount	Total	Freight	ShipAddress
2	Cactus Comidas para llevar	Argentina		$ 46.00	7	0%	$ 322.00	$ 19.76	Cerrito 333
3	Cactus Comidas para llevar	Argentina		$ 7.75	20	0%	$ 155.00	$ 19.76	Cerrito 333
4	Cactus Comidas para llevar	Argentina		$ 15.00	10	0%	$ 150.00	$ 2.84	Cerrito 333
5	Cactus Comidas para llevar	Argentina		$ 45.60	8	0%	$ 364.80	$ 31.51	Cerrito 333
6	Cactus Comidas para llevar	Argentina		$ 14.00	20	0%	$ 280.00	$ 31.51	Cerrito 333
7	**Cactus Comidas para llevar Total**						$ 1,271.80		
8	Océano Atlántico Ltda.	Argentina		$ 6.00	5	0%	$ 30.00	$ 1.27	Ing. Gustavo M
9	Océano Atlántico Ltda.	Argentina		$ 21.35	20	0%	$ 427.00	$ 49.56	Ing. Gustavo M
10	Océano Atlántico Ltda.	Argentina		$ 30.00	6	0%	$ 180.00	$ 49.56	Ing. Gustavo M
11	Océano Atlántico Ltda.	Argentina		$ 34.80	5	0%	$ 174.00	$ 49.56	Ing. Gustavo M
12	Océano Atlántico Ltda.	Argentina		$ 21.00	30	0%	$ 630.00	$ 217.86	Ing. Gustavo M
13	Océano Atlántico Ltda.	Argentina		$ 81.00	15	0%	$ 1,215.00	$ 217.86	Ing. Gustavo M
14	Océano Atlántico Ltda.	Argentina		$ 18.00	10	0%	$ 180.00	$ 217.86	Ing. Gustavo M
15	Océano Atlántico Ltda.	Argentina		$ 13.00	15	0%	$ 195.00	$ 217.86	Ing. Gustavo M
16	**Océano Atlántico Ltda. Total**						$ 3,031.00		
17	Rancho grande	Argentina		$ 81.00	5	0%	$ 405.00	$ 90.85	Av. del Liberta
18	Rancho grande	Argentina		$ 263.50	2	0%	$ 527.00	$ 90.85	Av. del Liberta
19	Rancho grande	Argentina		$ 17.45	6	0%	$ 104.70	$ 63.77	Av. del Liberta
20	Rancho grande	Argentina		$ 32.00	6	0%	$ 192.00	$ 63.77	Av. del Liberta
21	Rancho grande	Argentina		$ 19.50	20	0%	$ 390.00	$ 63.77	Av. del Liberta
22	**Rancho grande Total**						$ 1,618.70		

TIPS

Do I need to prepare my worksheet to use subtotals?

Yes. Excel sets up automatic subtotals based on data groupings in a selected field. For example, if you ask for subtotals based on the Customer field, Excel runs down the Customer column and creates a new subtotal each time the name changes. To get useful summaries, you need to sort the range on the field containing the data groupings you are interested in.

Can I only calculate totals?

No. The word *subtotal* here is a bit misleading because you can summarize more than just totals. You can also count values, calculate the average of the values, determine the maximum or minimum value, and more. To change the summary calculation, follow steps **1** to **4**, click the **Use function** ▼, and then click the function you want to use for the summary.

Group Related Data

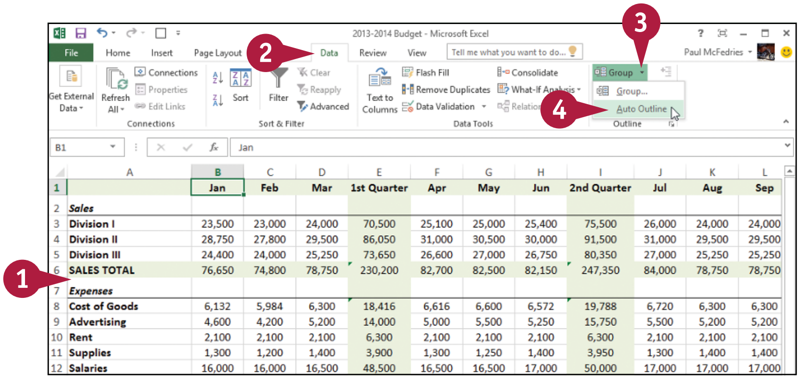
You can control a worksheet range display by grouping the data based on the worksheet formulas and data.

Grouping the data creates a worksheet outline, which you can use to "collapse" sections of the sheet to display only summary cells, or "expand" hidden sections to show the underlying detail. Note that when you add subtotals to a range as described in the previous section, "Summarize Data with Subtotals," Excel automatically groups the data and displays the outline tools.

Group Related Data

Create the Outline

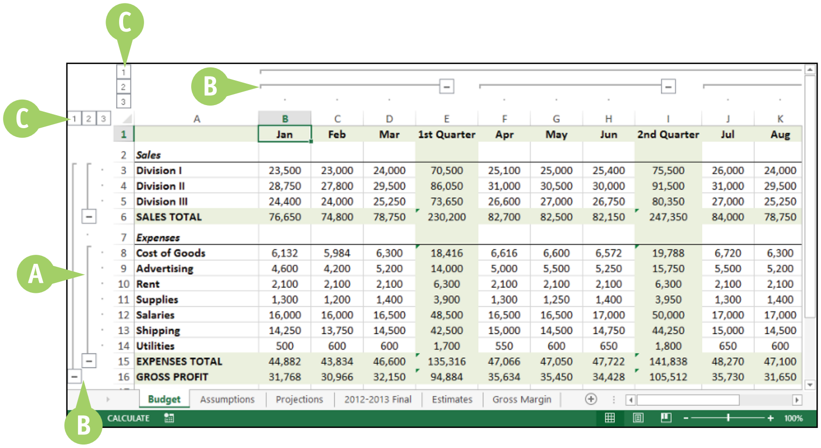
1. Display the worksheet you want to outline.
2. Click the **Data** tab.
3. Click the **Group** ▼.
4. Click **Auto Outline**.



2013-2014 Budget - Microsoft Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Paul McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Consolidate
What-If Analysis
Relation
Data Tools
Group
Group...
Auto Outline
Outline
B1
Jan
1
2
3
4

	A	B	C	D	E	F	G	H	I	J	K	L
1		Jan	Feb	Mar	1st Quarter	Apr	May	Jun	2nd Quarter	Jul	Aug	Sep
2	*Sales*											
3	Division I	23,500	23,000	24,000	70,500	25,100	25,000	25,400	75,500	26,000	24,000	24,000
4	Division II	28,750	27,800	29,500	86,050	31,000	30,500	30,000	91,500	31,000	29,500	29,500
5	Division III	24,400	24,000	25,250	73,650	26,600	27,000	26,750	80,350	27,000	25,250	25,250
6	SALES TOTAL	76,650	74,800	78,750	230,200	82,700	82,500	82,150	247,350	84,000	78,750	78,750
7	*Expenses*											
8	Cost of Goods	6,132	5,984	6,300	18,416	6,616	6,600	6,572	19,788	6,720	6,300	6,300
9	Advertising	4,600	4,200	5,200	14,000	5,000	5,500	5,250	15,750	5,500	5,200	5,200
10	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	2,100	2,100	2,100
11	Supplies	1,300	1,200	1,400	3,900	1,300	1,250	1,400	3,950	1,300	1,400	1,400
12	Salaries	16,000	16,000	16,500	48,500	16,500	16,500	17,000	50,000	17,000	17,000	17,000

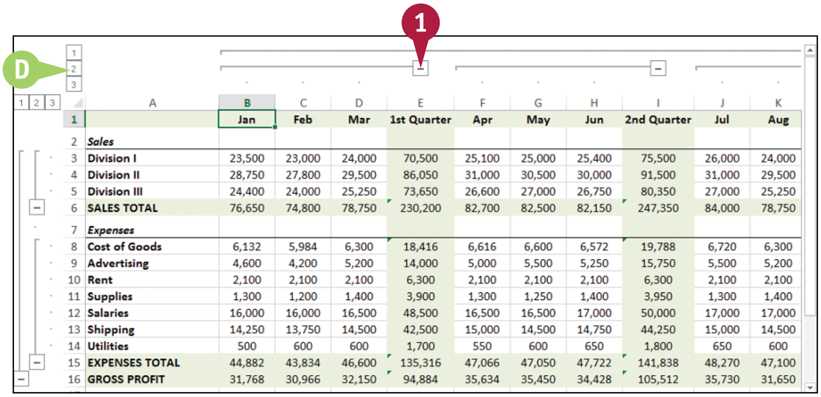
- **A** Excel outlines the worksheet data.
- **B** Excel uses level bars to indicate the grouped ranges.
- **C** Excel displays level symbols to indicate the various levels of the detail that are available in the outline.



C
B
C
A
B
1
2
3
1 2 3
Budget
Assumptions
Projections
2012-2013 Final
Estimates
Gross Margin
CALCULATE
100%

	A	B	C	D	E	F	G	H	I	J	K
1		Jan	Feb	Mar	1st Quarter	Apr	May	Jun	2nd Quarter	Jul	Aug
2	*Sales*										
3	Division I	23,500	23,000	24,000	70,500	25,100	25,000	25,400	75,500	26,000	24,000
4	Division II	28,750	27,800	29,500	86,050	31,000	30,500	30,000	91,500	31,000	29,500
5	Division III	24,400	24,000	25,250	73,650	26,600	27,000	26,750	80,350	27,000	25,250
6	SALES TOTAL	76,650	74,800	78,750	230,200	82,700	82,500	82,150	247,350	84,000	78,750
7	*Expenses*										
8	Cost of Goods	6,132	5,984	6,300	18,416	6,616	6,600	6,572	19,788	6,720	6,300
9	Advertising	4,600	4,200	5,200	14,000	5,000	5,500	5,250	15,750	5,500	5,200
10	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	2,100	2,100
11	Supplies	1,300	1,200	1,400	3,900	1,300	1,250	1,400	3,950	1,300	1,400
12	Salaries	16,000	16,000	16,500	48,500	16,500	16,500	17,000	50,000	17,000	17,000
13	Shipping	14,250	13,750	14,500	42,500	15,000	14,500	14,750	44,250	15,000	14,500
14	Utilities	500	600	600	1,700	550	600	650	1,800	650	600
15	EXPENSES TOTAL	44,882	43,834	46,600	135,316	47,066	47,050	47,722	141,838	48,270	47,100
16	GROSS PROFIT	31,768	30,966	32,150	94,884	35,634	35,450	34,428	105,512	35,730	31,650

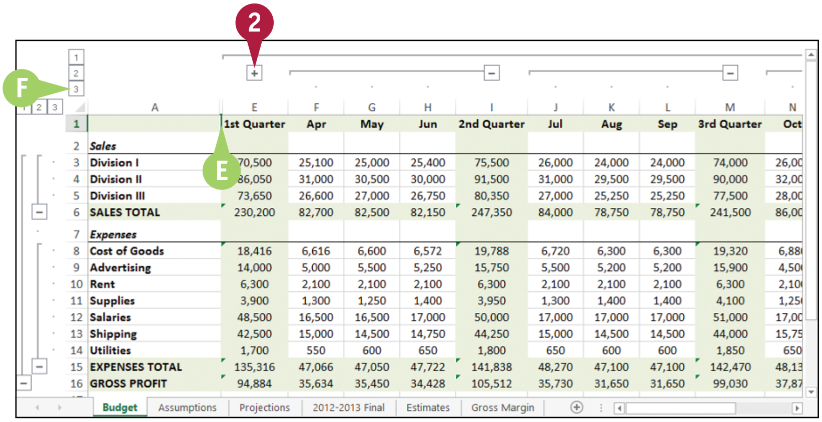
Use the Outline to Control the Range Display



	A	B	C	D	E	F	G	H	I	J	K
1		Jan	Feb	Mar	1st Quarter	Apr	May	Jun	2nd Quarter	Jul	Aug
2	*Sales*										
3	Division I	23,500	23,000	24,000	70,500	25,100	25,000	25,400	75,500	26,000	24,000
4	Division II	28,750	27,800	29,500	86,050	31,000	30,500	30,000	91,500	31,000	29,500
5	Division III	24,400	24,000	25,250	73,650	26,600	27,000	26,750	80,350	27,000	25,250
6	SALES TOTAL	76,650	74,800	78,750	230,200	82,700	82,500	82,150	247,350	84,000	78,750
7	*Expenses*										
8	Cost of Goods	6,132	5,984	6,300	18,416	6,616	6,600	6,572	19,788	6,720	6,300
9	Advertising	4,600	4,200	5,200	14,000	5,000	5,500	5,250	15,750	5,500	5,200
10	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	2,100	2,100
11	Supplies	1,300	1,200	1,400	3,900	1,300	1,250	1,400	3,950	1,300	1,400
12	Salaries	16,000	16,000	16,500	48,500	16,500	16,500	17,000	50,000	17,000	17,000
13	Shipping	14,250	13,750	14,500	42,500	15,000	14,500	14,750	44,250	15,000	14,500
14	Utilities	500	600	600	1,700	550	600	650	1,800	650	600
15	EXPENSES TOTAL	44,882	43,834	46,600	135,316	47,066	47,050	47,722	141,838	48,270	47,100
16	GROSS PROFIT	31,768	30,966	32,150	94,884	35,634	35,450	34,428	105,512	35,730	31,650

1. Click a **Collapse** symbol (−) to hide the range indicated by the level bar.

D You can also collapse multiple ranges that are on the same outline level by clicking the appropriate level symbol.



	A	E	F	G	H	I	J	K	L	M	N
1		1st Quarter	Apr	May	Jun	2nd Quarter	Jul	Aug	Sep	3rd Quarter	Oct
2	*Sales*										
3	Division I	70,500	25,100	25,000	25,400	75,500	26,000	24,000	24,000	74,000	26,00
4	Division II	86,050	31,000	30,500	30,000	91,500	31,000	29,500	29,500	90,000	32,00
5	Division III	73,650	26,600	27,000	26,750	80,350	27,000	25,250	25,250	77,500	28,00
6	SALES TOTAL	230,200	82,700	82,500	82,150	247,350	84,000	78,750	78,750	241,500	86,00
7	*Expenses*										
8	Cost of Goods	18,416	6,616	6,600	6,572	19,788	6,720	6,300	6,300	19,320	6,88
9	Advertising	14,000	5,000	5,500	5,250	15,750	5,500	5,200	5,200	15,900	4,50
10	Rent	6,300	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	2,10
11	Supplies	3,900	1,300	1,250	1,400	3,950	1,300	1,400	1,400	4,100	1,25
12	Salaries	48,500	16,500	16,500	17,000	50,000	17,000	17,000	17,000	51,000	17,00
13	Shipping	42,500	15,000	14,500	14,750	44,250	15,000	14,500	14,500	44,000	15,75
14	Utilities	1,700	550	600	650	1,800	650	600	600	1,850	650
15	EXPENSES TOTAL	135,316	47,066	47,050	47,722	141,838	48,270	47,100	47,100	142,470	48,13
16	GROSS PROFIT	94,884	35,634	35,450	34,428	105,512	35,730	31,650	31,650	99,030	37,87

E Excel collapses the range.

2. Click the **Expand** symbol (+) to view the range again.

F You can also show multiple ranges that are on the same outline level by clicking the appropriate level symbol.

TIP

Do I have to prepare my worksheet before I can group the data?

Yes. Not all worksheets can be grouped, so you need to make sure your worksheet is a candidate for outlining. First, the worksheet must contain formulas that reference cells or ranges directly adjacent to the formula cell. Worksheets with SUM( ) functions that subtotal cells above or to the left are particularly good candidates for outlining.

Second, there must be a consistent pattern to the direction of the formula references. For example, a worksheet with formulas that always reference cells above or to the left can be outlined. Excel will not outline a worksheet with, say, SUM( ) functions that reference ranges above and below a formula cell.

Analyze Data with Goal Seek

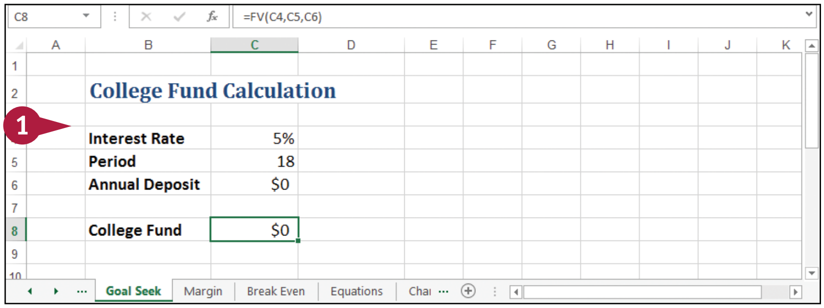
If you already know the formula result you want, but you must find an input value that produces that result, you can use the Excel Goal Seek tool to solve the problem. You tell Goal Seek the final value you need and which variable to change, and it finds a solution for you.

For example, you might know that you want to have $50,000 saved to purchase new equipment five years from now, so you need to calculate how much to invest each year.

Analyze Data with Goal Seek

① Set up your worksheet model.

Note: See the first tip to learn more about setting up a worksheet for Goal Seek.


1
A
B
C
D
E
F
G
H
I
J
K
Goal Seek
Margin
Break Even
Equations
Chai

C8 =FV(C4,C5,C6)

College Fund Calculation

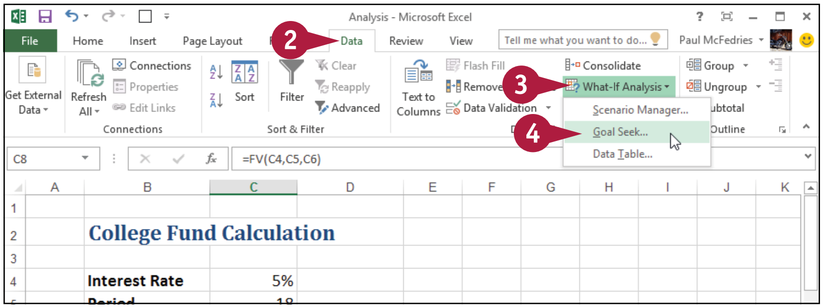
Interest Rate	5%
Period	18
Annual Deposit	$0
College Fund	$0

② Click the **Data** tab.

③ Click **What-If Analysis** (▦?).

④ Click **Goal Seek.**

The Goal Seek dialog box appears.


Analysis - Microsoft Excel
File
Home
Insert
Page Layout
Data
Review
View
Tell me what you want to do...
Paul McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove
Data Validation
Consolidate
What-If Analysis
Scenario Manager...
Goal Seek...
Data Table...
Group
Ungroup
ubtotal
Outline
2
3
4

C8 =FV(C4,C5,C6)

College Fund Calculation

Interest Rate	5%

5 Click inside the **Set cell** box.

6 Click the cell that contains the formula you want Goal Seek to work with.

7 Use the **To value** text box to type the value that you want Goal Seek to find.

8 Click in the **By changing cell** box.

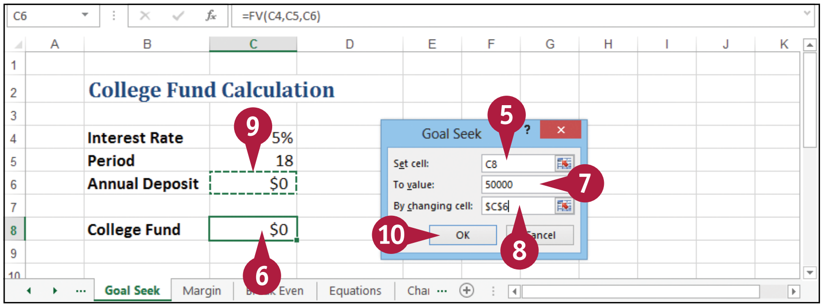
9 Click the cell that you want Goal Seek to modify.

10 Click **OK**.

A Goal Seek adjusts the changing cell value until it reaches a solution.

B The formula now shows the value you entered in step 7.

11 Click **OK**.



C6 =FV(C4,C5,C6)

College Fund Calculation

Interest Rate	5%
Period	18
Annual Deposit	$0
College Fund	$0

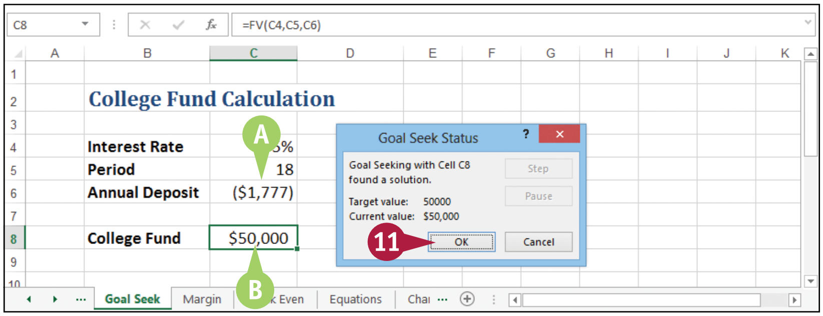
Goal Seek

Set cell: C8

To value: 50000

By changing cell: $C$6

A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
9
5
7
10
8
6
OK
Cancel
Goal Seek
Margin
Break Even
Equations
Char



C8 =FV(C4,C5,C6)

College Fund Calculation

Interest Rate	5%
Period	18
Annual Deposit	($1,777)
College Fund	$50,000

Goal Seek Status

Goal Seeking with Cell C8 found a solution.

Target value: 50000

Current value: $50,000

A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
A
11
B
Step
Pause
OK
Cancel
Goal Seek
Margin
Break Even
Equations
Char

TIPS

How do I set up my worksheet to use Goal Seek?

Setting up your worksheet model for Goal Seek means doing three things. First, set up one cell as the *changing cell*, which is the value that Goal Seek will manipulate to reach the goal. Enter an initial value (such as 0) into the cell. Second, set up the other input values for the formula and give them proper initial values. Third, create a formula for Goal Seek to use to reach the goal.

What other types of problems can Goal Seek solve?

One common problem is called a *break-even analysis*, where you determine the number of units you have to sell of a product so that your total profits are 0. In this case, the changing cell is the number of units sold, and the formula is the profit calculation. You can also use Goal Seek to determine which price (the changing cell) is required to return a particular profit margin (the formula).

Analyze Data with Scenarios

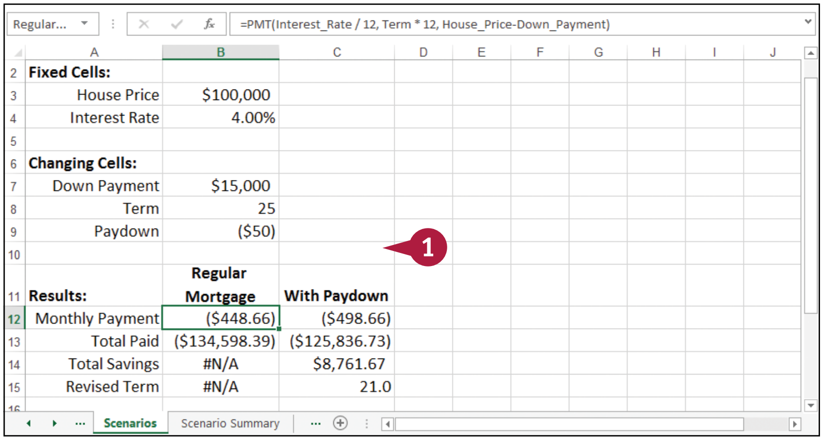
You can analyze the result of a formula by creating sets of values that enable you to quickly use those values as the inputs for a formula.

For example, one set of values might represent a best-case approach, while another might represent a worst-case approach. In Excel, each of these coherent sets of input values — known as *changing cells* — is called a *scenario*. By creating multiple scenarios, you can easily apply these different value sets to analyze how the result of a formula changes under different conditions.

Analyze Data with Scenarios

Create a Scenario

1. Set up your worksheet model.



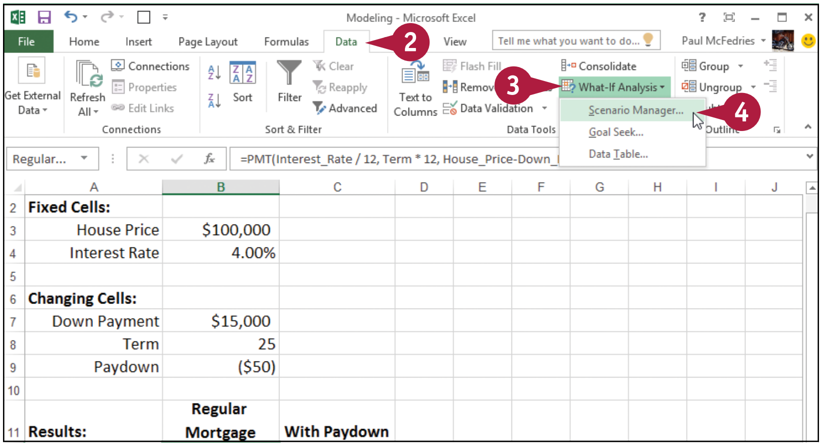
Regular...

=PMT(Interest_Rate / 12, Term * 12, House_Price-Down_Payment)

	A	B	C
2	**Fixed Cells:**		
3	House Price	$100,000	
4	Interest Rate	4.00%	
5			
6	**Changing Cells:**		
7	Down Payment	$15,000	
8	Term	25	
9	Paydown	($50)	
10			
11	**Results:**	**Regular Mortgage**	**With Paydown**
12	Monthly Payment	($448.66)	($498.66)
13	Total Paid	($134,598.39)	($125,836.73)
14	Total Savings	#N/A	$8,761.67
15	Revised Term	#N/A	21.0

D
E
F
G
H
I
J
1
Scenarios
Scenario Summary

2. Click the **Data** tab.
3. Click **What-If Analysis** (▦?).
4. Click **Scenario Manager**.



Modeling - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Paul McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove
Data Validation
Data Tools
Consolidate
What-If Analysis
Scenario Manager...
Goal Seek...
Data Table...
Group
Ungroup
Outline
2
3
4

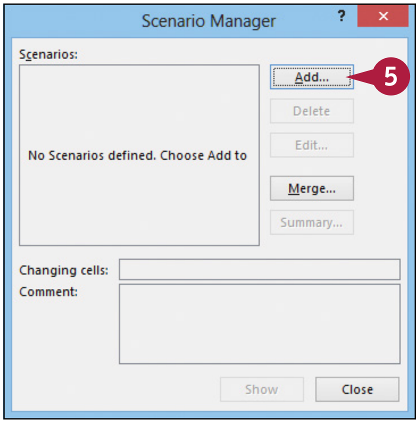
Regular...

=PMT(Interest_Rate / 12, Term * 12, House_Price-Down_

	A	B	C
2	**Fixed Cells:**		
3	House Price	$100,000	
4	Interest Rate	4.00%	
5			
6	**Changing Cells:**		
7	Down Payment	$15,000	
8	Term	25	
9	Paydown	($50)	
10			
11	**Results:**	**Regular Mortgage**	**With Paydown**

The Scenario Manager dialog box appears.

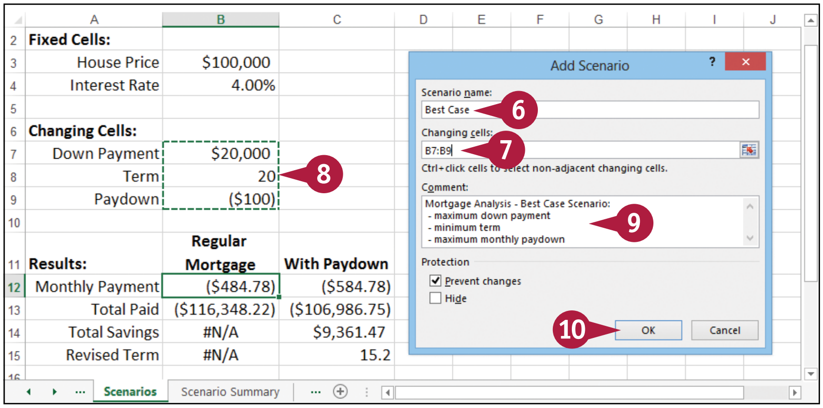
5. Click **Add**.



No Scenarios defined. Choose Add to

The Add Scenario dialog box appears.

6. Type a name for the scenario.
7. Click in the **Changing cells** box.
8. Select the cells you want to change in the scenario.
9. Type a description for the scenario.
10. Click **OK**.



	A	B	C
2	**Fixed Cells:**		
3	House Price	$100,000	
4	Interest Rate	4.00%	
5			
6	**Changing Cells:**		
7	Down Payment	$20,000	
8	Term	20	
9	Paydown	($100)	
10		**Regular**	
11	**Results:**	**Mortgage**	**With Paydown**
12	Monthly Payment	($484.78)	($584.78)
13	Total Paid	($116,348.22)	($106,986.75)
14	Total Savings	#N/A	$9,361.47
15	Revised Term	#N/A	15.2

Scenario name: Best Case

Changing cells: B7:B9

Ctrl+click cells to select non-adjacent changing cells.

Comment:
Mortgage Analysis - Best Case Scenario:
- maximum down payment
- minimum term
- maximum monthly paydown

☑ Prevent changes
☐ Hide

TIPS

Are there any restrictions on the changing cells?

When you are building a worksheet model for use with scenarios, make sure that each changing cell is a constant value. If you use a formula for a changing cell, Excel replaces that formula with a constant value defined in the scenario, so you lose your formula.

Do I need to add a description to each scenario?

Yes. As you see in the next section, once you have one or more scenarios defined, they appear in the Scenario Manager, and for each scenario you see its changing cells and its description. The description is often very useful, particularly if you have several scenarios defined, so be sure to write a detailed description in step 9 to help you differentiate your scenarios later on.

continued ►

Analyze Data with Scenarios (continued)

Excel stores your scenarios in the Scenario Manager. You can use the Scenario Manager to perform a number of scenario-related tasks. For example, you can select one of your scenarios and then click a button to display the scenario's values in your worksheet. You can also use the Scenario Manager to edit existing scenarios and to delete scenarios you no longer need.

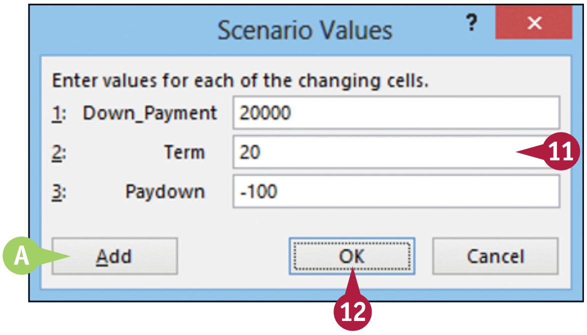
Analyze Data with Scenarios (continued)

The Scenario Values dialog box appears.

11 Use the text boxes to specify a value for each changing cell.

A To add more scenarios, click **Add** and then repeat steps 6 to 11.

12 Click **OK**.



Scenario Values

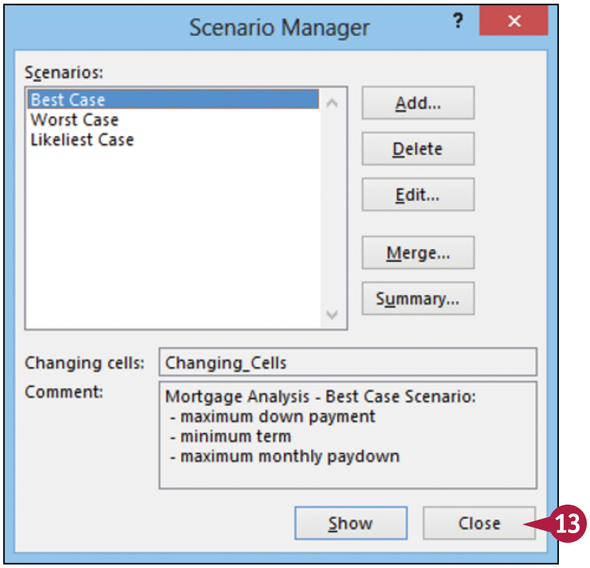
Enter values for each of the changing cells.

1: Down_Payment 20000

2: Term 20

3: Paydown -100

13 Click **Close**.



Scenario Manager

Scenarios:

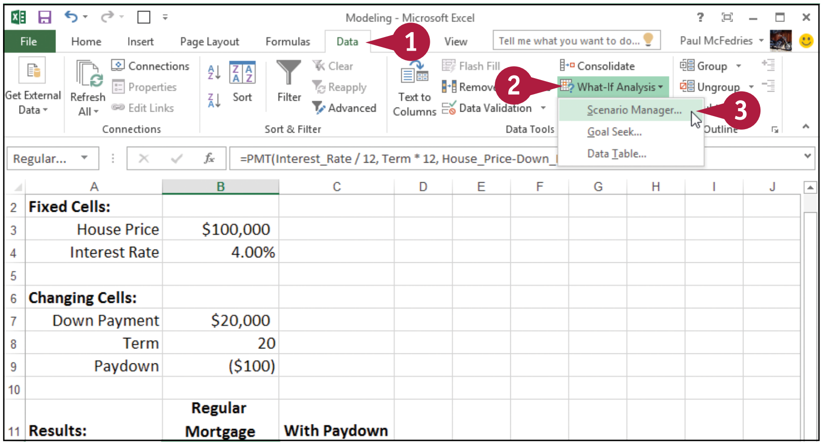
- Best Case
- Worst Case
- Likeliest Case

Changing cells: Changing_Cells

Comment: Mortgage Analysis - Best Case Scenario:
- maximum down payment
- minimum term
- maximum monthly paydown

Display Scenarios

1. Click the **Data** tab.
2. Click .
3. Click **Scenario Manager**.


Modeling - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
View
Tell me what you want to do...
Paul McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Sort
Filter
Clear
Reapply
Advanced
Text to Columns
Flash Fill
Remove
Data Validation
Consolidate
What-If Analysis
Scenario Manager...
Goal Seek...
Data Table...
Group
Ungroup
Outline
Connections
Sort & Filter
Data Tools
1
2
3

Regular... =PMT(Interest_Rate / 12, Term * 12, House_Price-Down_

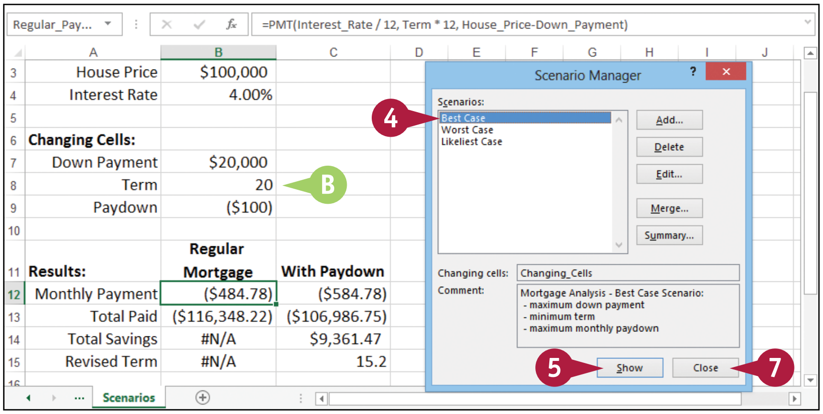
	A	B	C
2	**Fixed Cells:**		
3	House Price	$100,000	
4	Interest Rate	4.00%	
5			
6	**Changing Cells:**		
7	Down Payment	$20,000	
8	Term	20	
9	Paydown	($100)	
10			
11	**Results:**	**Regular Mortgage**	**With Paydown**

The Scenario Manager dialog box appears.

4. Click the scenario you want to display.
5. Click **Show**.

B Excel enters the scenario values into the changing cells and displays the formula result.

6. Repeat steps 4 and 5 to display other scenarios.
7. Click **Close**.


Scenario Manager
?
×
Add...
Delete
Edit...
Merge...
Summary...
Show
Close
Scenarios
4
5
7
B

Regular_Pay... =PMT(Interest_Rate / 12, Term * 12, House_Price-Down_Payment)

	A	B	C
3	House Price	$100,000	
4	Interest Rate	4.00%	
5			
6	**Changing Cells:**		
7	Down Payment	$20,000	
8	Term	20	
9	Paydown	($100)	
10			
11	**Results:**	**Regular Mortgage**	**With Paydown**
12	Monthly Payment	($484.78)	($584.78)
13	Total Paid	($116,348.22)	($106,986.75)
14	Total Savings	#N/A	$9,361.47
15	Revised Term	#N/A	15.2

Scenarios:
Best Case
Worst Case
Likeliest Case

Changing cells: Changing_Cells

Comment: Mortgage Analysis - Best Case Scenario:
- maximum down payment
- minimum term
- maximum monthly paydown

TIPS

How do I edit a scenario?

If you need to make changes to a scenario, you can edit the name, the changing cells, the description, and the scenario's input values. Click the **Data** tab, click , and then click **Scenario Manager**. In the Scenario Manager dialog box, click the scenario you want to modify, and then click **Edit**.

How do I remove a scenario?

If you have a scenario that you no longer need, you should delete it to reduce clutter in the Scenario Manager. Click the **Data** tab, click , and then click **Scenario Manager**. Click the scenario you want to delete. Note that Excel does not ask you to confirm the deletion, so double-check that you have selected the correct scenario. Click **Delete** and then click **Close**.

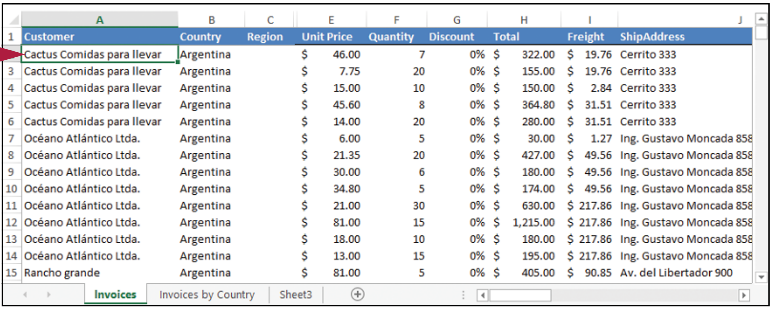
Remove Duplicate Values from a Range or Table

You can make your Excel data more accurate for analysis by removing any duplicate records. Duplicate records throw off your calculations by including the same data two or more times. To prevent this, you should delete duplicate records. However, rather than looking for duplicates manually, you can use the Remove Duplicates command, which can quickly find and remove duplicates in even the largest ranges or tables.

Before you use the Remove Duplicates command, you must decide what defines a duplicate record in your data. That is, does every field have to be identical or is it enough that only certain fields are identical?

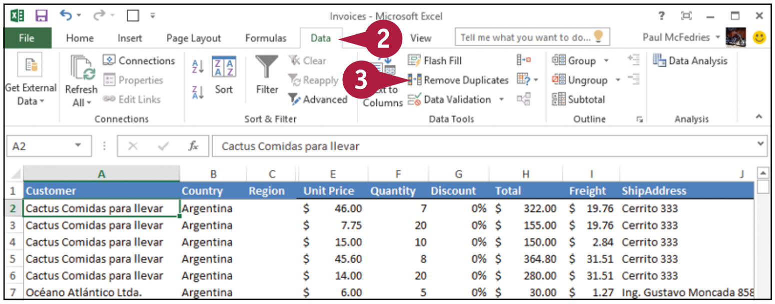
Remove Duplicate Values from a Range or Table

1. Click a cell inside the range or table.


1
Invoices
Invoices by Country
Sheet3

	A	B	C	E	F	G	H	I	J
1	Customer	Country	Region	Unit Price	Quantity	Discount	Total	Freight	ShipAddress
2	Cactus Comidas para llevar	Argentina		$ 46.00	7	0%	$ 322.00	$ 19.76	Cerrito 333
3	Cactus Comidas para llevar	Argentina		$ 7.75	20	0%	$ 155.00	$ 19.76	Cerrito 333
4	Cactus Comidas para llevar	Argentina		$ 15.00	10	0%	$ 150.00	$ 2.84	Cerrito 333
5	Cactus Comidas para llevar	Argentina		$ 45.60	8	0%	$ 364.80	$ 31.51	Cerrito 333
6	Cactus Comidas para llevar	Argentina		$ 14.00	20	0%	$ 280.00	$ 31.51	Cerrito 333
7	Océano Atlántico Ltda.	Argentina		$ 6.00	5	0%	$ 30.00	$ 1.27	Ing. Gustavo Moncada 858
8	Océano Atlántico Ltda.	Argentina		$ 21.35	20	0%	$ 427.00	$ 49.56	Ing. Gustavo Moncada 858
9	Océano Atlántico Ltda.	Argentina		$ 30.00	6	0%	$ 180.00	$ 49.56	Ing. Gustavo Moncada 858
10	Océano Atlántico Ltda.	Argentina		$ 34.80	5	0%	$ 174.00	$ 49.56	Ing. Gustavo Moncada 858
11	Océano Atlántico Ltda.	Argentina		$ 21.00	30	0%	$ 630.00	$ 217.86	Ing. Gustavo Moncada 858
12	Océano Atlántico Ltda.	Argentina		$ 81.00	15	0%	$ 1,215.00	$ 217.86	Ing. Gustavo Moncada 858
13	Océano Atlántico Ltda.	Argentina		$ 18.00	10	0%	$ 180.00	$ 217.86	Ing. Gustavo Moncada 858
14	Océano Atlántico Ltda.	Argentina		$ 13.00	15	0%	$ 195.00	$ 217.86	Ing. Gustavo Moncada 858
15	Rancho grande	Argentina		$ 81.00	5	0%	$ 405.00	$ 90.85	Av. del Libertador 900

2. Click the **Data** tab.
3. Click **Remove Duplicates** (▮→▮).


Invoices - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
2
View
Tell me what you want to do...
Paul McFedries
Get External Data
Refresh All
Connections
Properties
Edit Links
Connections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
3
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Data Tools
Group
Ungroup
Subtotal
Outline
Data Analysis
Analysis
A2
Cactus Comidas para llevar

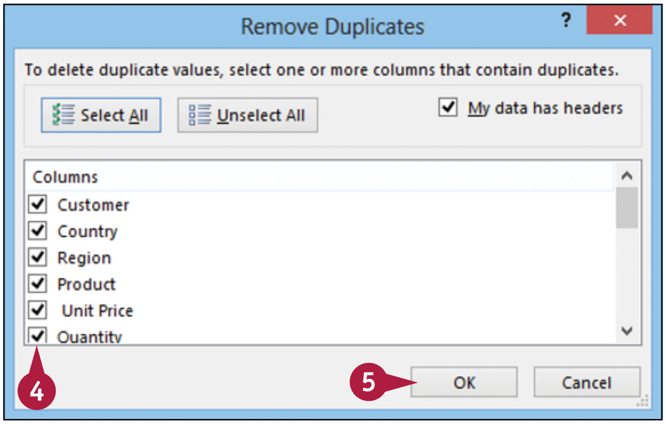
	A	B	C	E	F	G	H	I	J
1	Customer	Country	Region	Unit Price	Quantity	Discount	Total	Freight	ShipAddress
2	Cactus Comidas para llevar	Argentina		$ 46.00	7	0%	$ 322.00	$ 19.76	Cerrito 333
3	Cactus Comidas para llevar	Argentina		$ 7.75	20	0%	$ 155.00	$ 19.76	Cerrito 333
4	Cactus Comidas para llevar	Argentina		$ 15.00	10	0%	$ 150.00	$ 2.84	Cerrito 333
5	Cactus Comidas para llevar	Argentina		$ 45.60	8	0%	$ 364.80	$ 31.51	Cerrito 333
6	Cactus Comidas para llevar	Argentina		$ 14.00	20	0%	$ 280.00	$ 31.51	Cerrito 333
7	Océano Atlántico Ltda.	Argentina		$ 6.00	5	0%	$ 30.00	$ 1.27	Ing. Gustavo Moncada 858

The Remove Duplicates dialog box appears.

4 Select the check box beside each field that you want Excel to check for duplication values (☐ changes to ☑).

Note: Excel does not give you a chance to confirm the deletion of the duplicate records, so be sure you want to do this before proceeding.

5 Click **OK**.



To delete duplicate values, select one or more columns that contain duplicates.

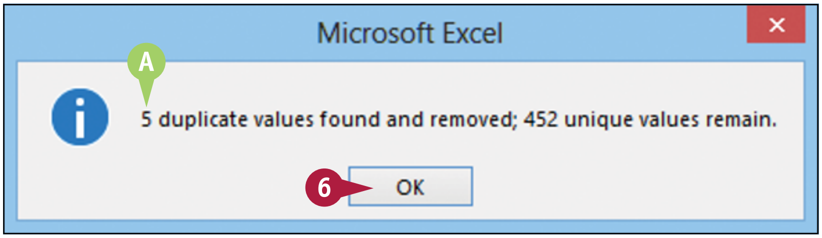
☑ My data has headers

☑ Customer
☑ Country
☑ Region
☑ Product
☑ Unit Price
☑ Quantity

Excel deletes any duplicate records that it finds.

A Excel tells you the number of duplicate records that it deleted.

6 Click **OK**.



5 duplicate values found and removed; 452 unique values remain.

TIPS

If I have a lot of columns, is there a quick way to check for duplicates based on just a couple of those fields?

Yes. If your table has many fields, you may want Excel to use only one or two of those fields to look for duplicate records. Rather than deselecting all the other check boxes manually, first click **Unselect All** in the Remove Duplicates dialog box to clear all the check boxes (☑ changes to ☐). You can then select just the check boxes you want Excel to use (☐ changes to ☑).

Can I remove duplicates even if my range does not have column headers?

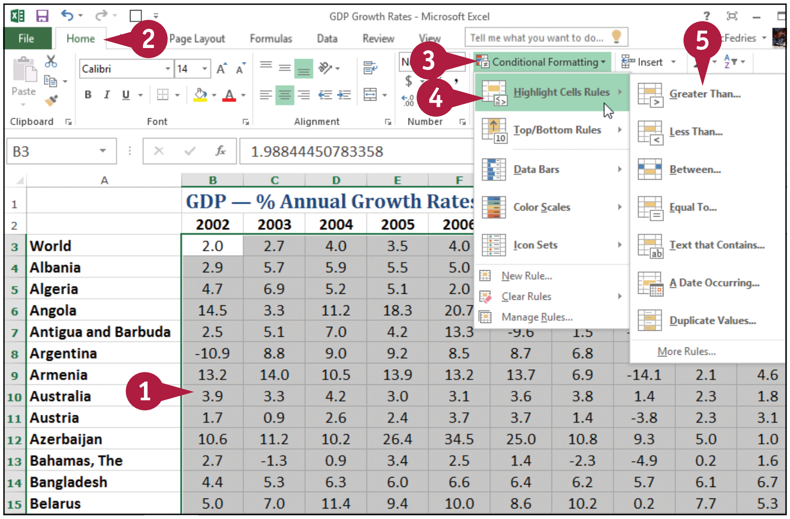
Yes. Excel can still examine the column data even if there are no headers. In this case, follow steps 1 to 3 to open the Remove Duplicates dialog box, then make sure the **My data has headers** check box is deselected (☐). Use the check boxes labeled Column A, Column B, and so on to choose the columns that you want Excel to check for duplicate values (☐ changes to ☑) and then click **OK**.

Highlight Cells That Meet Some Criteria

A *conditional format* is formatting that Excel applies only to cells that meet the criteria you specify. For example, you can tell Excel to apply the formatting only if a cell's value is greater or less than some specified amount, between two specified values, or equal to some value. You can also look for cells that contain specified text, dates that occur during a specified timeframe, and more.

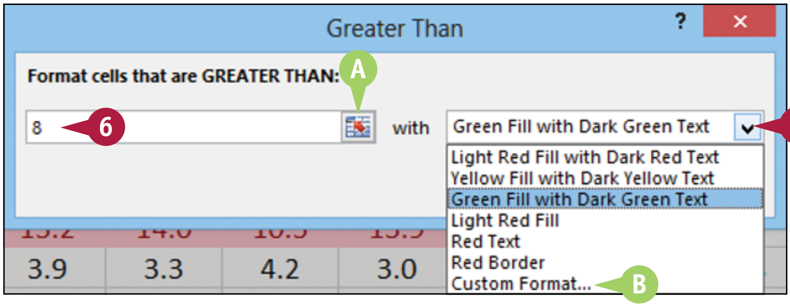
You can specify the font, border, and background pattern, which helps to ensure that the cells that meet your criteria stand out from the other cells in the range.

Highlight Cells That Meet Some Criteria


GDP Growth Rates - Microsoft Excel
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Fedries
Conditional Formatting
Insert
Paste
Calibri
14
B
I
U
Clipboard
Font
Alignment
Number
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
Greater Than...
Less Than...
Between...
Equal To...
Text that Contains...
A Date Occurring...
Duplicate Values...
More Rules...
1
2
3
4
5

B3 1.98844450783358

	A	B	C	D	E	F					
1		GDP — % Annual Growth Rates									
2		2002	2003	2004	2005	2006					
3	World	2.0	2.7	4.0	3.5	4.0					
4	Albania	2.9	5.7	5.9	5.5	5.0					
5	Algeria	4.7	6.9	5.2	5.1	2.0					
6	Angola	14.5	3.3	11.2	18.3	20.7					
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5			
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8			
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3


Greater Than
?
×
Light Red Fill with Dark Red Text
Yellow Fill with Dark Yellow Text
Green Fill with Dark Green Text
Light Red Fill
Red Text
Red Border
Custom Format...
A
6
7
B

Format cells that are GREATER THAN: 8 with Green Fill with Dark Green Text

① Select the range with which you want to work.

② Click the **Home** tab.

③ Click **Conditional Formatting** (▦).

④ Click **Highlight Cells Rules**.

⑤ Click the operator you want to use for the condition.

A dialog box appears, the name of which depends on the operator you clicked in step **5**.

⑥ Type the value you want to use for the condition.

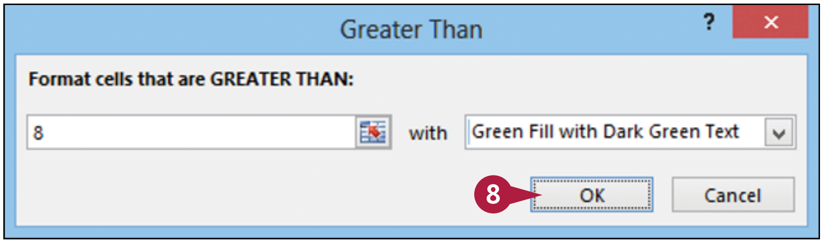
Ⓐ You can also click **Collapse Dialog** (▦), click a worksheet cell, and then click **Restore Dialog** (▦).

Depending on the operator, you may need to specify two values.

⑦ Click this drop-down arrow (▼), and then click the formatting you want to use.

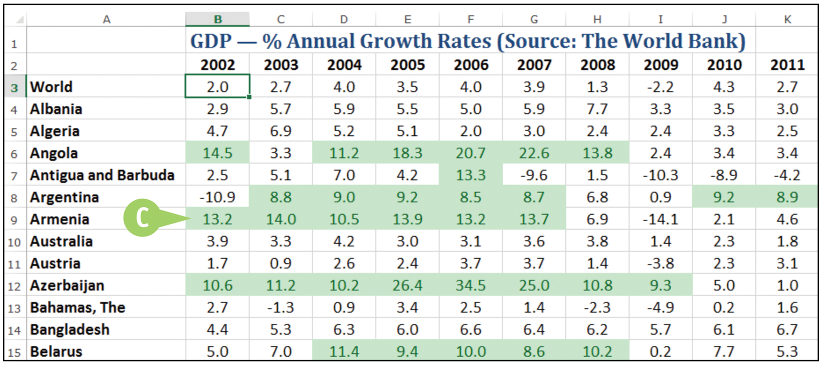
Ⓑ To create your own format, click **Custom Format**.

8 Click **OK**.



8 with Green Fill with Dark Green Text

C Excel applies the formatting to cells that meet the condition you specified.



	A	B	C	D	E	F	G	H	I	J	K
1		GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3

TIPS

Can I set up more than one conditional format on a range?

Yes, Excel enables you to specify multiple conditional formats. For example, you could set up one condition for cells that are greater than some value, and a separate condition for cells that are less than some other value. You can apply unique formats to each condition. Follow steps 1 to 8 to configure the new condition.

How do I remove a conditional format?

If you no longer require a conditional format, you can delete it. Follow steps 1 to 3 to select the range and display the Conditional Formatting drop-down menu, and then click **Manage Rules**. Excel displays the Conditional Formatting Rules Manager dialog box. Click the conditional format you want to remove and then click **Delete Rule**.

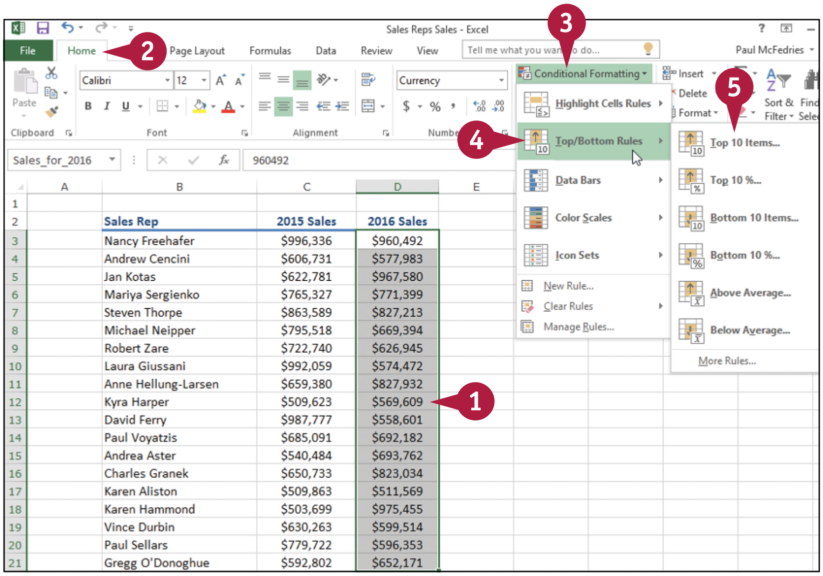
Highlight the Top or Bottom Values in a Range

When analyzing worksheet data, it is often useful to look for items that stand out from the norm. For example, you might want to know which sales reps sold the most last year, or which departments had the lowest gross margins.

You can do this by setting up *top/bottom rules*, where Excel applies a conditional format to those items that are at the top or bottom of a range of values. For the top or bottom values, you can specify a number, such as the top 5 or 10, or a percentage, such as the bottom 20 percent.

Highlight the Top or Bottom Values in a Range

1. Select the range with which you want to work.
2. Click the **Home** tab.
3. Click **Conditional Formatting** (▦).
4. Click **Top/Bottom Rules**.
5. Click the type of rule you want to create.


Sales Reps Sales - Excel
Paul McFedries
File
Home
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paste
Clipboard
Calibri
12
Font
Alignment
Currency
Number
Conditional Formatting
Insert
Delete
Format
Sort & Filter
Find & Select
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
Top 10 Items...
Top 10 %...
Bottom 10 Items...
Bottom 10 %...
Above Average...
Below Average...
More Rules...
1
2
3
4
5

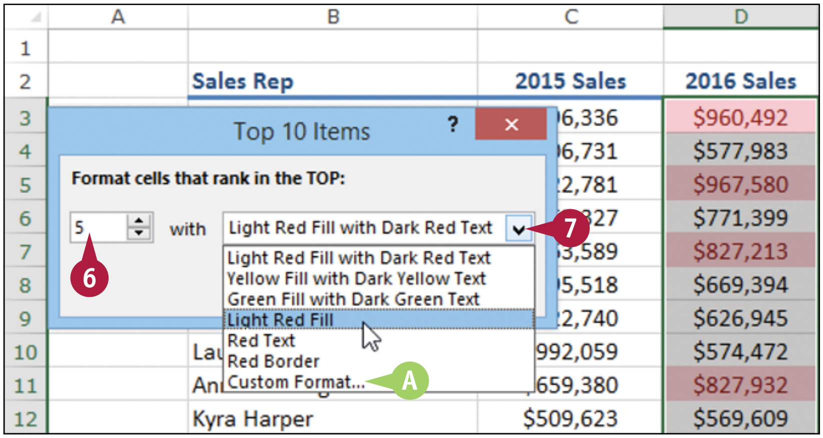
Sales_for_2016 : 960492

	A	B	C	D
1				
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freehafer	$996,336	$960,492
4		Andrew Cencini	$606,731	$577,983
5		Jan Kotas	$622,781	$967,580
6		Mariya Sergienko	$765,327	$771,399
7		Steven Thorpe	$863,589	$827,213
8		Michael Neipper	$795,518	$669,394
9		Robert Zare	$722,740	$626,945
10		Laura Giussani	$992,059	$574,472
11		Anne Hellung-Larsen	$659,380	$827,932
12		Kyra Harper	$509,623	$569,609
13		David Ferry	$987,777	$558,601
14		Paul Voyatzis	$685,091	$692,182
15		Andrea Aster	$540,484	$693,762
16		Charles Granek	$650,733	$823,034
17		Karen Aliston	$509,863	$511,569
18		Karen Hammond	$503,699	$975,455
19		Vince Durbin	$630,263	$599,514
20		Paul Sellars	$779,722	$596,353
21		Gregg O'Donoghue	$592,802	$652,171

A dialog box appears, whose name depends on the type of rule you clicked in step **5**.

6. Type the value you want to use for the condition.
7. Click this drop-down arrow (▾), and then click the formatting you want to use.

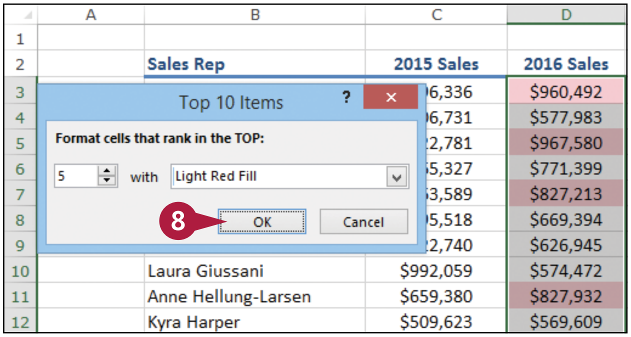
Ⓐ To create your own format, click **Custom Format**.


A
B
C
D
Sales Rep
2015 Sales
2016 Sales
Top 10 Items
?
×
Light Red Fill with Dark Red Text
Yellow Fill with Dark Yellow Text
Green Fill with Dark Green Text
Light Red Fill
Red Text
Red Border
Custom Format...
6
7
A

Format cells that rank in the TOP:

5 with Light Red Fill with Dark Red Text

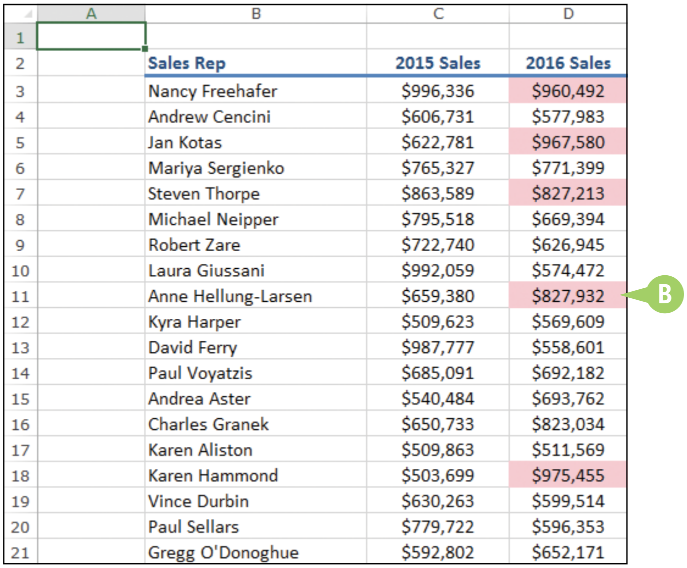
8 Click **OK**.



Format cells that rank in the TOP:

5 with Light Red Fill

B Excel applies the formatting to cells that meet the condition you specified.



	A	B	C	D
1				
2		Sales Rep	2015 Sales	2016 Sales
3		Nancy Freehafer	$996,336	$960,492
4		Andrew Cencini	$606,731	$577,983
5		Jan Kotas	$622,781	$967,580
6		Mariya Sergienko	$765,327	$771,399
7		Steven Thorpe	$863,589	$827,213
8		Michael Neipper	$795,518	$669,394
9		Robert Zare	$722,740	$626,945
10		Laura Giussani	$992,059	$574,472
11		Anne Hellung-Larsen	$659,380	$827,932
12		Kyra Harper	$509,623	$569,609
13		David Ferry	$987,777	$558,601
14		Paul Voyatzis	$685,091	$692,182
15		Andrea Aster	$540,484	$693,762
16		Charles Granek	$650,733	$823,034
17		Karen Aliston	$509,863	$511,569
18		Karen Hammond	$503,699	$975,455
19		Vince Durbin	$630,263	$599,514
20		Paul Sellars	$779,722	$596,353
21		Gregg O'Donoghue	$592,802	$652,171

TIPS

Can I highlight cells that are above or below the average?

Yes, Excel also enables you to create top/bottom rules based on the average value in the range. First, follow steps 1 to 4 to select the range and display the Top/Bottom Rules menu. Then click either **Above Average** to format those values that exceed the range average, or **Below Average** to format those values that are less than the range average.

How do I remove a top/bottom rule?

If you no longer require a top/bottom rule, you can delete it. Follow steps 1 to 3 to select the range and display the Conditional Formatting drop-down menu. Click **Clear Rules**, and then click **Clear Rules from Selected Cells**. Excel removes the rule from the range.

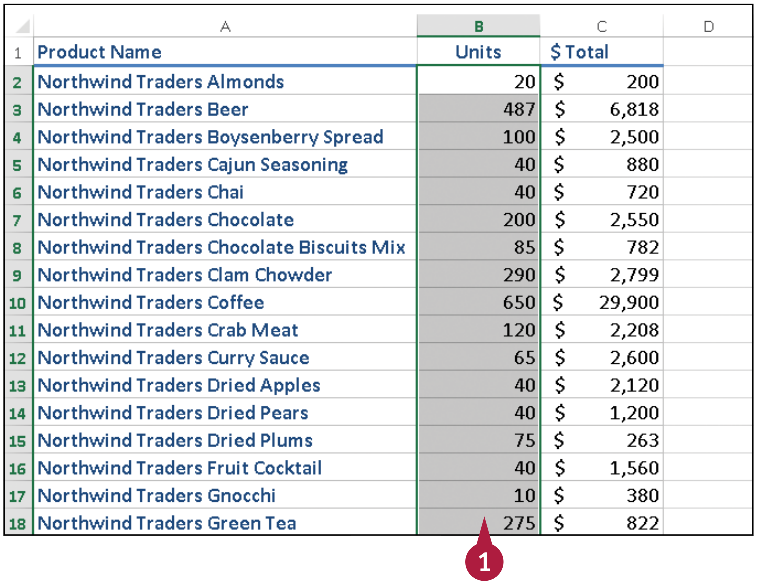
Analyze Cell Values with Data Bars

In some data analysis scenarios, you might be interested more in the relative values within a range than the absolute values. For example, if you have a table of products that includes a column showing unit sales, how do you compare the relative sales of all the products?

This sort of analysis is often easiest if you visualize the relative values. You can do that by using *data bars*. Data bars are a data visualization feature that applies colored, horizontal bars to each cell in a range of values, and these bars appear "behind" the values in the range.

Analyze Cell Values with Data Bars

① Select the range with which you want to work.

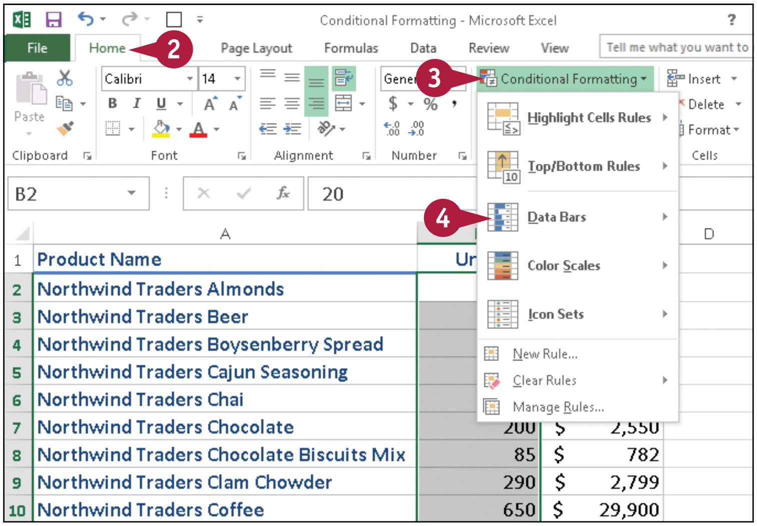


	A	B	C	D
1	Product Name	Units	$ Total	
2	Northwind Traders Almonds	20	$ 200	
3	Northwind Traders Beer	487	$ 6,818	
4	Northwind Traders Boysenberry Spread	100	$ 2,500	
5	Northwind Traders Cajun Seasoning	40	$ 880	
6	Northwind Traders Chai	40	$ 720	
7	Northwind Traders Chocolate	200	$ 2,550	
8	Northwind Traders Chocolate Biscuits Mix	85	$ 782	
9	Northwind Traders Clam Chowder	290	$ 2,799	
10	Northwind Traders Coffee	650	$ 29,900	
11	Northwind Traders Crab Meat	120	$ 2,208	
12	Northwind Traders Curry Sauce	65	$ 2,600	
13	Northwind Traders Dried Apples	40	$ 2,120	
14	Northwind Traders Dried Pears	40	$ 1,200	
15	Northwind Traders Dried Plums	75	$ 263	
16	Northwind Traders Fruit Cocktail	40	$ 1,560	
17	Northwind Traders Gnocchi	10	$ 380	
18	Northwind Traders Green Tea	275	$ 822	

② Click the **Home** tab.

③ Click **Conditional Formatting** (▦).

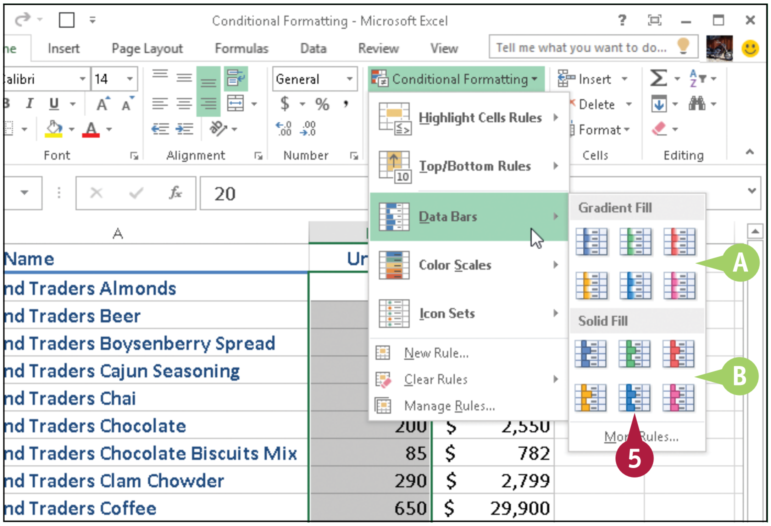
④ Click **Data Bars**.


Conditional Formatting - Microsoft Excel
?
File
Home
2
Page Layout
Formulas
Data
Review
View
Tell me what you want to
Calibri
14
Gener
3
Conditional Formatting
Insert
Delete
Format
Paste
Clipboard
Font
Alignment
Number
Cells
Highlight Cells Rules
Top/Bottom Rules
4
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
B2
20
A
D
Product Name
Un
Northwind Traders Almonds
Northwind Traders Beer
Northwind Traders Boysenberry Spread
Northwind Traders Cajun Seasoning
Northwind Traders Chai
Northwind Traders Chocolate
200 $ 2,550
Northwind Traders Chocolate Biscuits Mix
85 $ 782
Northwind Traders Clam Chowder
290 $ 2,799
Northwind Traders Coffee
650 $ 29,900

⑤ Click the fill type of data bars you want to create:

Ⓐ Gradient Fill data bars begin with a solid color, and then gradually fade to a lighter color.

Ⓑ Solid Fill data bars are a solid color.


Conditional Formatting - Microsoft Excel
Insert
Page Layout
Formulas
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Review
View
Tell me what you want to do...
Calibri
14
General
Conditional Formatting
Insert
Delete
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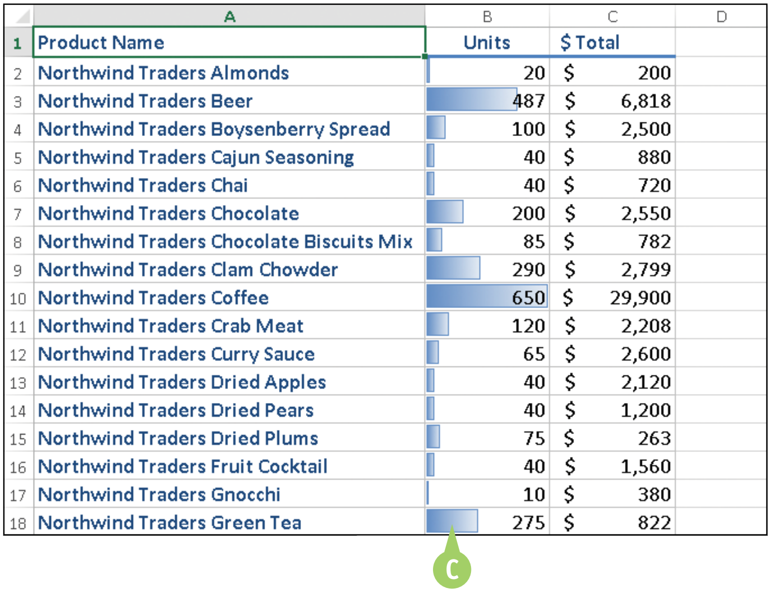
Number
Cells
Editing
20
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
Gradient Fill
Solid Fill
More Rules...
A
Name
nd Traders Almonds
nd Traders Beer
nd Traders Boysenberry Spread
nd Traders Cajun Seasoning
nd Traders Chai
nd Traders Chocolate
nd Traders Chocolate Biscuits Mix
nd Traders Clam Chowder
nd Traders Coffee
200 $ 2,550
85 $ 782
290 $ 2,799
650 $ 29,900
A
B
5

Ⓒ Excel applies the data bars to each cell in the range.



	A	B	C	D
1	Product Name	Units	$ Total	
2	Northwind Traders Almonds	20	$ 200	
3	Northwind Traders Beer	487	$ 6,818	
4	Northwind Traders Boysenberry Spread	100	$ 2,500	
5	Northwind Traders Cajun Seasoning	40	$ 880	
6	Northwind Traders Chai	40	$ 720	
7	Northwind Traders Chocolate	200	$ 2,550	
8	Northwind Traders Chocolate Biscuits Mix	85	$ 782	
9	Northwind Traders Clam Chowder	290	$ 2,799	
10	Northwind Traders Coffee	650	$ 29,900	
11	Northwind Traders Crab Meat	120	$ 2,208	
12	Northwind Traders Curry Sauce	65	$ 2,600	
13	Northwind Traders Dried Apples	40	$ 2,120	
14	Northwind Traders Dried Pears	40	$ 1,200	
15	Northwind Traders Dried Plums	75	$ 263	
16	Northwind Traders Fruit Cocktail	40	$ 1,560	
17	Northwind Traders Gnocchi	10	$ 380	
18	Northwind Traders Green Tea	275	$ 822	

TIPS

How do data bars work?

The length of the data bar that appears in each cell depends on the value in that cell: The larger the value, the longer the data bar. The cell with the highest value has the longest data bar, the cell with the lowest value has the shortest data bar, and the other cells have data bars with lengths that reflect each cell's value.

How do I delete data bars from a range?

If you no longer require the data bars, you can remove them. Follow steps 1 to 3 to select the range and display the Conditional Formatting drop-down menu, and then click **Manage Rules**. Excel displays the Conditional Formatting Rules Manager dialog box. Click the data bar rule you want to remove, click **Delete Rule**, and then click **OK**.

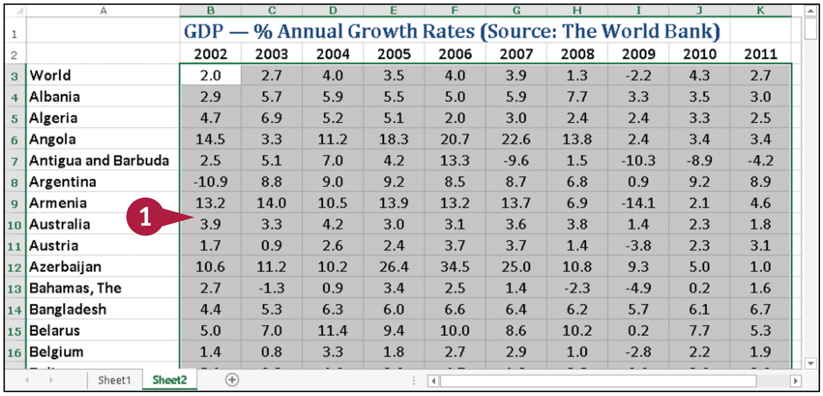
Analyze Cell Values with Color Scales

When analyzing worksheet data, it is often useful to get some idea about the overall distribution of the values. For example, it might be useful to know whether a range has a lot of low values and just a few high values.

You can analyze your worksheet data by using a conditional format called *color scales*. A color scale compares the relative values of cells in a range by applying shading to each cell, where the shading color is a reflection of the cell's value.

Analyze Cell Values with Color Scales

1. Select the range with which you want to work.

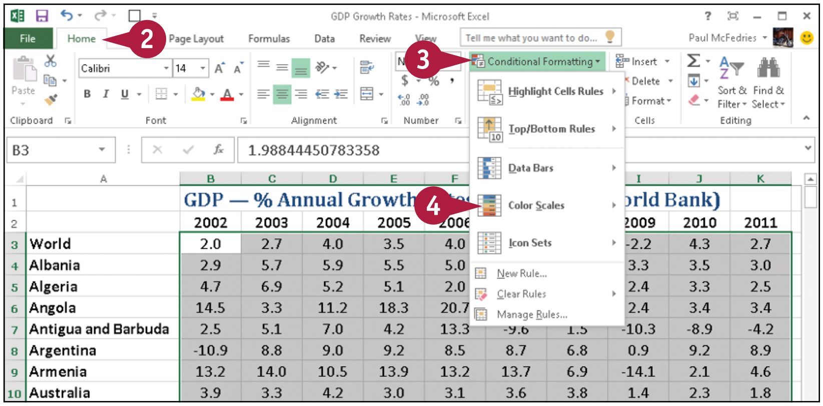


GDP — % Annual Growth Rates (Source: The World Bank)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9

1
Sheet1
Sheet2

2. Click the **Home** tab.
3. Click **Conditional Formatting** (▦).
4. Click **Color Scales**.



B3 1.98844450783358

GDP — % Annual Growth … orld Bank)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	2.0	2.7	4.0	3.5	4.0			-2.2	4.3	2.7
Albania	2.9	5.7	5.9	5.5	5.0			3.3	3.5	3.0
Algeria	4.7	6.9	5.2	5.1	2.0			2.4	3.3	2.5
Angola	14.5	3.3	11.2	18.3	20.7			2.4	3.4	3.4
Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8

GDP Growth Rates - Microsoft Excel
File
Home
Page Layout
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Tell me what you want to do...
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Clipboard
Calibri
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Font
Alignment
Number
Conditional Formatting
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
Insert
Delete
Format
Cells
Sort & Filter
Find & Select
Editing
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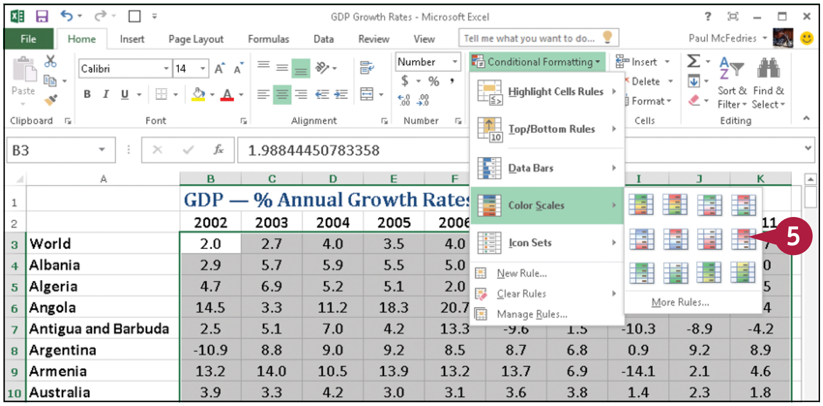
3
4

⑤ Click the color scale that has the color scheme you want to apply.


GDP Growth Rates - Microsoft Excel
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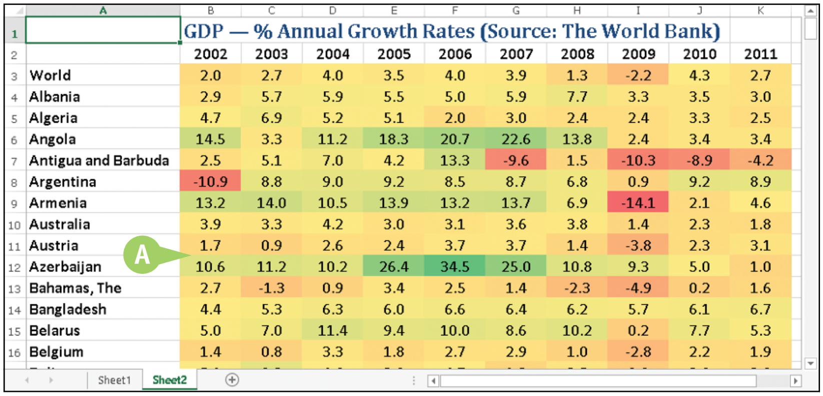
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
More Rules...
5

B3 1.98844450783358

	A	B	C	D	E	F	G	H	I	J	K
1		GDP — % Annual Growth Rates									
2		2002	2003	2004	2005	2006					
3	World	2.0	2.7	4.0	3.5	4.0					
4	Albania	2.9	5.7	5.9	5.5	5.0					
5	Algeria	4.7	6.9	5.2	5.1	2.0					
6	Angola	14.5	3.3	11.2	18.3	20.7					
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8

Ⓐ Excel applies the color scales to each cell in the range.


A
Sheet1
Sheet2

	A	B	C	D	E	F	G	H	I	J	K
1		GDP — % Annual Growth Rates (Source: The World Bank)									
2		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
3	World	2.0	2.7	4.0	3.5	4.0	3.9	1.3	-2.2	4.3	2.7
4	Albania	2.9	5.7	5.9	5.5	5.0	5.9	7.7	3.3	3.5	3.0
5	Algeria	4.7	6.9	5.2	5.1	2.0	3.0	2.4	2.4	3.3	2.5
6	Angola	14.5	3.3	11.2	18.3	20.7	22.6	13.8	2.4	3.4	3.4
7	Antigua and Barbuda	2.5	5.1	7.0	4.2	13.3	-9.6	1.5	-10.3	-8.9	-4.2
8	Argentina	-10.9	8.8	9.0	9.2	8.5	8.7	6.8	0.9	9.2	8.9
9	Armenia	13.2	14.0	10.5	13.9	13.2	13.7	6.9	-14.1	2.1	4.6
10	Australia	3.9	3.3	4.2	3.0	3.1	3.6	3.8	1.4	2.3	1.8
11	Austria	1.7	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	2.3	3.1
12	Azerbaijan	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	1.0
13	Bahamas, The	2.7	-1.3	0.9	3.4	2.5	1.4	-2.3	-4.9	0.2	1.6
14	Bangladesh	4.4	5.3	6.3	6.0	6.6	6.4	6.2	5.7	6.1	6.7
15	Belarus	5.0	7.0	11.4	9.4	10.0	8.6	10.2	0.2	7.7	5.3
16	Belgium	1.4	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.2	1.9

TIPS

In what other situations are color scales useful?

Besides showing patterns, color scales can also tell you whether your data includes any *outliers*, values that are much higher or lower than all or most of the others. Similarly, you can also use color scales to make value judgments about your data. For example, high sales and low numbers of product defects are good, whereas low margins and high employee turnover rates are bad.

When should I use a three-color scale versus a two-color scale?

If your goal is to look for outliers or to make value judgments about your data, go with a three-color scale because outliers stand out more, and you can assign your own values to the colors (such as positive, neutral, and negative). Use a two-color scale when you want to look for patterns in the data, as a two-color scale offers less contrast.

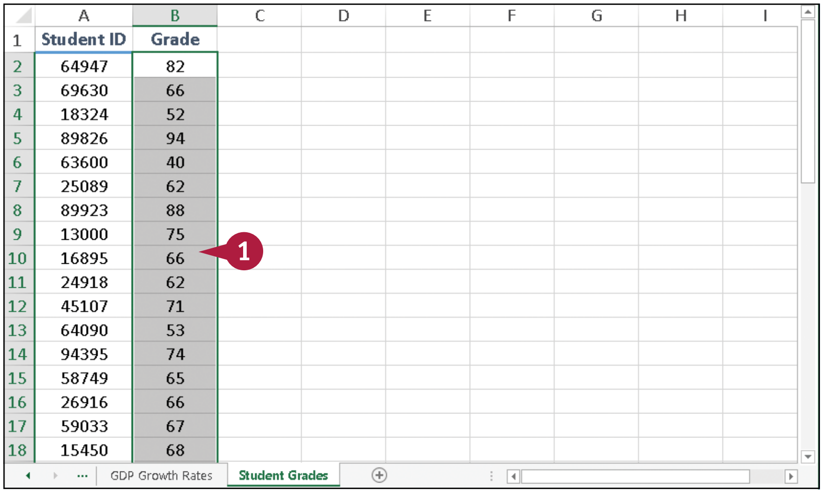
Analyze Cell Values with Icon Sets

When you are trying to make sense of a large data set, symbols that have common or well-known associations are often useful for clarifying the data. For example, for most people a check mark means something is good or finished or acceptable, whereas an X means something is bad or unfinished or unacceptable; a green circle is positive, whereas a red circle is negative (think traffic lights).

Excel puts these and many other symbolic associations to good use with the *icon sets* feature. You use icon sets to visualize the relative values of cells in a range.

Analyze Cell Values with Icon Sets

1. Select the range with which you want to work.



	A	B
1	Student ID	Grade
2	64947	82
3	69630	66
4	18324	52
5	89826	94
6	63600	40
7	25089	62
8	89923	88
9	13000	75
10	16895	66
11	24918	62
12	45107	71
13	64090	53
14	94395	74
15	58749	65
16	26916	66
17	59033	67
18	15450	68

C
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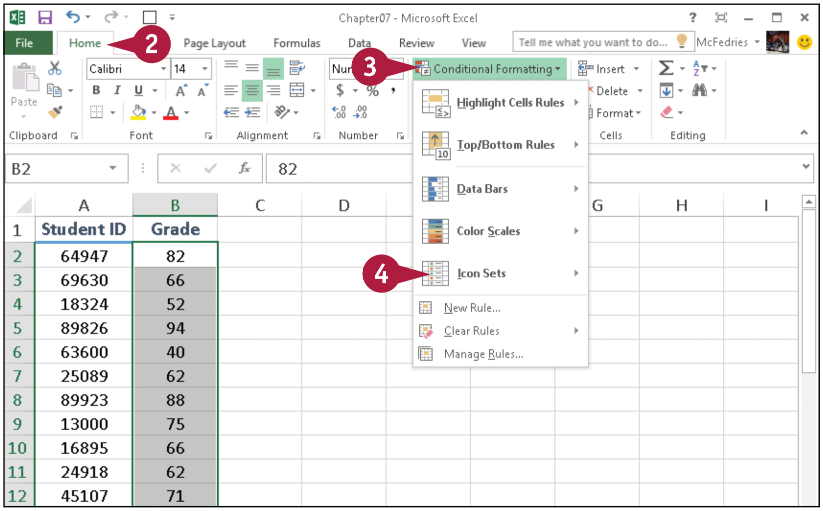
GDP Growth Rates
Student Grades

2. Click the **Home** tab.
3. Click **Conditional Formatting** (![]).
4. Click **Icon Sets**.



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Clear Rules
Manage Rules...
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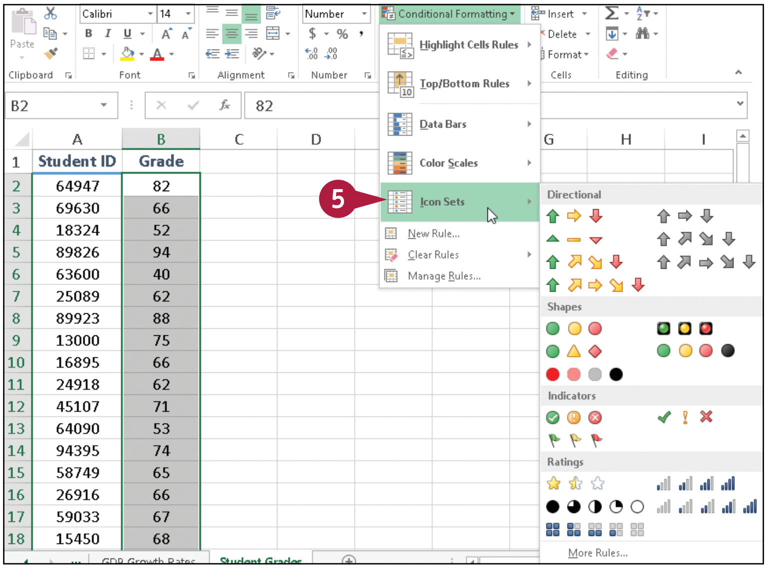
	A	B
1	Student ID	Grade
2	64947	82
3	69630	66
4	18324	52
5	89826	94
6	63600	40
7	25089	62
8	89923	88
9	13000	75
10	16895	66
11	24918	62
12	45107	71

5 Click the type of icon set you want to apply.

The categories include Directional, Shapes, Indicators, and Ratings.


Conditional Formatting
Highlight Cells Rules
Top/Bottom Rules
Data Bars
Color Scales
Icon Sets
New Rule...
Clear Rules
Manage Rules...
Directional
Shapes
Indicators
Ratings
More Rules...
5
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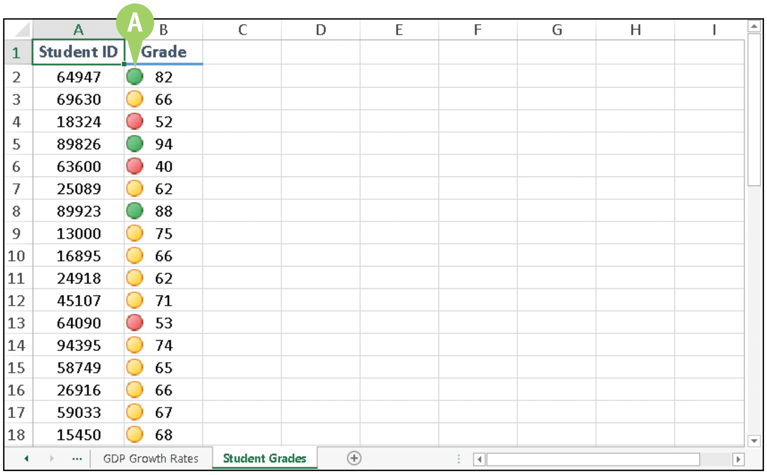
82
GDP Growth Rates
Student Grades

	A	B
1	Student ID	Grade
2	64947	82
3	69630	66
4	18324	52
5	89826	94
6	63600	40
7	25089	62
8	89923	88
9	13000	75
10	16895	66
11	24918	62
12	45107	71
13	64090	53
14	94395	74
15	58749	65
16	26916	66
17	59033	67
18	15450	68

A Excel applies the icons to each cell in the range.


A
GDP Growth Rates
Student Grades

	A	B
1	Student ID	Grade
2	64947	🟢 82
3	69630	🟡 66
4	18324	🔴 52
5	89826	🟢 94
6	63600	🔴 40
7	25089	🟡 62
8	89923	🟢 88
9	13000	🟡 75
10	16895	🟡 66
11	24918	🟡 62
12	45107	🟡 71
13	64090	🔴 53
14	94395	🟡 74
15	58749	🟡 65
16	26916	🟡 66
17	59033	🟡 67
18	15450	🟡 68

TIPS

How do icon sets work?

With icon sets, Excel adds a particular icon to each cell in the range, and that icon tells you something about the cell's value relative to the rest of the range. For example, the highest values might be assigned an upward-pointing arrow, the lowest values a downward-pointing arrow, and the values in between a horizontal arrow.

How do I use the different icon set categories?

The Excel icon sets come in four categories: Directional, Shapes, Indicators, and Ratings. Use Directional icon sets for indicating trends and data movement; use Shapes icon sets for pointing out the high (green) and low (red) values; use Indicators to add value judgments; and use Ratings to show where each cell resides in the overall range of data values.

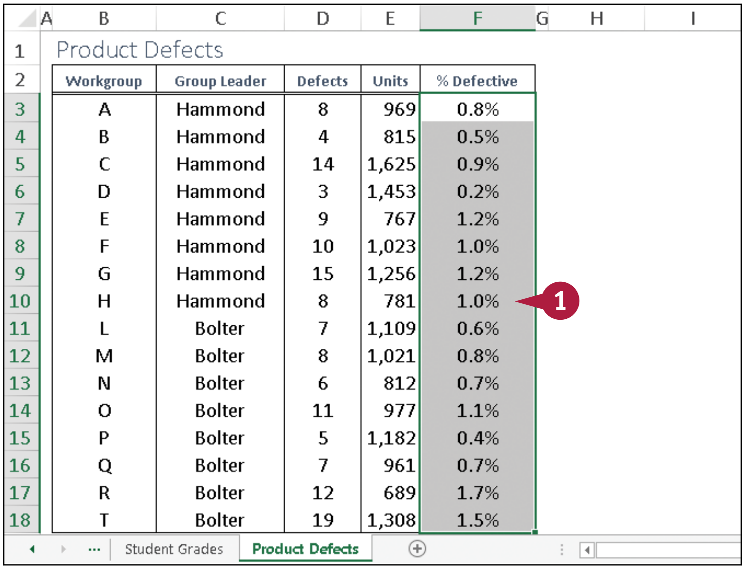
Create a Custom Conditional Formatting Rule

Excel's conditional formatting rules in Excel — highlight cells rules, top/bottom rules, data bars, color scales, and icon sets — offer an easy way to analyze data through visualization.

However, these predefined rules do not suit particular types of data or data analysis. For example, the icon sets assume that higher values are more positive than lower values, but that is not always true; in a database of product defects, lower values are better than higher ones. To get the type of data analysis you prefer, you can create a custom conditional formatting rule and apply it to your range.

Create a Custom Conditional Formatting Rule

1. Select the range you want to work with.



Product Defects

Workgroup	Group Leader	Defects	Units	% Defective
A	Hammond	8	969	0.8%
B	Hammond	4	815	0.5%
C	Hammond	14	1,625	0.9%
D	Hammond	3	1,453	0.2%
E	Hammond	9	767	1.2%
F	Hammond	10	1,023	1.0%
G	Hammond	15	1,256	1.2%
H	Hammond	8	781	1.0%
L	Bolter	7	1,109	0.6%
M	Bolter	8	1,021	0.8%
N	Bolter	6	812	0.7%
O	Bolter	11	977	1.1%
P	Bolter	5	1,182	0.4%
Q	Bolter	7	961	0.7%
R	Bolter	12	689	1.7%
T	Bolter	19	1,308	1.5%

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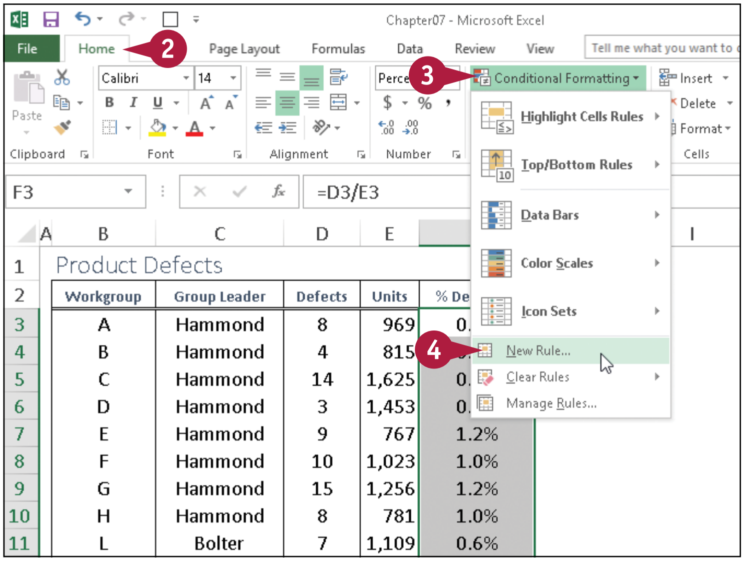
Student Grades
Product Defects

2. Click the **Home** tab.
3. Click **Conditional Formatting** (▦).
4. Click **New Rule**.



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Clear Rules
Manage Rules...

F3 =D3/E3

Product Defects

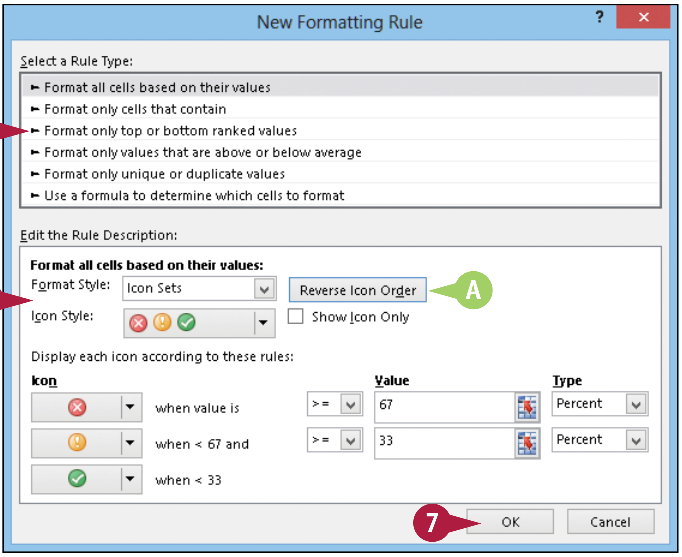
Workgroup	Group Leader	Defects	Units	% De
A	Hammond	8	969	0.
B	Hammond	4	815	
C	Hammond	14	1,625	0.
D	Hammond	3	1,453	0.
E	Hammond	9	767	1.2%
F	Hammond	10	1,023	1.0%
G	Hammond	15	1,256	1.2%
H	Hammond	8	781	1.0%
L	Bolter	7	1,109	0.6%

The New Formatting Rule dialog box appears.

5. Click the type of rule you want to create.
6. Edit the rule's style and formatting.

   The controls you see depend on the rule type you selected.

   A With Icon Sets, click **Reverse Icon Order** if you want to reverse the normal icon assignments, as shown here.
7. Click **OK**.



New Formatting Rule

Select a Rule Type:

- ► Format all cells based on their values
- ► Format only cells that contain
- ► Format only top or bottom ranked values
- ► Format only values that are above or below average
- ► Format only unique or duplicate values
- ► Use a formula to determine which cells to format

Edit the Rule Description:

Format all cells based on their values:

Format Style: Icon Sets

Reverse Icon Order

Icon Style: ✗ ! ✓

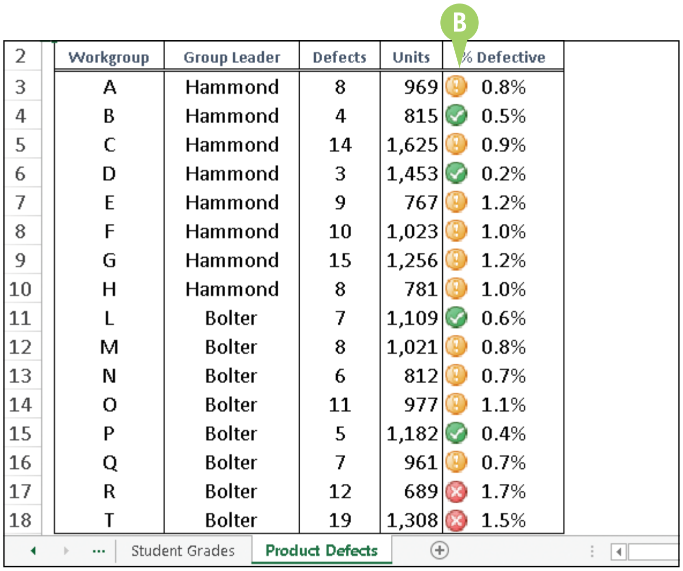
☐ Show Icon Only

Display each icon according to these rules:

Icon			Value	Type
✗	when value is	>=	67	Percent
!	when < 67 and	>=	33	Percent
✓	when < 33			

OK Cancel

B Excel applies the conditional formatting to each cell in the range.



	Workgroup	Group Leader	Defects	Units	% Defective
3	A	Hammond	8	969	! 0.8%
4	B	Hammond	4	815	✓ 0.5%
5	C	Hammond	14	1,625	! 0.9%
6	D	Hammond	3	1,453	✓ 0.2%
7	E	Hammond	9	767	! 1.2%
8	F	Hammond	10	1,023	! 1.0%
9	G	Hammond	15	1,256	! 1.2%
10	H	Hammond	8	781	! 1.0%
11	L	Bolter	7	1,109	✓ 0.6%
12	M	Bolter	8	1,021	! 0.8%
13	N	Bolter	6	812	! 0.7%
14	O	Bolter	11	977	! 1.1%
15	P	Bolter	5	1,182	✓ 0.4%
16	Q	Bolter	7	961	! 0.7%
17	R	Bolter	12	689	✗ 1.7%
18	T	Bolter	19	1,308	✗ 1.5%

TIPS

How do I modify a custom conditional formatting rule?

Follow steps 1 to 3 to select the range and display the Conditional Formatting drop-down menu, and then click **Manage Rules**. Excel displays the Conditional Formatting Rules Manager dialog box. Click the rule you want to modify and then click **Edit Rule**.

How do I remove a custom rule?

Follow steps 1 to 3 to select the range and display the Conditional Formatting drop-down menu, click **Clear Rules**, and then click **Clear Rules from Selected Cells**. If you have multiple custom rules defined for a worksheet and no longer require them, you can remove all of them. Click the **Home** tab, click **Conditional Formatting**, click **Clear Rules**, and then click **Clear Rules from Entire Sheet**.

Consolidate Data from Multiple Worksheets

It is common to distribute similar worksheets to multiple departments to capture budget numbers, inventory values, survey data, and so on. Those worksheets must then be combined into a summary report showing company-wide totals. This is called *consolidating* the data.

Rather than doing this manually, Excel can consolidate your data automatically. You can use the Consolidate feature to consolidate the data either by position or by category. In both cases, you specify one or more source ranges (the ranges that contain the data you want to consolidate) and a destination range (the range where the consolidated data will appear).

Consolidate Data from Multiple Worksheets

Consolidate by Position

① Create a new worksheet that uses the same layout (including row and column headers) as the sheets you want to consolidate.

② Open the workbooks that contain the worksheets you want to consolidate.

③ Select the upper-left corner of the destination range.

④ Click the **Data** tab.

⑤ Click **Consolidate** (⊞).

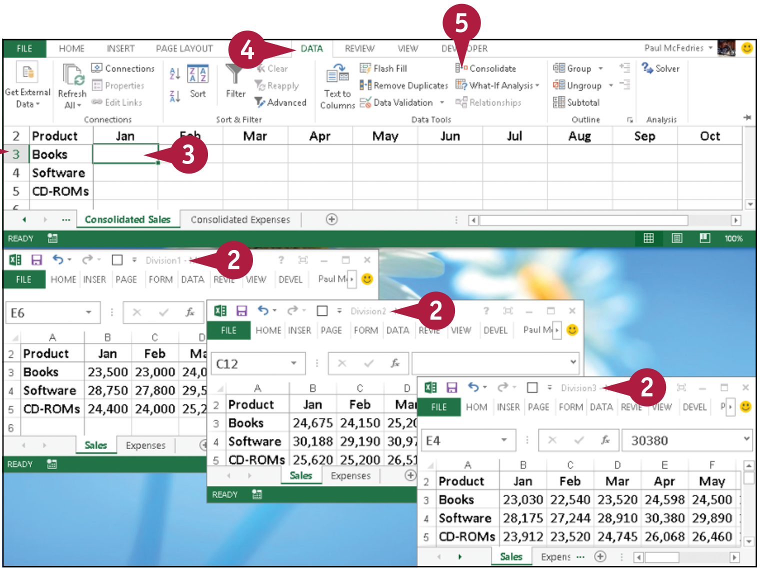
The Consolidate dialog box appears.

⑥ Click the **Function** drop-down arrow (▼), and then click the summary function you want to use.

⑦ Click inside the **Reference** text box.

⑧ Select one of the ranges you want to consolidate.

⑨ Click **Add**.



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VIEW
DEVELOPER
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Consolidated Sales
Consolidated Expenses
Sales
Expenses
Division1
Division2
Division3

Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Books										
Software										
CD-ROMs										

Division1:

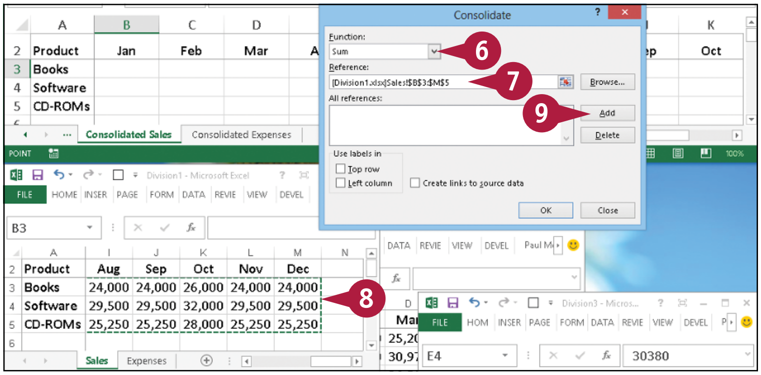
Product	Jan	Feb
Books	23,500	23,000
Software	28,750	27,800
CD-ROMs	24,400	24,000

Division2:

Product	Jan	Feb
Books	24,675	24,150
Software	30,188	29,190
CD-ROMs	25,620	25,200

Division3 (E4: 30380):

Product	Jan	Feb	Mar	Apr	May
Books	23,030	22,540	23,520	24,598	24,500
Software	28,175	27,244	28,910	30,380	29,890
CD-ROMs	23,912	23,520	24,745	26,068	26,460



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Consolidate
Browse...
Add
Delete
OK
Close
Consolidated Sales
Consolidated Expenses
Division1 - Microsoft Excel
Division3 - Micros...
Sales
Expenses

Function: Sum

Reference: [Division1.xlsx]Sales!$B$3:$M$5

All references:

Use labels in

☐ Top row

☐ Left column

☐ Create links to source data

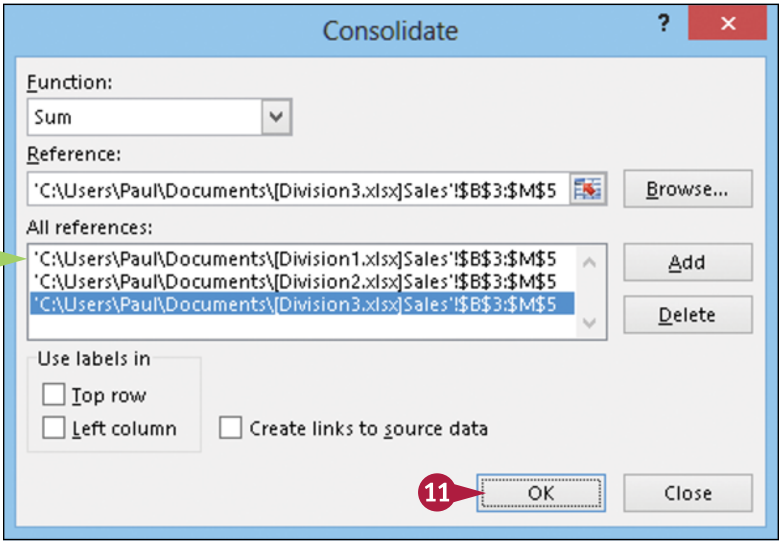
Division1, Sales (B3):

Product	Aug	Sep	Oct	Nov	Dec
Books	24,000	24,000	26,000	24,000	24,000
Software	29,500	29,500	32,000	29,500	29,500
CD-ROMs	25,250	25,250	28,000	25,250	25,250

Ⓐ Excel adds the range to the All References list.

10 Repeat steps 7 to 9 to add all the consolidation ranges.

11 Click **OK**.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Consolidate

Function: Sum

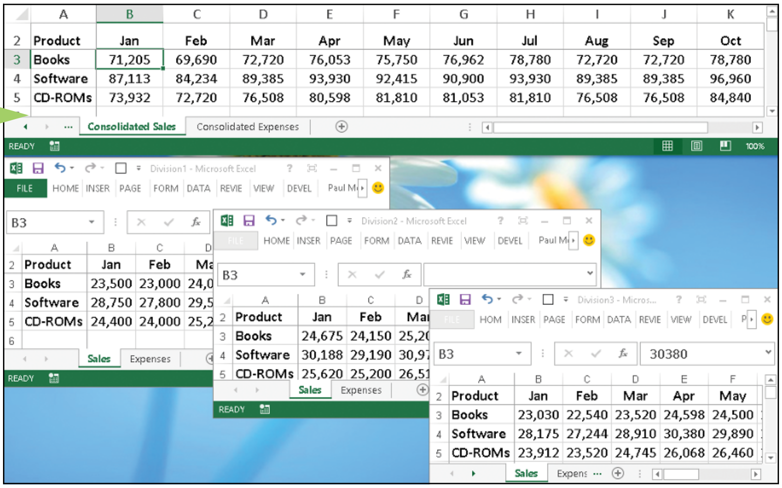
Reference: 'C:\Users\Paul\Documents\[Division3.xlsx]Sales'!$B$3:$M$5

All references:
'C:\Users\Paul\Documents\[Division1.xlsx]Sales'!$B$3:$M$5
'C:\Users\Paul\Documents\[Division2.xlsx]Sales'!$B$3:$M$5
'C:\Users\Paul\Documents\[Division3.xlsx]Sales'!$B$3:$M$5

Use labels in
☐ Top row
☐ Left column
☐ Create links to source data

Browse...
Add
Delete
OK
Close

Ⓑ Excel consolidates the data from the source ranges and displays the summary in the destination range.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Consolidated Expenses
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Division1 - Microsoft Excel
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Sales
Expenses
Division2 - Microsoft Excel
Division3 - Micros...

	A	B	C	D	E	F	G	H	I	J	K
2	Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
3	Books	71,205	69,690	72,720	76,053	75,750	76,962	78,780	72,720	72,720	78,780
4	Software	87,113	84,234	89,385	93,930	92,415	90,900	93,930	89,385	89,385	96,960
5	CD-ROMs	73,932	72,720	76,508	80,598	81,810	81,053	81,810	76,508	76,508	84,840

Division1: B3

	A	B	C	D
2	Product	Jan	Feb	Ma
3	Books	23,500	23,000	24,0
4	Software	28,750	27,800	29,5
5	CD-ROMs	24,400	24,000	25,2
6				

Division2: B3

	A	B	C	D
2	Product	Jan	Feb	Mar
3	Books	24,675	24,150	25,20
4	Software	30,188	29,190	30,97
5	CD-ROMs	25,620	25,200	26,51

Division3: B3 30380

	A	B	C	D	E	F
2	Product	Jan	Feb	Mar	Apr	May
3	Books	23,030	22,540	23,520	24,598	24,500
4	Software	28,175	27,244	28,910	30,380	29,890
5	CD-ROMs	23,912	23,520	24,745	26,068	26,460

TIP

Is there an easy way to update the consolidation if the source data changes?

If the source data changes, then you probably want to reflect those changes in the consolidation worksheet. Rather than running the entire consolidation over again, a much easier solution is to select the **Create links to source data** check box (☐ changes to ☑) in the Consolidate dialog box. This enables you to update the consolidation worksheet by clicking the **Data** tab and then clicking **Refresh All**.

This also means that Excel creates an outline in the consolidation sheet, and you can use that outline to see the detail from each of the source ranges. See the "Group Related Data" section earlier in the chapter to learn more about outlines in Excel.

continued ►

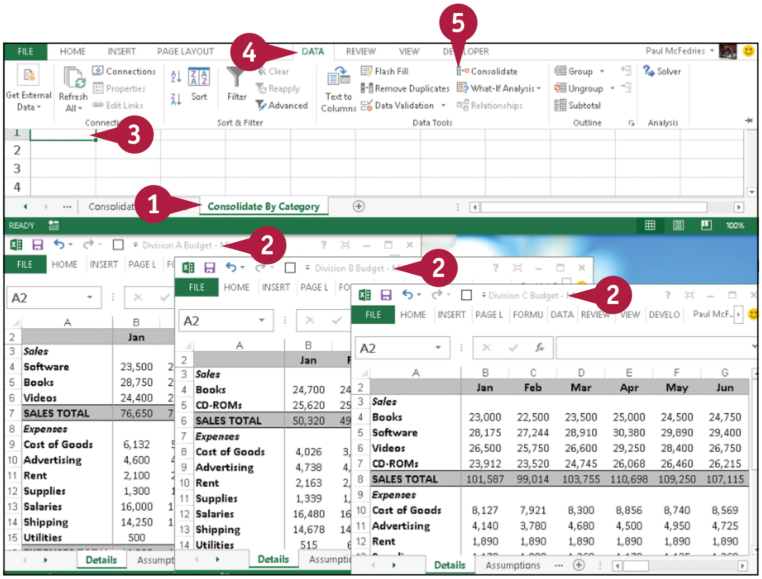
Consolidate Data from Multiple Worksheets (continued)

If the worksheets you want to summarize do not use the same layout, you need to tell Excel to consolidate the data *by category*. This method consolidates the data by looking for common row and column labels in each worksheet.

For example, suppose you are consolidating sales and Division A sells software, books, and videos; Division B sells books and CD-ROMs; and Division C sells books, software, videos, and CD-ROMs. When you consolidate this data, Excel summarizes the software from Divisions A and C, the CD-ROMs from Divisions B and C, and the books from all three.

Consolidate Data from Multiple Worksheets (continued)

Consolidate by Category



Division A Budget – Details

	A	B
2		Jan
3	*Sales*	
4	**Software**	23,500
5	**Books**	28,750
6	**Videos**	24,400
7	**SALES TOTAL**	76,650
8	*Expenses*	
9	**Cost of Goods**	6,132
10	**Advertising**	4,600
11	**Rent**	2,100
12	**Supplies**	1,300
13	**Salaries**	16,000
14	**Shipping**	14,250
15	**Utilities**	500

Division B Budget – Details

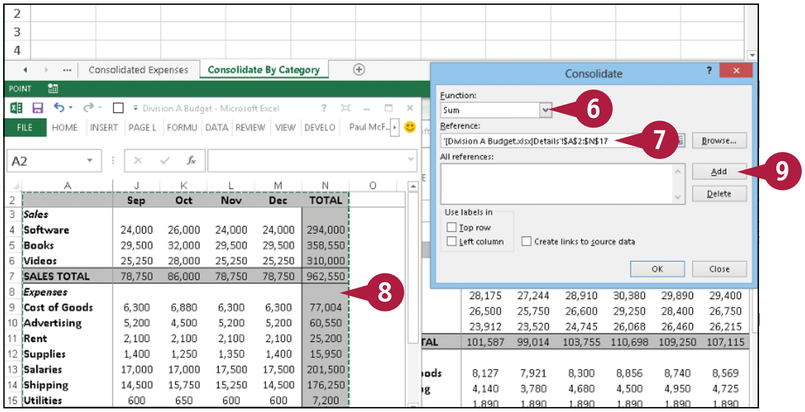
	A	B
2		Jan
3	*Sales*	
4	**Books**	24,700
5	**CD-ROMs**	25,620
6	**SALES TOTAL**	50,320
7	*Expenses*	
8	**Cost of Goods**	4,026
9	**Advertising**	4,738
10	**Rent**	2,163
11	**Supplies**	1,339
12	**Salaries**	16,480
13	**Shipping**	14,678
14	**Utilities**	515

Division C Budget – Details

	A	B	C	D	E	F	G
2		Jan	Feb	Mar	Apr	May	Jun
3	*Sales*						
4	**Books**	23,000	22,500	23,500	25,000	24,500	24,750
5	**Software**	28,175	27,244	28,910	30,380	29,890	29,400
6	**Videos**	26,500	25,750	26,600	29,250	28,400	26,750
7	**CD-ROMs**	23,912	23,520	24,745	26,068	26,460	26,215
8	**SALES TOTAL**	101,587	99,014	103,755	110,698	109,250	107,115
9	*Expenses*						
10	**Cost of Goods**	8,127	7,921	8,300	8,856	8,740	8,569
11	**Advertising**	4,140	3,780	4,680	4,500	4,950	4,725
12	**Rent**	1,890	1,890	1,890	1,890	1,890	1,890

1. Create a new worksheet for the consolidation.
2. Open the workbooks that contain the worksheets you want to consolidate.
3. Select the upper-left corner of the destination range.
4. Click the **Data** tab.
5. Click **Consolidate** (▤→▢).

The Consolidate dialog box appears.



Division A Budget - Microsoft Excel

	A	J	K	L	M	N
2		Sep	Oct	Nov	Dec	TOTAL
3	*Sales*					
4	**Software**	24,000	26,000	24,000	24,000	294,000
5	**Books**	29,500	32,000	29,500	29,500	358,550
6	**Videos**	25,250	28,000	25,250	25,250	310,000
7	**SALES TOTAL**	78,750	86,000	78,750	78,750	962,550
8	*Expenses*					
9	**Cost of Goods**	6,300	6,880	6,300	6,300	77,004
10	**Advertising**	5,200	4,500	5,200	5,200	60,550
11	**Rent**	2,100	2,100	2,100	2,100	25,200
12	**Supplies**	1,400	1,250	1,350	1,400	15,950
13	**Salaries**	17,000	17,000	17,500	17,500	201,500
14	**Shipping**	14,500	15,750	15,250	14,500	176,250
15	**Utilities**	600	650	600	600	7,200

Function: Sum

Reference: '[Division A Budget.xlsx]Details'!$A$2:$N$17

All references:

Use labels in

☐ Top row

☐ Left column

☐ Create links to source data

6. Click the **Function** drop-down arrow (▼), and then click the summary function you want to use.
7. Click inside the **Reference** text box.
8. Select one of the ranges you want to consolidate.

Note: Be sure to include the row and column labels in the range.

9. Click **Add**.

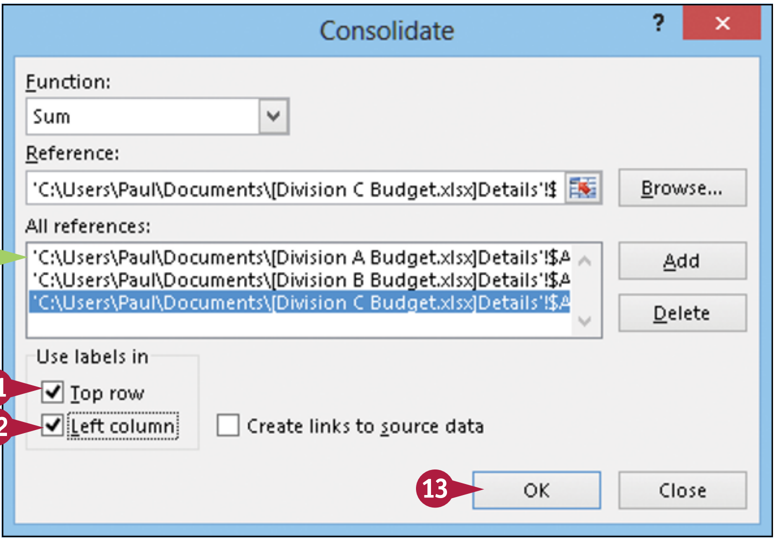
C Excel adds the range to the All references list.

10 Repeat steps 7 to 9 to add all the consolidation ranges.

11 If you have labels in the top row of each range, click **Top Row** (☐ changes to ☑).

12 If you have labels in the left-column row of each range, click **Left Column** (☐ changes to ☑).

13 Click **OK**.



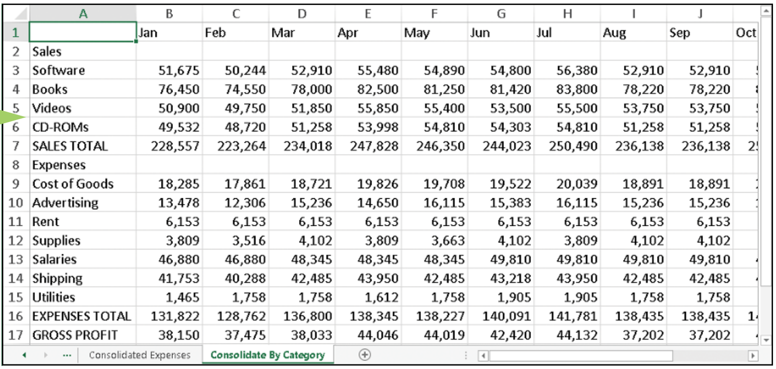
Function: Sum

Reference: 'C:\Users\Paul\Documents\[Division C Budget.xlsx]Details'!$

All references:
'C:\Users\Paul\Documents\[Division A Budget.xlsx]Details'!$A
'C:\Users\Paul\Documents\[Division B Budget.xlsx]Details'!$A
'C:\Users\Paul\Documents\[Division C Budget.xlsx]Details'!$A

Use labels in
☑ Top row
☑ Left column
☐ Create links to source data

D Excel consolidates the data from the source ranges and displays the summary in the destination range.



	A	B	C	D	E	F	G	H	I	J	
1		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
2	Sales										
3	Software	51,675	50,244	52,910	55,480	54,890	54,800	56,380	52,910	52,910	
4	Books	76,450	74,550	78,000	82,500	81,250	81,420	83,800	78,220	78,220	
5	Videos	50,900	49,750	51,850	55,850	55,400	53,500	55,500	53,750	53,750	
6	CD-ROMs	49,532	48,720	51,258	53,998	54,810	54,303	54,810	51,258	51,258	
7	SALES TOTAL	228,557	223,264	234,018	247,828	246,350	244,023	250,490	236,138	236,138	
8	Expenses										
9	Cost of Goods	18,285	17,861	18,721	19,826	19,708	19,522	20,039	18,891	18,891	
10	Advertising	13,478	12,306	15,236	14,650	16,115	15,383	16,115	15,236	15,236	
11	Rent	6,153	6,153	6,153	6,153	6,153	6,153	6,153	6,153	6,153	
12	Supplies	3,809	3,516	4,102	3,809	3,663	4,102	3,809	4,102	4,102	
13	Salaries	46,880	46,880	48,345	48,345	48,345	49,810	49,810	49,810	49,810	
14	Shipping	41,753	40,288	42,485	43,950	42,485	43,218	43,950	42,485	42,485	
15	Utilities	1,465	1,758	1,758	1,612	1,758	1,905	1,905	1,758	1,758	
16	EXPENSES TOTAL	131,822	128,762	136,800	138,345	138,227	140,091	141,781	138,435	138,435	
17	GROSS PROFIT	38,150	37,475	38,033	44,046	44,019	42,420	44,132	37,202	37,202	

TIP

What happens if the source data layout changes?

If the layout of the source data changes, then you must run the consolidation again.

If you consolidated by position, then before you can rerun the consolidation, you must first adjust the layout of the consolidation worksheet to match the changes to the source data. (You do not need to do this if you consolidated by category.)

No matter which consolidation method you used, before you run the consolidation again, you must delete the existing source ranges. Click the **Data** tab, and then click **Consolidate** (⊞) to display the Consolidate dialog box. For each source range, click the range in the **All references** list and then click **Delete**.

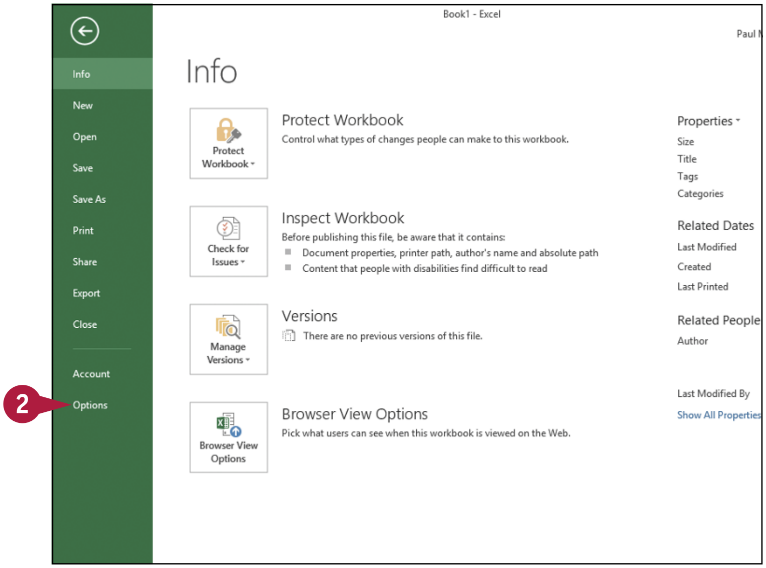
Load the Excel Analysis ToolPak

You can get access to a number of powerful statistical analysis tools by loading the Analysis ToolPak add-in. The Analysis ToolPak consists of 19 statistical tools that calculate statistical measures such as correlation, regression, rank and percentile, covariance, and moving averages.

You can also use the analysis tools to generate descriptive statistics (such as median, mode, and standard deviation), random numbers, and histograms.

Load the Excel Analysis ToolPak

1. Click the **File** tab (not shown).
2. Click **Options**.


Book1 - Excel
Paul
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
2
Info
Protect Workbook
Check for Issues
Manage Versions
Browser View Options
Properties
Size
Title
Tags
Categories
Related Dates
Last Modified
Created
Last Printed
Related People
Author
Last Modified By
Show All Properties

Protect Workbook
Control what types of changes people can make to this workbook.

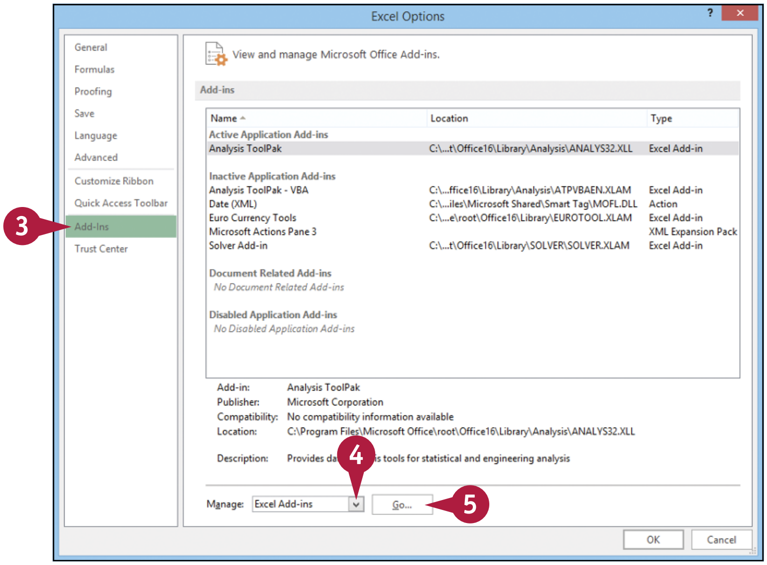
Inspect Workbook
Before publishing this file, be aware that it contains:
- Document properties, printer path, author's name and absolute path
- Content that people with disabilities find difficult to read

Versions
There are no previous versions of this file.

Browser View Options
Pick what users can see when this workbook is viewed on the Web.

The Excel Options dialog box appears.

3. Click **Add-Ins**.
4. In the Manage list, click **Excel Add-ins**.
5. Click **Go**.


Excel Options
General
Formulas
Proofing
Save
Language
Advanced
Customize Ribbon
Quick Access Toolbar
Add-Ins
Trust Center
3
4
5
Go...
OK
Cancel

View and manage Microsoft Office Add-ins.

Add-ins

Name	Location	Type
Active Application Add-ins		
Analysis ToolPak	C:\...t\Office16\Library\Analysis\ANALYS32.XLL	Excel Add-in
Inactive Application Add-ins		
Analysis ToolPak - VBA	C:\...ffice16\Library\Analysis\ATPVBAEN.XLAM	Excel Add-in
Date (XML)	C:\...iles\Microsoft Shared\Smart Tag\MOFL.DLL	Action
Euro Currency Tools	C:\...e\root\Office16\Library\EUROTOOL.XLAM	Excel Add-in
Microsoft Actions Pane 3		XML Expansion Pack
Solver Add-in	C:\...t\Office16\Library\SOLVER\SOLVER.XLAM	Excel Add-in
Document Related Add-ins		
No Document Related Add-ins		
Disabled Application Add-ins		
No Disabled Application Add-ins		

Add-in: Analysis ToolPak
Publisher: Microsoft Corporation
Compatibility: No compatibility information available
Location: C:\Program Files\Microsoft Office\root\Office16\Library\Analysis\ANALYS32.XLL

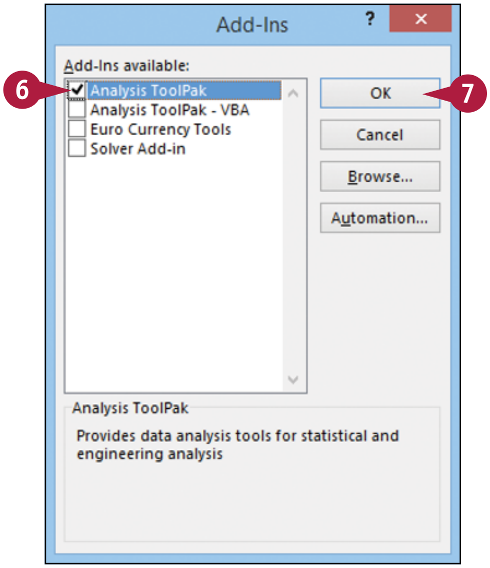
Description: Provides da is tools for statistical and engineering analysis

Manage: Excel Add-ins

The Add-Ins dialog box appears.

6 Select the **Analysis ToolPak** check box (☐ changes to ☑).

7 Click **OK**.

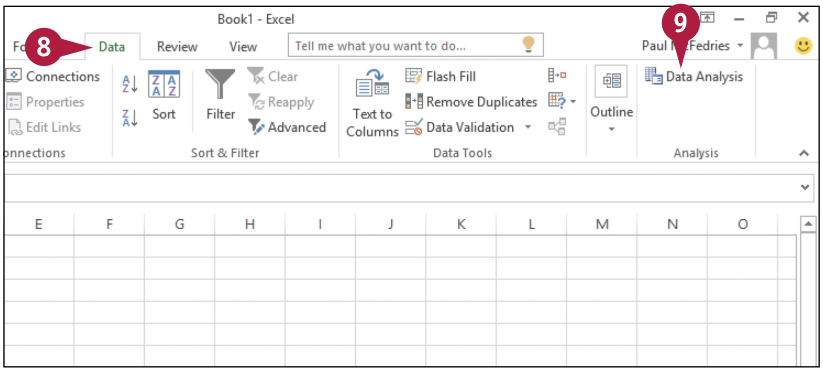

Add-Ins
?
×
Add-Ins available:
6
☑ Analysis ToolPak
☐ Analysis ToolPak - VBA
☐ Euro Currency Tools
☐ Solver Add-in
OK
7
Cancel
Browse...
Automation...
Analysis ToolPak

Provides data analysis tools for statistical and engineering analysis

Excel loads the Analysis ToolPak add-in.

8 Click the **Data** tab.

9 Click **Data Analysis** (▦) to access the Analysis ToolPak tools.


Book1 - Excel
8
Data
Review
View
Tell me what you want to do...
9
Paul McFedries
Connections
Properties
Edit Links
onnections
Sort
Filter
Clear
Reapply
Advanced
Sort & Filter
Text to Columns
Flash Fill
Remove Duplicates
Data Validation
Data Tools
Outline
Data Analysis
Analysis
E
F
G
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I
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TIP

How do I use the statistical tools?

The specific steps you follow vary from tool to tool, but you can follow these general steps to use any of the Analysis ToolPak's statistical tools:

1 Click the **Data** tab.

2 Click ▦.

The Data Analysis dialog box appears.

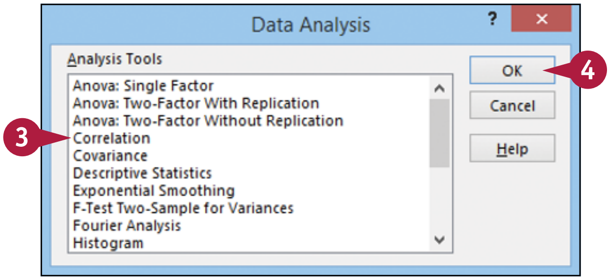
3 Click the tool you want to use.

4 Click **OK**.

Excel displays a dialog box for the tool.

5 Fill in the dialog box (the controls vary from tool to tool).

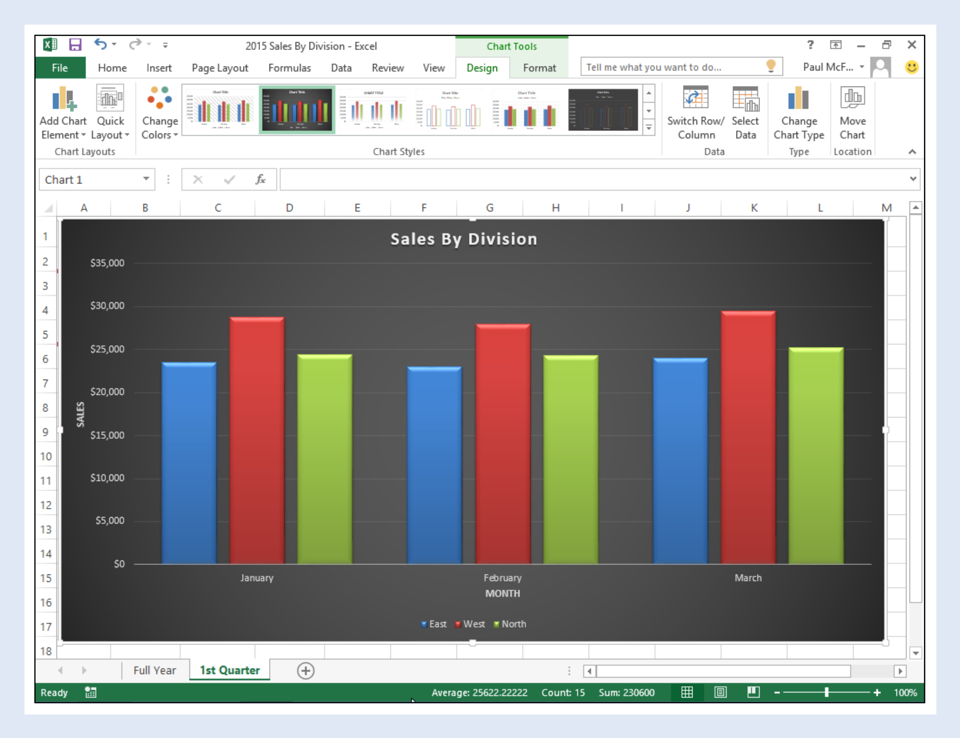
6 Click **OK**.


Data Analysis
?
×
Analysis Tools
Anova: Single Factor
Anova: Two-Factor With Replication
Anova: Two-Factor Without Replication
Correlation
Covariance
Descriptive Statistics
Exponential Smoothing
F-Test Two-Sample for Variances
Fourier Analysis
Histogram
3
OK
4
Cancel
Help

CHAPTER 12

Visualizing Data with Charts

You can take a worksheet full of numbers and display them as a chart. Visualizing your data in this way makes the data easier to understand and analyze. To help you see your data exactly the way you want, Excel offers a wide variety of chart types, and a large number of chart options.


2015 Sales By Division - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Format
Tell me what you want to do...
Paul McF...
Add Chart Element
Quick Layout
Change Colors
Chart Layouts
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Move Chart
Location
Chart 1
Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
SALES
January
February
March
MONTH
East
West
North
Full Year
1st Quarter
Ready
Average: 25622.22222
Count: 15
Sum: 230600
100%

Examine Chart Elements 266
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Create a Chart 268
Create a Recommended Chart 270
Add Chart Titles 272
Add Data Labels 273
Position the Chart Legend 274
Display Chart Gridlines 275
Display a Data Table 276
Change the Chart Layout and Style 277
Select a Different Chart Type 278
Change the Chart Source Data. 280
Move or Resize a Chart 282
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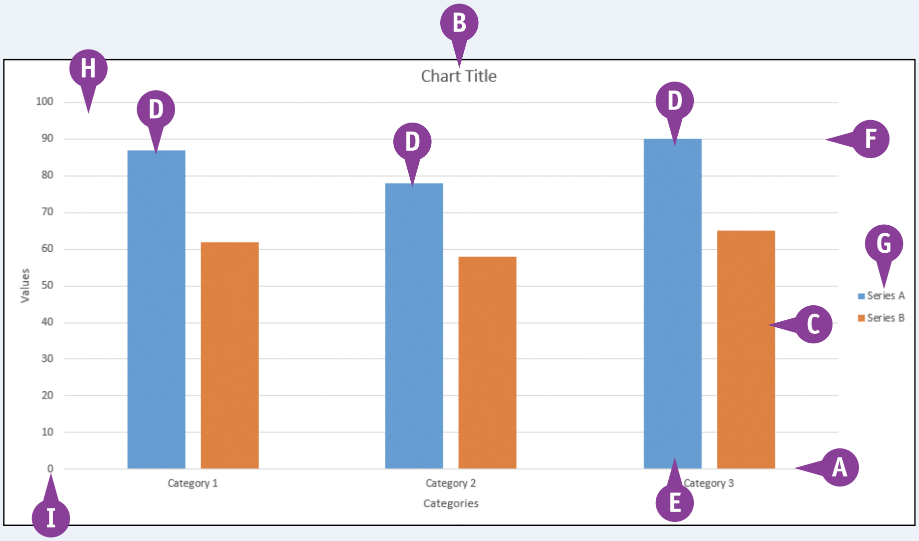
Examine Chart Elements

One of the best ways to analyze your worksheet data — or get your point across to other people — is to display your data visually in a *chart*, which is a graphic representation of spreadsheet data. As the data in the spreadsheet changes, the chart also changes to reflect the new numbers.

You have dozens of different chart formats to choose from, and if none of the built-in Excel formats is just right, you can further customize these charts to suit your needs. To get the most out of charts, you need to familiarize yourself with the basic chart elements.



Ⓐ Category Axis

The axis (usually the X axis) that contains the category groupings.

Ⓑ Chart Title

The title of the chart.

Ⓒ Data Marker

A symbol that represents a specific data value. The symbol used depends on the chart type.

Ⓓ Data Series

A collection of related data values. Normally, the marker for each value in a series has the same pattern.

Ⓔ Data Value

A single piece of data, also called a *data point*.

Ⓕ Gridlines

Optional horizontal and vertical extensions of the axis tick marks. These lines make data values easier to read.

Ⓖ Legend

A guide that shows the colors, patterns, and symbols used by the markers for each data series.

Ⓗ Plot Area

The area bounded by the category and value axes. It contains the data points and gridlines.

Ⓘ Value Axis

The axis (usually the Y axis) that contains the data values.

CHAPTER
12

Understanding Chart Types

Excel offers 15 different types of charts, including column charts, bar charts, line charts, and pie charts. The chart type you use depends on the type of data and how you want to present that data visually.

Chart Types

Chart Type	Description
Area chart	Shows the relative contributions over time that each data series makes to the whole picture.
Bar chart	Compares distinct items or shows single items at distinct intervals. A bar chart is laid out with categories along the vertical axis and values along the horizontal axis.
Box & Whisker chart	Visualizes several statistical values for the data in each category, including the average, the range, the minimum, and the maximum.
Column chart	Like a bar chart, compares distinct items or shows single items at distinct intervals. However, a column chart is laid out with categories along the horizontal axis and values along the vertical axis.
Doughnut chart	Like a pie chart, shows the proportion of the whole that is contributed by each value in a data series. The advantage of a doughnut chart is that you can plot multiple data series.
Histogram	Groups the category values into ranges — called *bins* — and shows the frequency with which the data values fall within each bin.
Line chart	Shows how a data series changes over time. The category (X) axis usually represents a progression of even increments (such as days or months), and the series points are plotted on the value (Y) axis.
Pie chart	Shows the proportion of the whole that is contributed by each value in a single data series. The whole is represented as a circle (the “pie”), and each value is displayed as a proportional “slice” of the circle.
Radar chart	Makes comparisons within a data series and between data series relative to a center point. Each category is shown with a value axis extending from the center point.
Stock chart	Designed to plot stock-market prices, such as a stock’s daily high, low, and closing values.
Sunburst chart	Displays hierarchical data as a series of concentric circles, with the top level as the innermost circle and each circle divided proportionally according to the data values within that level.
Surface chart	Analyzes two sets of data and determines the optimum combination of the two.
Treemap chart	For hierarchical data, shows a large rectangle for each item in the top level, then divides each rectangle proportionally based on the value of each item in the next level.
Waterfall chart	Shows a running total as category values are added (positive values) or subtracted (negative values).
XY chart	Shows the relationship between numeric values in two different data series. It can also plot a series of data pairs in XY coordinates. (This is also called a *scatter* chart.)

Create a Chart

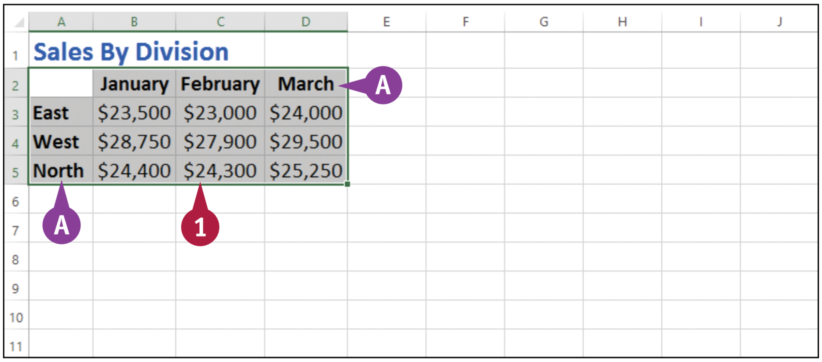
You can create a chart from your Excel worksheet data with just a few mouse clicks. Excel offers nearly 100 default chart configurations, so there should always be a type that best visualizes your data. If you would prefer to let Excel suggest a chart type based on your data, see the following section, "Create a Recommended Chart."

Regardless of the chart type you choose originally, you can change to a different chart type at any time. See the "Select a Different Chart Type" section later in this chapter.

Create a Chart

1. Select the data that you want to visualize in a chart.

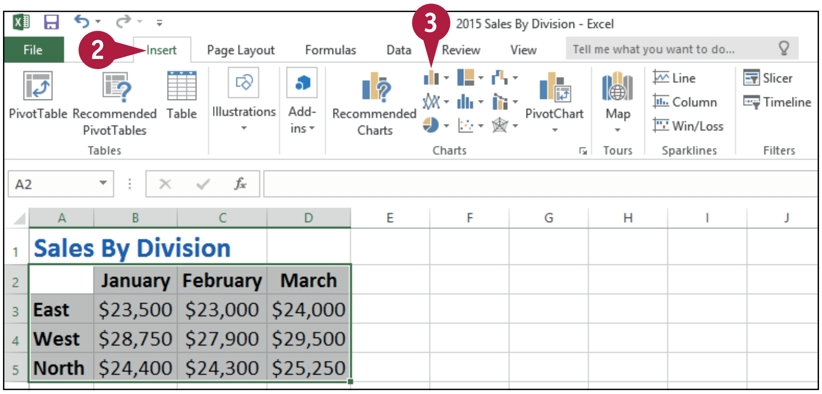
A. If your data includes headings, be sure to include those headings in the selection.



Sales By Division

	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250

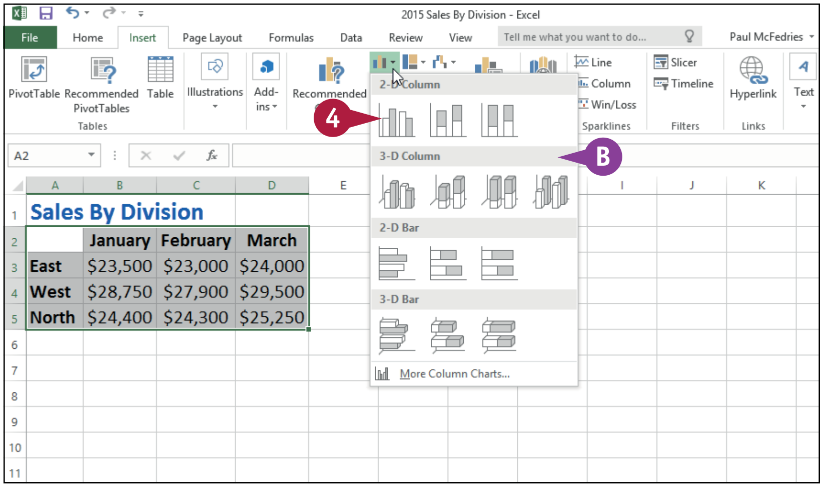
2. Click the **Insert** tab.
3. Click a chart type.


2015 Sales By Division - Excel
File
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
Add-ins
Recommended Charts
Charts
PivotChart
Map
Tours
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
A2
2
3

Sales By Division

	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250

- **B** Excel displays a gallery of configurations for the chart type.
- **4** Click the chart configuration you want to use.


2015 Sales By Division - Excel
File
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Formulas
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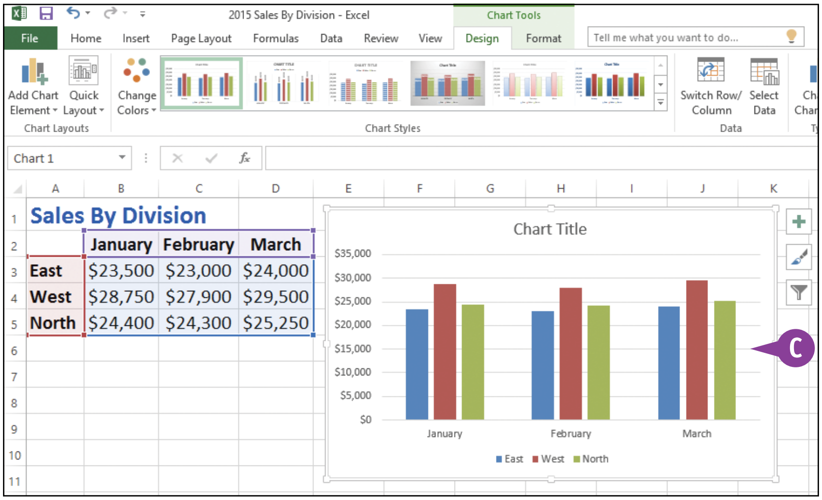
View
Tell me what you want to do...
Paul McFedries
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
Add-ins
Recommended
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
Hyperlink
Links
Text
A2
2-D Column
3-D Column
2-D Bar
3-D Bar
More Column Charts...
4
B

Sales By Division

	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250

- **C** Excel inserts the chart.

  The sections in the rest of this chapter show you how to configure, format, and move the chart.


2015 Sales By Division - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
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Format
Tell me what you want to do...
Add Chart Element
Quick Layout
Chart Layouts
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Chart 1
Chart Title
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
January
February
March
East
West
North
C

Sales By Division

	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250

TIP

Is there a way to create a chart on a separate sheet?

Yes. You can use a special workbook sheet called a *chart sheet*. If you have not yet created your chart, select the worksheet data, right-click any worksheet tab, and then click **Insert** to display the Insert dialog box. Click the **General** tab, click **Chart**, and then click **OK**. Excel creates a new chart sheet and inserts the chart.

If you have already created your chart, you can move it to a separate chart sheet. See the first tip in the “Move or Resize a Chart” section later in this chapter.

Create a Recommended Chart

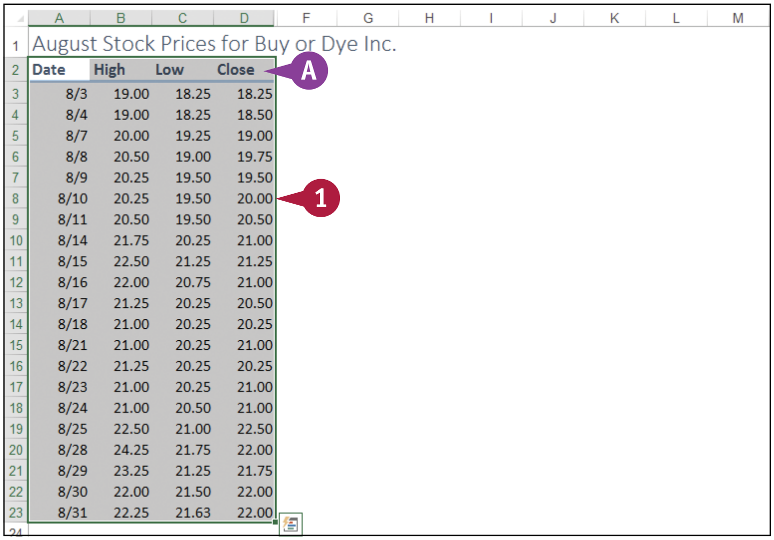
You can make it easier and faster to create a chart by choosing from one of the chart configurations recommended by Excel.

With close to 100 possible chart configurations, the Excel chart tools are certainly comprehensive. However, that can be an overwhelming number of choices if you're not sure which type would best visualize your data. Rather than wasting a great deal of time looking at dozens of different chart configurations, the Recommended Charts command examines your data and then narrows down the possible choices to about ten configurations that would work with your data.

Create a Recommended Chart

1. Select the data that you want to visualize in a chart.

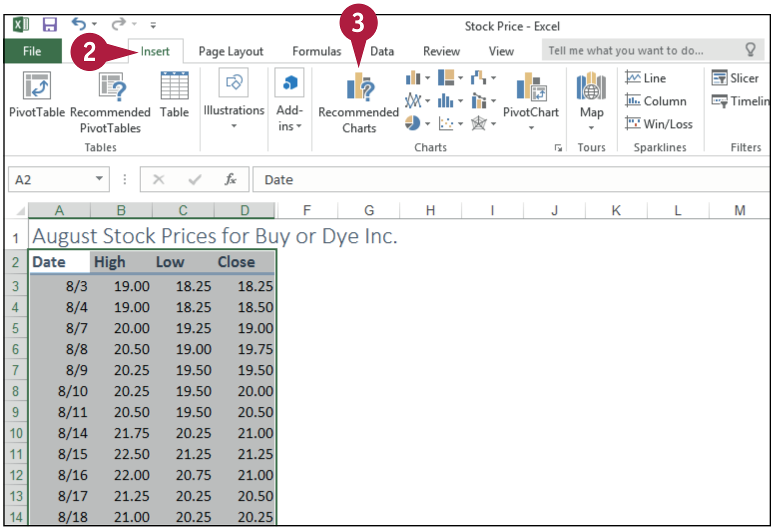
A. If your data includes headings, be sure to include those headings in the selection.



August Stock Prices for Buy or Dye Inc.

Date	High	Low	Close
8/3	19.00	18.25	18.25
8/4	19.00	18.25	18.50
8/7	20.00	19.25	19.00
8/8	20.50	19.00	19.75
8/9	20.25	19.50	19.50
8/10	20.25	19.50	20.00
8/11	20.50	19.50	20.50
8/14	21.75	20.25	21.00
8/15	22.50	21.25	21.25
8/16	22.00	20.75	21.00
8/17	21.25	20.25	20.50
8/18	21.00	20.25	20.25
8/21	21.00	20.25	21.00
8/22	21.25	20.25	20.25
8/23	21.00	20.25	21.00
8/24	21.00	20.50	21.00
8/25	22.50	21.00	22.50
8/28	24.25	21.75	22.00
8/29	23.25	21.25	21.75
8/30	22.00	21.50	22.00
8/31	22.25	21.63	22.00

2. Click the **Insert** tab.
3. Click **Recommended Charts**.


Stock Price - Excel
File
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
Add-ins
Recommended Charts
Charts
PivotChart
Map
Tours
Line
Column
Win/Loss
Sparklines
Slicer
Timelin
Filters
2
3
A2
Date

August Stock Prices for Buy or Dye Inc.

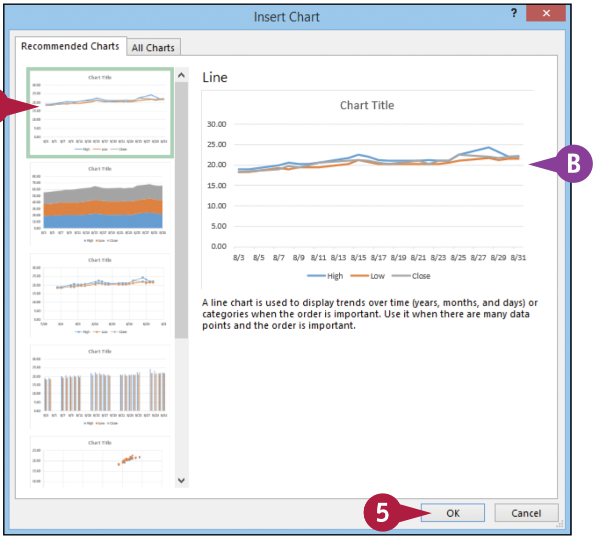
Date	High	Low	Close
8/3	19.00	18.25	18.25
8/4	19.00	18.25	18.50
8/7	20.00	19.25	19.00
8/8	20.50	19.00	19.75
8/9	20.25	19.50	19.50
8/10	20.25	19.50	20.00
8/11	20.50	19.50	20.50
8/14	21.75	20.25	21.00
8/15	22.50	21.25	21.25
8/16	22.00	20.75	21.00
8/17	21.25	20.25	20.50
8/18	21.00	20.25	20.25

The Insert Chart dialog box appears with the Recommended Charts tab displayed.

4 Click the chart type you want to use.

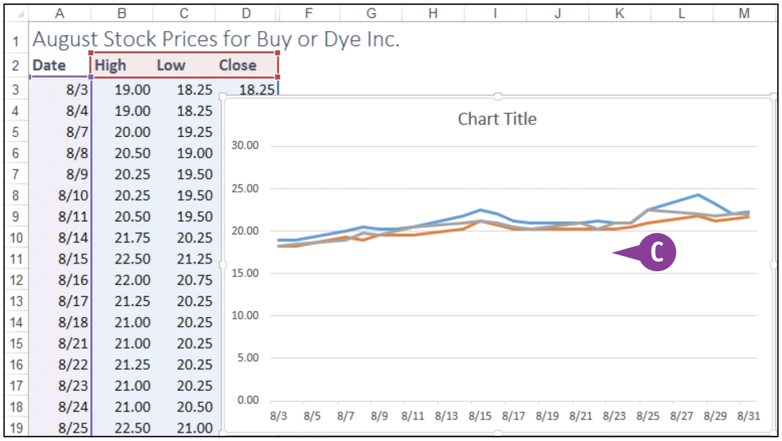
B A preview of the chart appears here.

5 Click **OK**.


Insert Chart
?
×
Recommended Charts
All Charts
4
Line
Chart Title
30.00
25.00
20.00
15.00
10.00
5.00
0.00
8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31
High
Low
Close
B
5
OK
Cancel

A line chart is used to display trends over time (years, months, and days) or categories when the order is important. Use it when there are many data points and the order is important.

C Excel inserts the chart.


A B C D F G H I J K L M
Chart Title
30.00
25.00
20.00
15.00
10.00
5.00
0.00
8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31
C

August Stock Prices for Buy or Dye Inc.

	Date	High	Low	Close
3	8/3	19.00	18.25	18.25
4	8/4	19.00	18.25	
5	8/7	20.00	19.25	
6	8/8	20.50	19.00	
7	8/9	20.25	19.50	
8	8/10	20.25	19.50	
9	8/11	20.50	19.50	
10	8/14	21.75	20.25	
11	8/15	22.50	21.25	
12	8/16	22.00	20.75	
13	8/17	21.25	20.25	
14	8/18	21.00	20.25	
15	8/21	21.00	20.25	
16	8/22	21.25	20.25	
17	8/23	21.00	20.25	
18	8/24	21.00	20.50	
19	8/25	22.50	21.00	

TIP

Is there a faster way to insert a recommended chart?

Yes, you can use the Quick Analysis feature in Excel:

1 Select the data that you want to visualize in a chart, including the headings, if any.

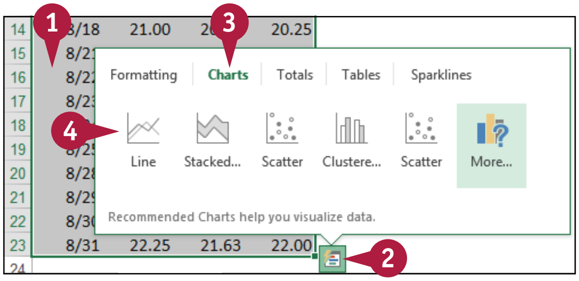
2 Click the **Quick Analysis** Smart tag (▤).

3 Click **Charts**.

Excel displays the chart types recommended for your data.

4 Click the chart type you want to use.

Excel inserts the chart.


14 8/18 21.00 20 20.25
15 8/2
16 8/2
17 8/2
18
19
20 8/2
21 8/2
22 8/3
23 8/31 22.25 21.63 22.00
24
1
2
3
4
Formatting
Charts
Totals
Tables
Sparklines
Line
Stacked...
Scatter
Clustere...
Scatter
More...

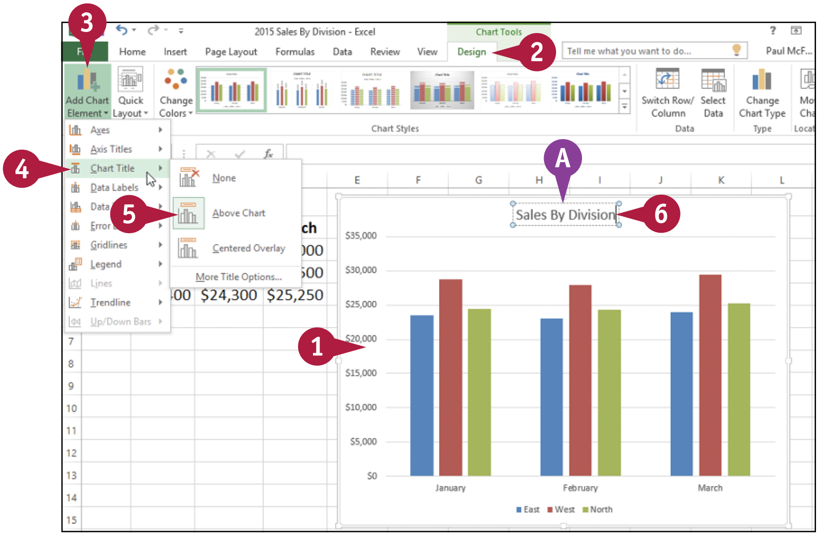
Recommended Charts help you visualize data.

Add Chart Titles

You can make your chart easier to understand by adding chart titles, which are labels that appear in specific sections of the chart. By including descriptive titles, you make it easier for other people to see at a glance what your chart is visualizing.

There are three types of chart titles that you can add. The first type is the overall chart title, which usually appears at the top of the chart. You can also add a title for the horizontal axis to describe the chart categories, as well as a title for the vertical axis, which describes the chart values.

Add Chart Titles

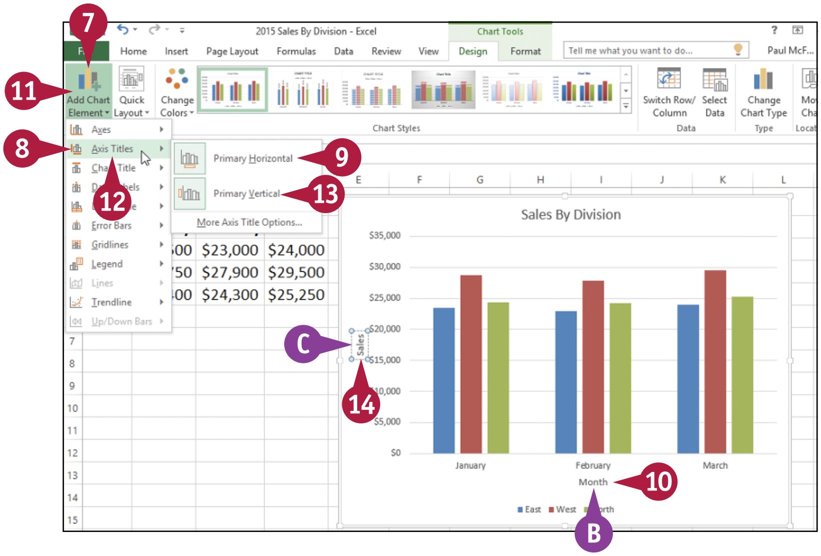


2015 Sales By Division - Excel
Chart Tools
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McF...
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Axes
Axis Titles
Chart Title
Data Labels
Data
Error
Gridlines
Legend
Lines
Trendline
Up/Down Bars
None
Above Chart
Centered Overlay
More Title Options...
Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
January
February
March
East
West
North
$24,300
$25,250
1
2
3
4
5
6
A

1. Click the chart.
2. Click the **Design** tab.
3. Click **Add Chart Element.**
4. Click **Chart Title.**
5. Click **Above Chart.**

Ⓐ Excel adds the title box.

6. Type the title.



2015 Sales By Division - Excel
Chart Tools
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Format
Tell me what you want to do...
Paul McF...
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Axes
Axis Titles
Chart Title
Error Bars
Gridlines
Legend
Lines
Trendline
Up/Down Bars
Primary Horizontal
Primary Vertical
More Axis Title Options...
$23,000
$24,000
$27,900
$29,500
$24,300
$25,250
Sales By Division
Sales
Month
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
January
February
March
East
West
North
7
8
9
10
11
12
13
14
B
C

7. Click **Add Chart Element.**
8. Click **Axis Titles.**
9. Click **Primary Horizontal.**

Ⓑ Excel adds the title box.

10. Type the title.
11. Click **Add Chart Element.**
12. Click **Axis Titles.**
13. Click **Primary Vertical.**

Ⓒ Excel adds the title box.

14. Type the title.

Add Data Labels

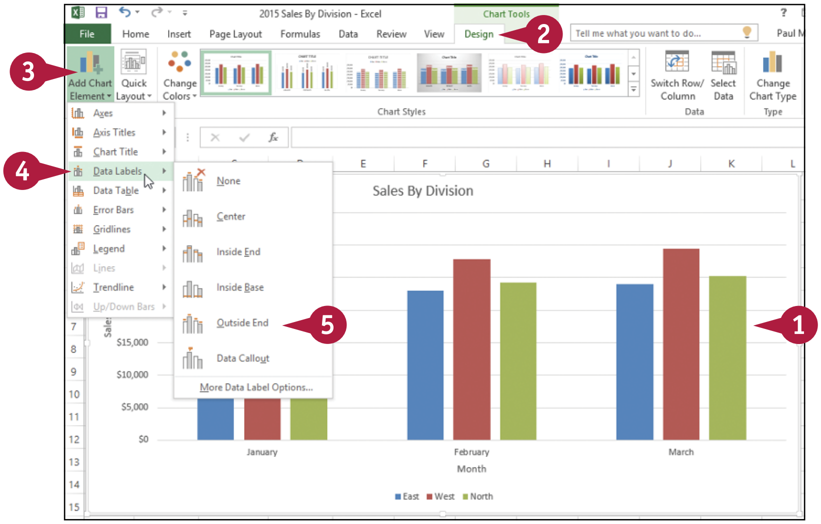
You can make your chart easier to read by adding data labels. A *data label* is a small text box that appears in or near a data marker and displays the value of that data point.

Excel offers several position options for the data labels, and these options depend on the chart type. For example, with a column chart you can place the data labels within or above each column, and for a line chart you can place the labels to the left or right, or above or below, the data marker.

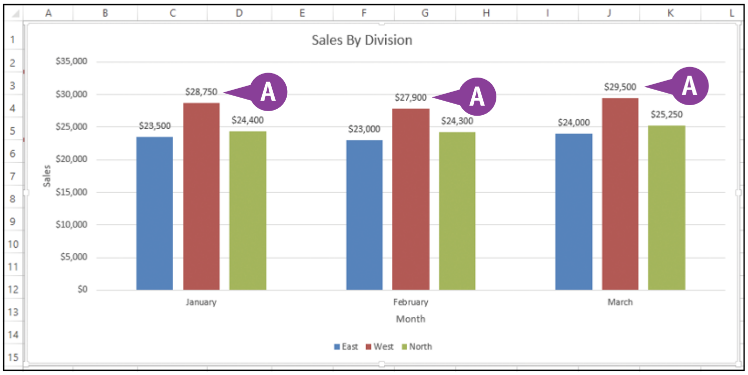
Add Data Labels

1. Click the chart.
2. Click the **Design** tab.
3. Click **Add Chart Element**.
4. Click **Data Labels**.
5. Click the position you want to use for the data labels.

Note: Remember that the position options you see depend on the chart type.


2015 Sales By Division - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Axes
Axis Titles
Chart Title
Data Labels
Data Table
Error Bars
Gridlines
Legend
Lines
Trendline
Up/Down Bars
None
Center
Inside End
Inside Base
Outside End
Data Callout
More Data Label Options...
Sales By Division
$15,000
$10,000
$5,000
$0
January
February
March
Month
Sales
East
West
North
1
2
3
4
5

A Excel adds the labels to the chart.

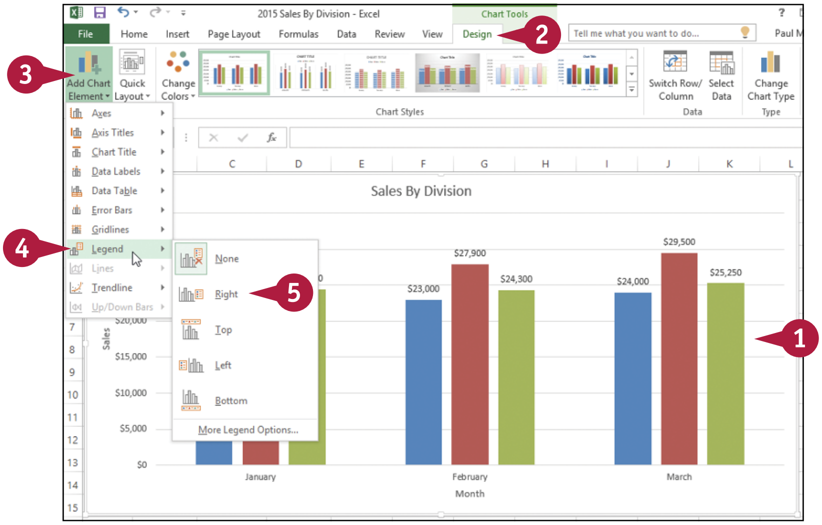

Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
Sales
$23,500
$28,750
$24,400
$23,000
$27,900
$24,300
$24,000
$29,500
$25,250
January
February
March
Month
East
West
North
A
A
A

Position the Chart Legend

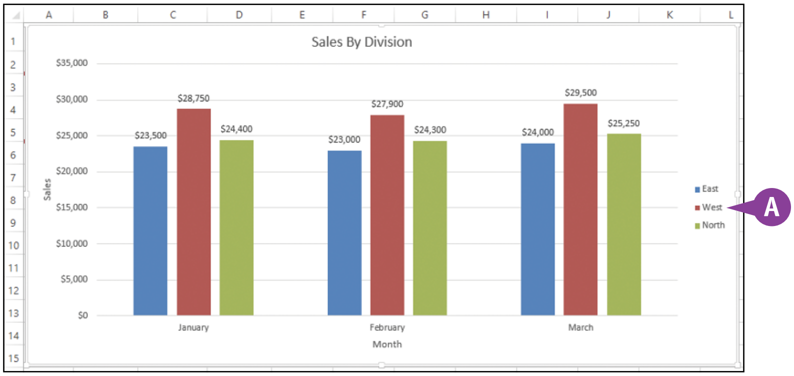
You can change the position of the chart *legend*, which identifies the colors associated with each data series in the chart. The legend is a crucial chart element for interpreting and understanding your chart, so it is important that you place it in the best position. For example, you might find the legend easier to read if it appears to the right of the chart. Alternatively, if you want more horizontal space to display your chart, you can move the legend above or below the chart.

Position the Chart Legend

1. Click the chart.
2. Click the **Design** tab.
3. Click **Add Chart Element.**
4. Click **Legend.**
5. Click the position you want to use for the legend.


2015 Sales By Division - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Axes
Axis Titles
Chart Title
Data Labels
Data Table
Error Bars
Gridlines
Legend
Lines
Trendline
Up/Down Bars
None
Right
Top
Left
Bottom
More Legend Options...
Sales By Division
Sales
$27,900
$24,300
$23,000
$29,500
$25,250
$24,000
$20,000
$15,000
$10,000
$5,000
$0
January
February
March
Month
1
2
3
4
5

A Excel moves the legend.


Sales By Division
Sales
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$23,500
$28,750
$24,400
$23,000
$27,900
$24,300
$24,000
$29,500
$25,250
January
February
March
Month
East
West
North
A

Display Chart Gridlines

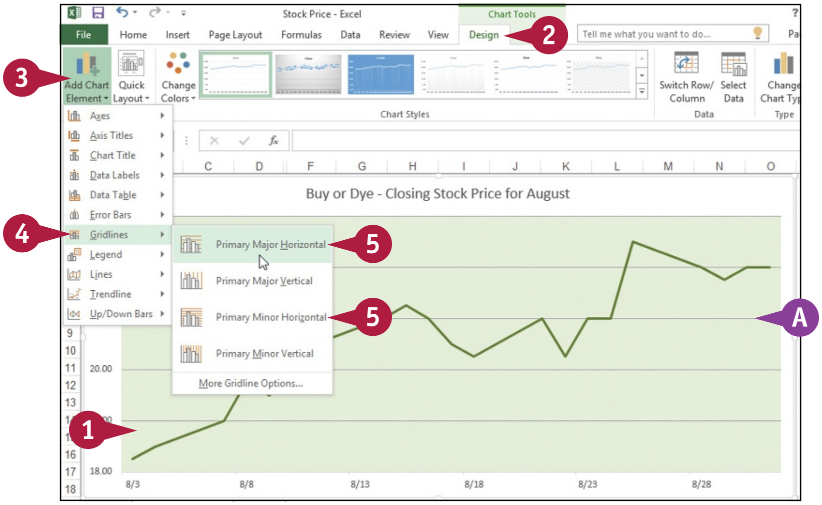
You can make your chart easier to read and analyze by adding gridlines. Horizontal gridlines extend from the vertical (value) axis, and are useful with area, bubble, and column charts. Vertical gridlines extend from the horizontal (category) axis and are useful with bar and line charts.

Major gridlines are gridlines associated with the *major units* (the values you see displayed on the vertical and horizontal axes), while *minor gridlines* are gridlines associated with the *minor units* (values between each major unit).

Display Chart Gridlines

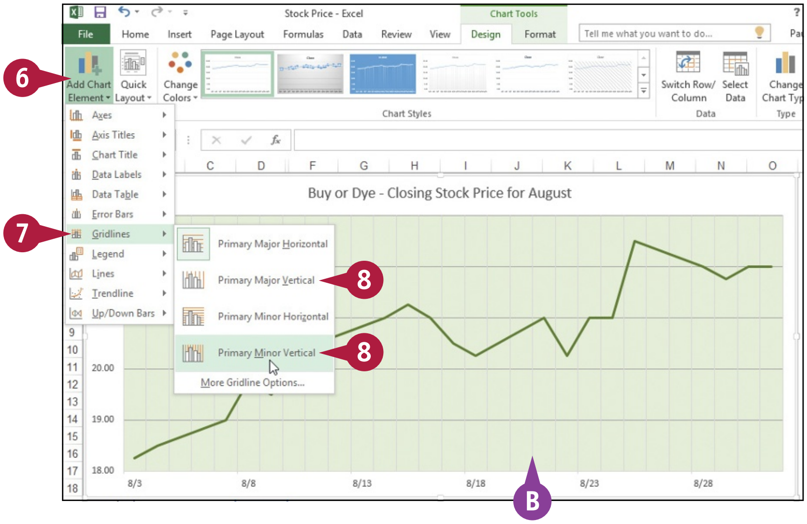
1. Click the chart.
2. Click the **Design** tab.
3. Click **Add Chart Element**.
4. Click **Gridlines**.
5. Click the horizontal gridline option you prefer.

Ⓐ Excel displays the horizontal gridlines.


Stock Price - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Axes
Axis Titles
Chart Title
Data Labels
Data Table
Error Bars
Gridlines
Legend
Lines
Trendline
Up/Down Bars
Primary Major Horizontal
Primary Major Vertical
Primary Minor Horizontal
Primary Minor Vertical
More Gridline Options...
Buy or Dye - Closing Stock Price for August
20.00
18.00
8/3
8/8
8/13
8/18
8/23
8/28
1
2
3
4
5
5
A

6. Click **Add Chart Element**.
7. Click **Gridlines**.
8. Click the vertical gridline option you prefer.

Ⓑ Excel displays the vertical gridlines.


Stock Price - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Format
Tell me what you want to do...
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Axes
Axis Titles
Chart Title
Data Labels
Data Table
Error Bars
Gridlines
Legend
Lines
Trendline
Up/Down Bars
Primary Major Horizontal
Primary Major Vertical
Primary Minor Horizontal
Primary Minor Vertical
More Gridline Options...
Buy or Dye - Closing Stock Price for August
20.00
19.00
18.00
8/3
8/8
8/13
8/18
8/23
8/28
6
7
8
8
B

Display a Data Table

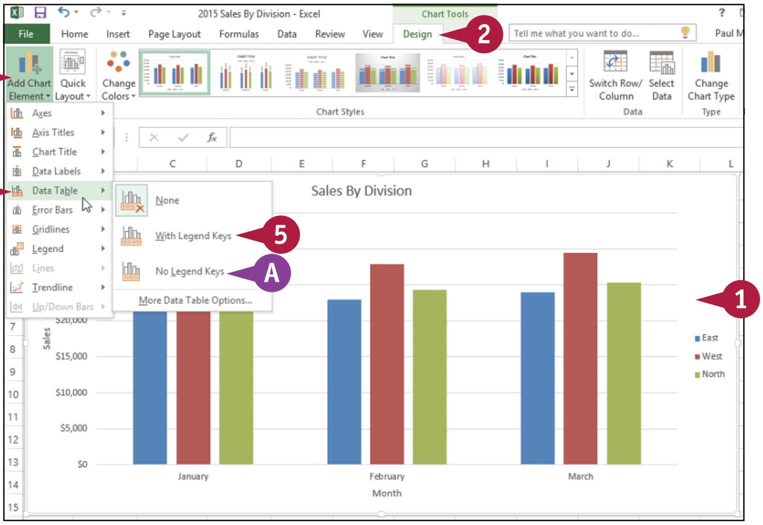
You can make it easier for yourself and others to interpret your chart by adding a data table. A *data table* is a tabular grid where each row is a data series from the chart, each column is a chart category, and each cell is a chart data point.

Excel gives you the option of displaying the data table with or without *legend keys*, which are markers that identify each series.

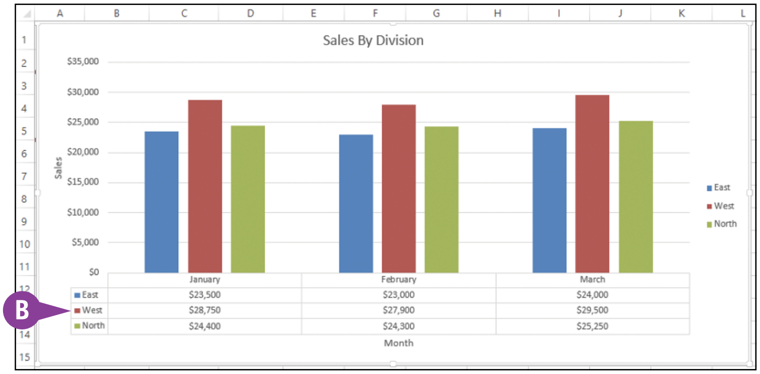
Display a Data Table

1. Click the chart.
2. Click the **Design** tab.
3. Click **Add Chart Element.**
4. Click **Data Table.**
5. Click **With Legend Keys.**

A. If you prefer not to display the legend keys, click **No Legend Keys.**


2015 Sales By Division - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul M
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Axes
Axis Titles
Chart Title
Data Labels
Data Table
Error Bars
Gridlines
Legend
Lines
Trendline
Up/Down Bars
None
With Legend Keys
No Legend Keys
More Data Table Options...
Sales By Division
Sales
$20,000
$15,000
$10,000
$5,000
$0
January
February
March
Month
East
West
North
1
2
3
4
5
A

B. Excel adds the data table below the chart.


Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
Sales
East
West
North
B

	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250

Month

Change the Chart Layout and Style

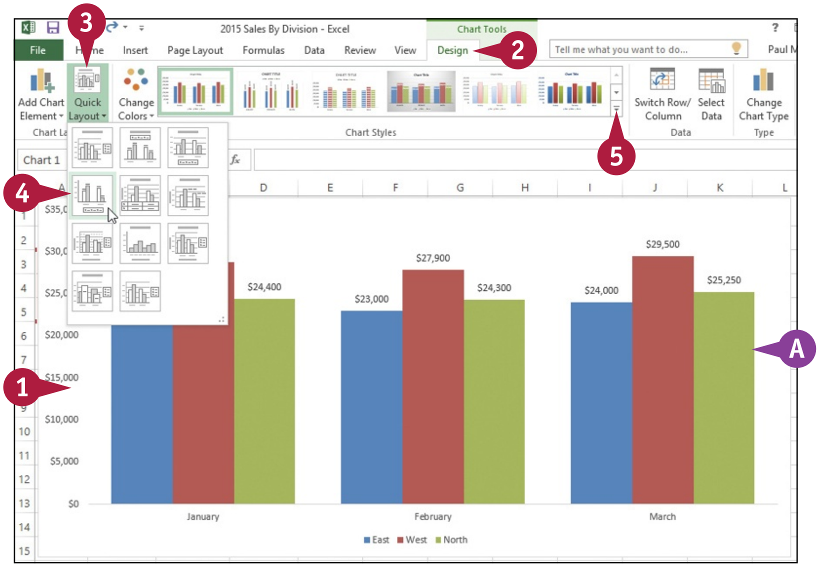
You can quickly format your chart by applying a different chart layout and chart style. The chart layout includes elements such as the titles, data labels, legend, gridlines, and data table. The Quick Layouts feature in Excel enables you to apply these elements in different combinations with just a few mouse clicks. The chart style represents the colors used by the chart data markers and background.

Change the Chart Layout and Style

1. Click the chart.
2. Click the **Design** tab.
3. Click **Quick Layout**.
4. Click the layout you want to use.

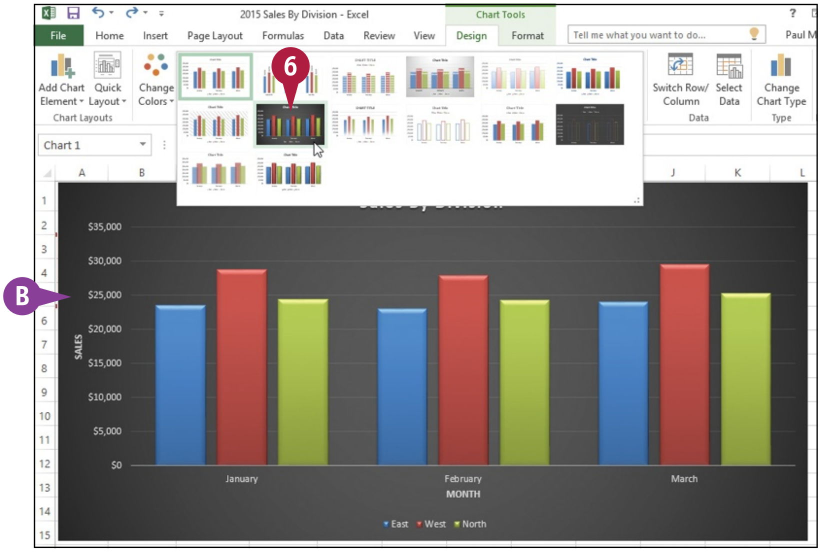
   A. Excel applies the layout.

5. Click the **Chart Styles** ▾.


2015 Sales By Division - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul M
Add Chart Element
Quick Layout
Change Colors
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Chart 1
1
2
3
4
5
A
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$24,400
$23,000
$27,900
$24,300
$24,000
$29,500
$25,250
January
February
March
East
West
North

6. Click the chart style you want to use.

   B. Excel applies the style to the chart.

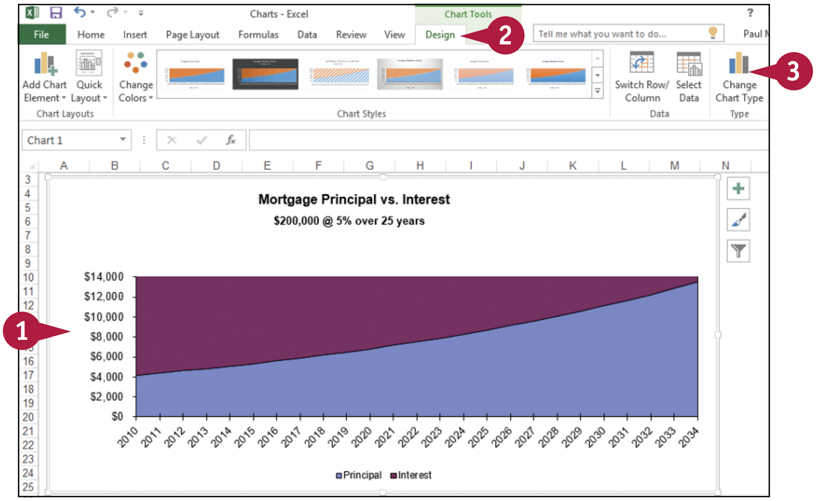

2015 Sales By Division - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Format
Tell me what you want to do...
Paul M
Add Chart Element
Quick Layout
Change Colors
Chart Layouts
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Chart 1
6
B
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
SALES
January
February
March
MONTH
East
West
North

Select a Different Chart Type

If you feel that the current chart type is not showing your data in the best way, you can change the chart type. This enables you to experiment not only with the 11 different chart types offered by Excel, but also with its nearly 100 chart type configurations.

For example, if you are graphing a stock's high, low, and closing prices, a line chart shows you each value, but a stock chart gives you a better sense of the daily price movements. Similarly, if you are using a bar chart to show percentages of some whole, you would more readily visualize the data by switching to a pie chart.

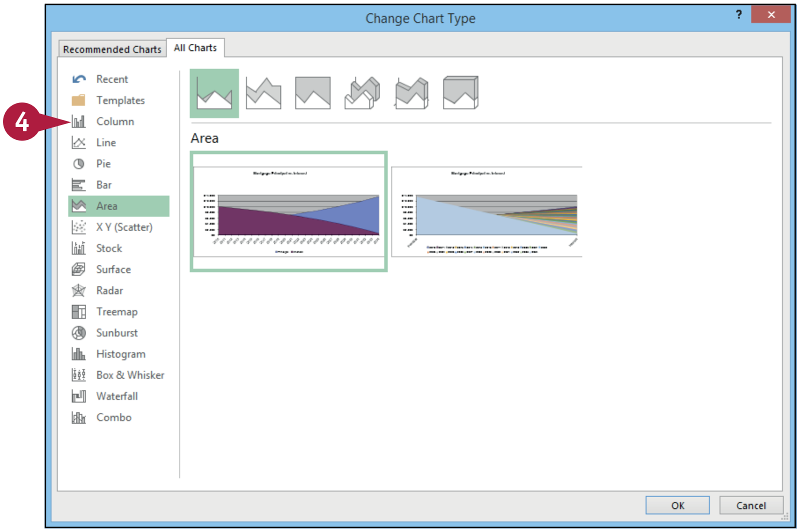
Select a Different Chart Type


Charts - Excel
Chart Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul
Add Chart Element
Quick Layout
Change Colors
Chart Layouts
Chart Styles
Switch Row/ Column
Select Data
Data
Change Chart Type
Type
Chart 1
Mortgage Principal vs. Interest
$200,000 @ 5% over 25 years
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
Principal
Interest
1
2
3

① Click the chart.

② Click the **Design** tab.

③ Click **Change Chart Type**.


Change Chart Type
?
Recommended Charts
All Charts
Recent
Templates
Column
Line
Pie
Bar
Area
X Y (Scatter)
Stock
Surface
Radar
Treemap
Sunburst
Histogram
Box & Whisker
Waterfall
Combo
Area
OK
Cancel
4

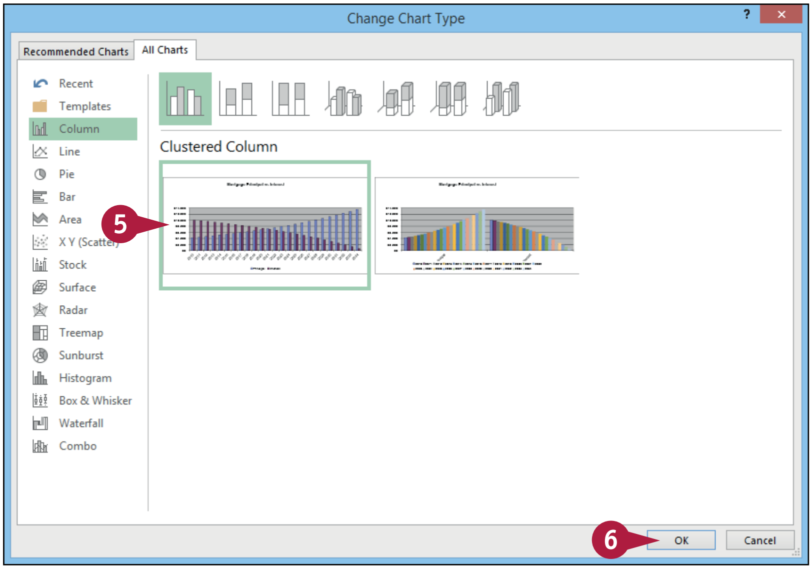
The Change Chart Type dialog box appears.

④ Click the chart type you want to use.

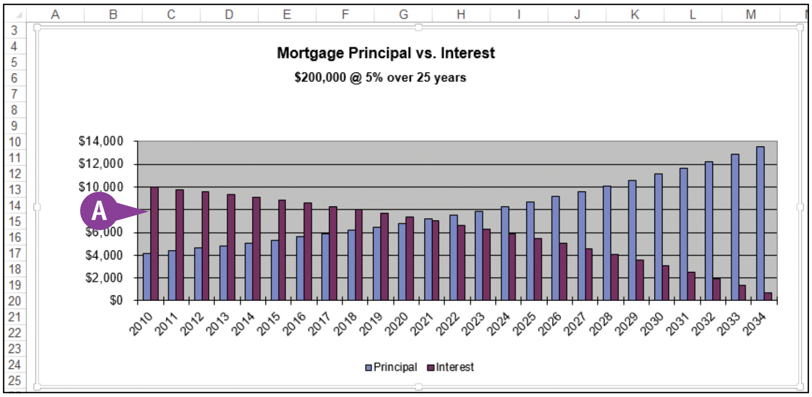
Excel displays the chart type configurations.

5 Click the configuration you want to use.

6 Click **OK**.


Change Chart Type
?
×
Recommended Charts
All Charts
Recent
Templates
Column
Line
Pie
Bar
Area
X Y (Scatter)
Stock
Surface
Radar
Treemap
Sunburst
Histogram
Box & Whisker
Waterfall
Combo
Clustered Column
5
6
OK
Cancel

A Excel applies the new chart type.



TIP

Can I save the chart type and formatting so that I can reuse it later on a different chart?

Yes. You do this by saving your work as a chart template. Follow the steps in this section and in the previous few sections of this chapter to set the chart type, titles, labels, legend position, gridlines, layout, and style. Right-click the chart's plot area or background, click **Save as Template**, type a name for the template, and then click **Save**. To reuse the template, follow steps 1 to 3, click **Templates**, click your template, and then click **OK**.

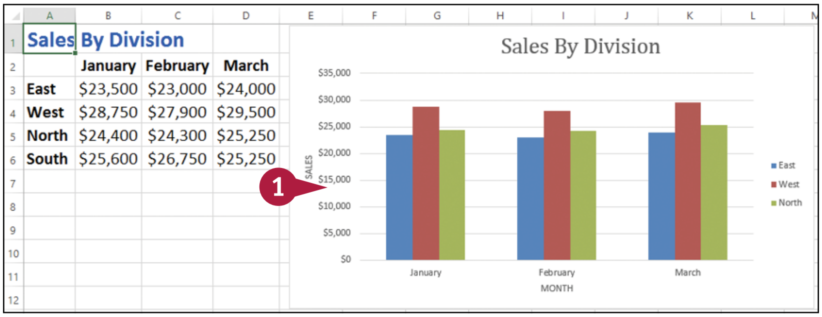
Change the Chart Source Data

In Excel, a chart's *source data* is the original range used to create the chart. You can keep your chart up to date and accurate by adjusting the chart when its source data changes.

You normally do this when the structure of the source data changes. For example, if the source range adds a row or column, you can adjust the chart to include the new data. However, you do not need to make any adjustments if just the data within the original range changes. In such cases, Excel automatically adjusts the chart to display the new data.

Change the Chart Source Data

① Click the chart to select it.



Sales By Division

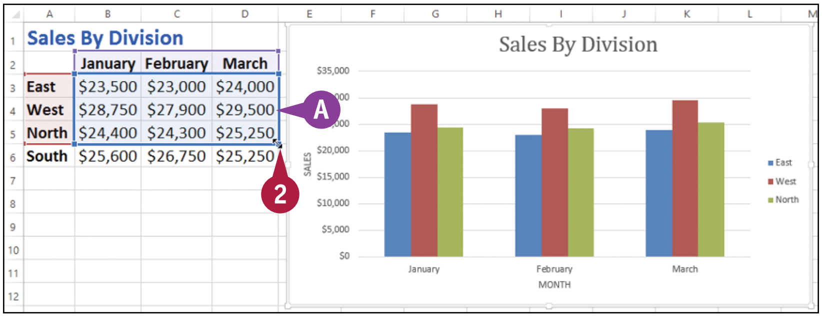
	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250
South	$25,600	$26,750	$25,250

A
B
C
D
E
F
G
H
I
J
K
L
M
1
2
3
4
5
6
7
8
9
10
11
12
Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
SALES
January
February
March
MONTH
East
West
North
1

Ⓐ Excel selects the chart's source data.

② Move the mouse ✚ over the lower-right corner of the range.

✚ changes to ↔.



Sales By Division

	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250
South	$25,600	$26,750	$25,250

A
B
C
D
E
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G
H
I
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K
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M
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2
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4
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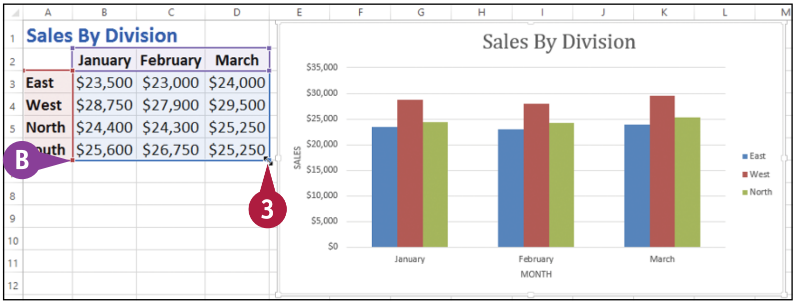
6
7
8
9
10
11
12
Sales By Division
$35,000
$20,000
$15,000
$10,000
$5,000
$0
SALES
January
February
March
MONTH
East
West
North
A
2

3 Click and drag ↔ until the selection includes all the data you want to include in the chart.

B Excel extends the blue outline to show you the new selection.

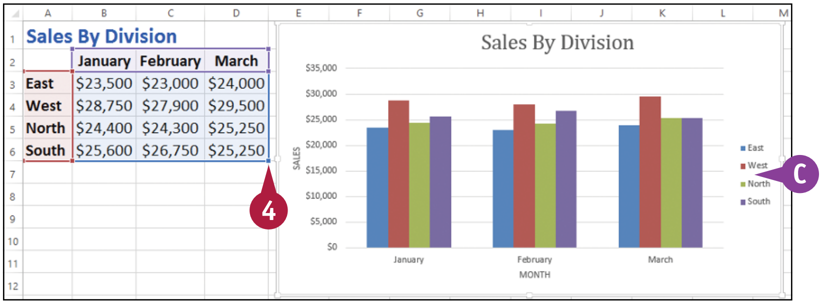


	A	B	C	D
1	Sales By Division			
2		January	February	March
3	East	$23,500	$23,000	$24,000
4	West	$28,750	$27,900	$29,500
5	North	$24,400	$24,300	$25,250
6	uth	$25,600	$26,750	$25,250

B
3
Sales By Division
SALES
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
January
February
March
MONTH
East
West
North

4 Release the mouse button.

C Excel redraws the chart to include the new data.



	A	B	C	D
1	Sales By Division			
2		January	February	March
3	East	$23,500	$23,000	$24,000
4	West	$28,750	$27,900	$29,500
5	North	$24,400	$24,300	$25,250
6	South	$25,600	$26,750	$25,250

4
C
Sales By Division
SALES
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
January
February
March
MONTH
East
West
North
South

TIPS

Is there a way to swap the chart series with the chart categories without modifying the source data?

Yes. Excel has a feature that enables you to switch the row and column data, which swaps the series and categories without affecting the source data. First click the chart to select it, and then click the **Design** tab. Click **Switch Row/Column** (⇄). Excel swaps the series and categories. Click ⇄ again to return to the original layout.

Is there a way to remove a series from a chart without deleting the data from the source range?

Yes. You can use the Select Data Source dialog box in Excel to remove individual series. Click the chart to select it, and then click the **Design** tab. Click **Select Data** (▦) to open the Select Data Source. In the **Legend Entries (Series)** list, click the series you want to get rid of, and then click **Remove**. Click **OK**.

Move or Resize a Chart

You can move a chart to another part of the worksheet. This is useful if the chart is blocking the worksheet data or if you want the chart to appear in a particular part of the worksheet.

You can also resize a chart. For example, if you find that the chart is difficult to read, making the chart bigger often solves the problem. Similarly, if the chart takes up too much space on the worksheet, you can make it smaller.

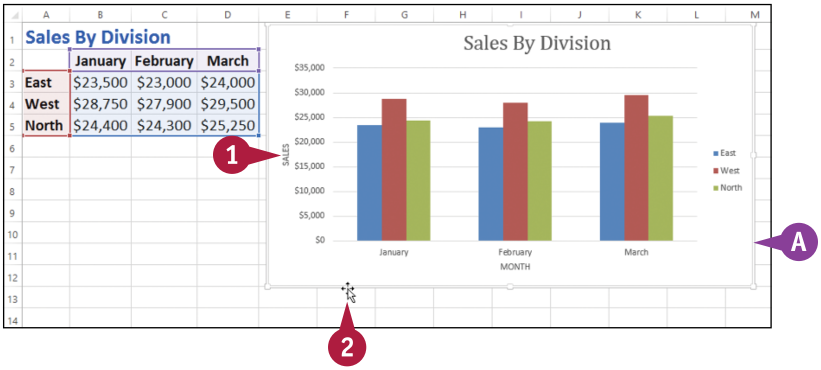
Move or Resize a Chart

Move a Chart

1. Click the chart.
   - A Excel displays a border around the chart.
2. Move ↖ over the chart border. ↖ changes to ✥.

Note: Do not position the mouse pointer over a corner or over the middle of any side of the border.

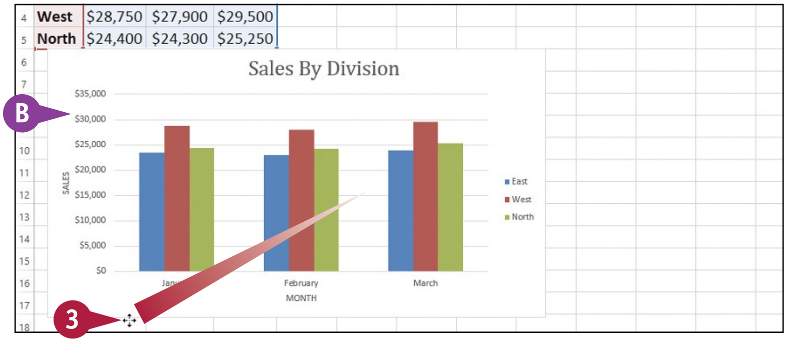
3. Click and drag the chart border to the location you want.
4. Release the mouse button.
   - B Excel moves the chart.



Sales By Division

	January	February	March
East	$23,500	$23,000	$24,000
West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250

A
B
C
D
E
F
G
H
I
J
K
L
M
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
SALES
January
February
March
MONTH
East
West
North
1
2
A



West	$28,750	$27,900	$29,500
North	$24,400	$24,300	$25,250

4
5
6
7
10
11
12
13
14
15
16
17
18
Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
SALES
February
March
MONTH
East
West
North
B
3

Resize a Chart

1. Click the chart.

   C Excel displays a border around the chart.

   D The border includes sizing handles on the corners and sides.

2. Move ↖ over a sizing handle.

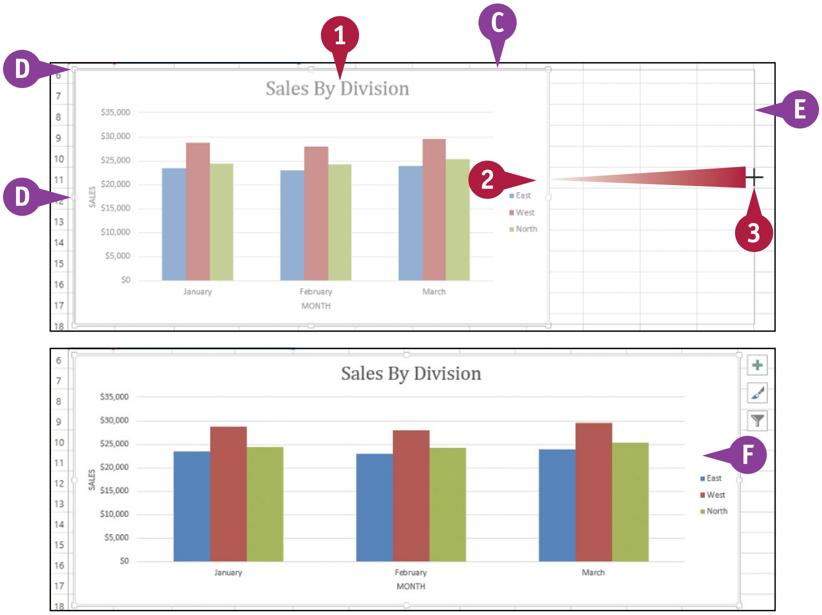
   ↖ changes to ⇔ (left or right), ⇕ (top or bottom), or ⤢ (corner).

3. Click and drag the handle.

   E Excel displays a gray outline of the new chart size.

4. Release the mouse button.

   F Excel resizes the chart.


D
1
C
D
E
2
3
F
Sales By Division
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
SALES
January
February
March
MONTH
East
West
North
6
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10
11
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13
14
15
16
17
18

TIPS

Can I move a chart to a separate sheet?

Yes. In the “Create a Chart” section earlier in this chapter, you learned how to create a new chart in a separate sheet. If your chart already exists on a worksheet, you can move it to a new sheet. Click the chart, click the **Design** tab, and then click **Move Chart** to open the Move Chart dialog box. Select the **New sheet** option (○ changes to ●). In the **New sheet** text box, type a name for the new sheet, and then click **OK**.

How do I delete a chart?

How you delete a chart depends on whether your chart exists as an object on a worksheet or in its own sheet. If the chart is on a worksheet, click the chart and then press Delete. If the chart exists on a separate sheet, right-click the sheet tab, click **Delete Sheet**, and then click **Delete**.

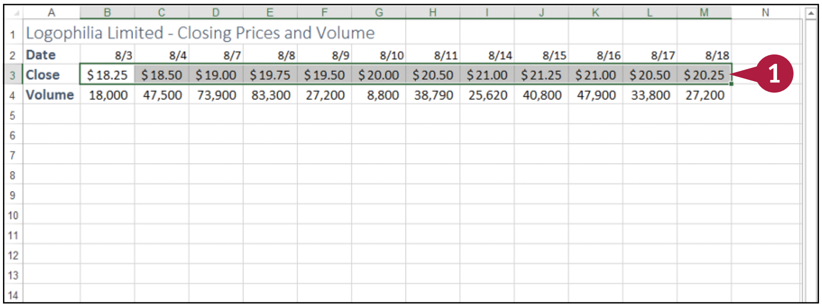
Add a Sparkline to a Cell

If you want a quick visualization of your data without having a chart take up a large amount of worksheet space, you can add a sparkline to a single cell. A *sparkline* is a small chart that visualizes a row or column of data and fits inside a single cell.

Excel offers three types of sparklines: Line (similar to a line chart), Column (similar to a column chart), and Win/Loss (for data that includes positive and negative values).

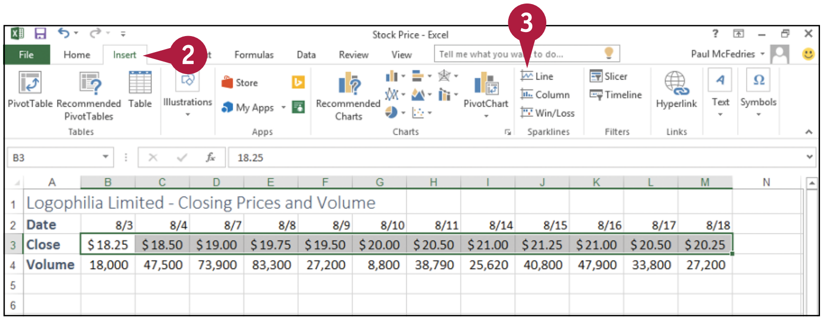
Add a Sparkline to a Cell

1. Select the row or column of data you want to visualize.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Logophilia Limited - Closing Prices and Volume													
2	**Date**	8/3	8/4	8/7	8/8	8/9	8/10	8/11	8/14	8/15	8/16	8/17	8/18	
3	**Close**	$ 18.25	$ 18.50	$ 19.00	$ 19.75	$ 19.50	$ 20.00	$ 20.50	$ 21.00	$ 21.25	$ 21.00	$ 20.50	$ 20.25	
4	**Volume**	18,000	47,500	73,900	83,300	27,200	8,800	38,790	25,620	40,800	47,900	33,800	27,200	

2. Click the **Insert** tab.
3. Click the type of sparkline you want to create.


Stock Price - Excel
?
File
Home
Insert
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
Store
My Apps
Apps
Recommended Charts
Charts
PivotChart
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
Hyperlink
Links
Text
Symbols
2
3

B3 18.25

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Logophilia Limited - Closing Prices and Volume													
2	**Date**	8/3	8/4	8/7	8/8	8/9	8/10	8/11	8/14	8/15	8/16	8/17	8/18	
3	**Close**	$ 18.25	$ 18.50	$ 19.00	$ 19.75	$ 19.50	$ 20.00	$ 20.50	$ 21.00	$ 21.25	$ 21.00	$ 20.50	$ 20.25	
4	**Volume**	18,000	47,500	73,900	83,300	27,200	8,800	38,790	25,620	40,800	47,900	33,800	27,200	

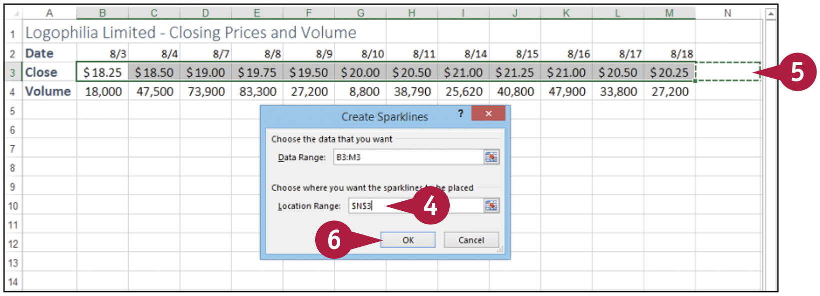
The Create Sparklines dialog box appears.

4. Click inside the **Location Range** box.
5. Click the cell where you want the sparkline to appear.
6. Click **OK**.

A Excel adds the sparkline to the cell.

B Excel displays the Sparkline Tools tab.

C Use the tools in the Design tab to format your sparkline.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Logophilia Limited - Closing Prices and Volume													
2	Date	8/3	8/4	8/7	8/8	8/9	8/10	8/11	8/14	8/15	8/16	8/17	8/18	
3	Close	$18.25	$18.50	$19.00	$19.75	$19.50	$20.00	$20.50	$21.00	$21.25	$21.00	$20.50	$20.25	
4	Volume	18,000	47,500	73,900	83,300	27,200	8,800	38,790	25,620	40,800	47,900	33,800	27,200	

Create Sparklines

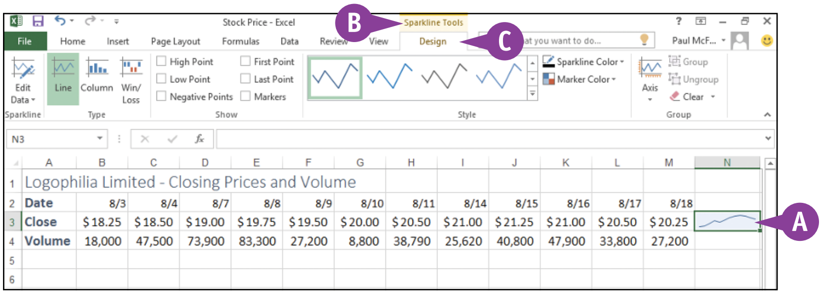
Choose the data that you want

Data Range: B3:M3

Choose where you want the sparklines to be placed

Location Range: $N$3

OK
Cancel
4
5
6



Stock Price - Excel
Sparkline Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Paul McF...
Edit Data
Line
Column
Win/Loss
High Point
Low Point
Negative Points
First Point
Last Point
Markers
Sparkline Color
Marker Color
Axis
Group
Ungroup
Clear
Sparkline
Type
Show
Style
Group
N3
A
B
C

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Logophilia Limited - Closing Prices and Volume													
2	Date	8/3	8/4	8/7	8/8	8/9	8/10	8/11	8/14	8/15	8/16	8/17	8/18	
3	Close	$18.25	$18.50	$19.00	$19.75	$19.50	$20.00	$20.50	$21.00	$21.25	$21.00	$20.50	$20.25	
4	Volume	18,000	47,500	73,900	83,300	27,200	8,800	38,790	25,620	40,800	47,900	33,800	27,200	

TIP

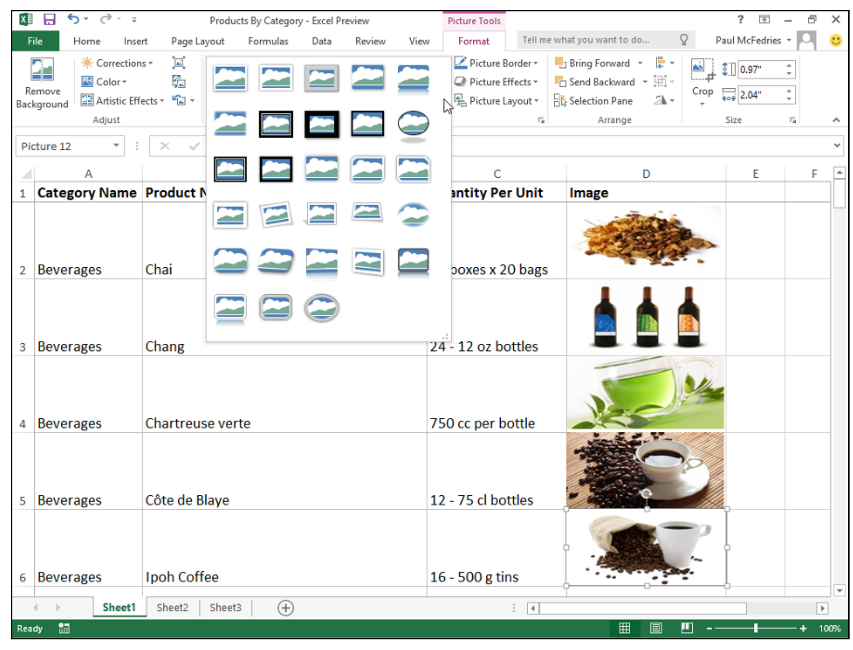
Can I add a sparkline to multiple rows or columns at once?

Yes. To do this, first select the rows or columns of data that you want to visualize. Follow steps **2** and **3** to open the Create Sparklines dialog box and place the cursor inside the **Location Range** box. Select a single cell for each row or column that you have selected. For example, if you have selected five rows, select five cells. Click **OK**. Excel adds a sparkline for each selected row or column.

CHAPTER 13

Adding Worksheet Graphics

You can enhance the visual appeal and effectiveness of your Excel worksheets by incorporating graphic objects such as shapes, clip art, pictures, or WordArt and SmartArt images. This chapter shows you not only how to insert graphics on your worksheets, but also how to edit and format those graphics.


Products By Category - Excel Preview
Picture Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Format
Tell me what you want to do...
Paul McFedries
Remove Background
Corrections
Color
Artistic Effects
Adjust
Picture Border
Picture Effects
Picture Layout
Bring Forward
Send Backward
Selection Pane
Arrange
Crop
0.97"
2.04"
Size
Picture 12
A
C
D
E
F
Sheet1
Sheet2
Sheet3
Ready
100%

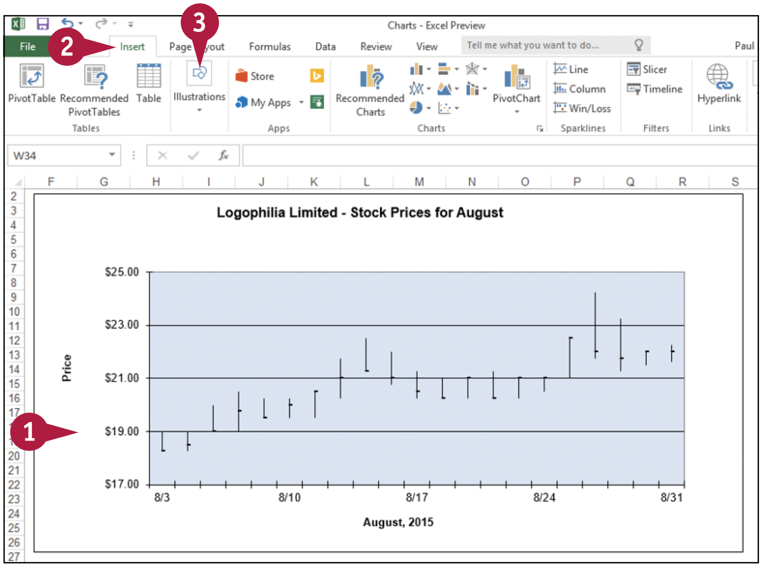
	Category Name	Product N	ntity Per Unit	Image
2	Beverages	Chai	oxes x 20 bags	
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl bottles	
6	Beverages	Ipoh Coffee	16 - 500 g tins	

Draw a Shape 288
Insert a Clip Art Image 290
Insert a Photo 292
Insert a WordArt Image. 294
Insert a SmartArt Graphic. 296
Move or Resize a Graphic 298
Crop a Picture 300
Format a Picture 302

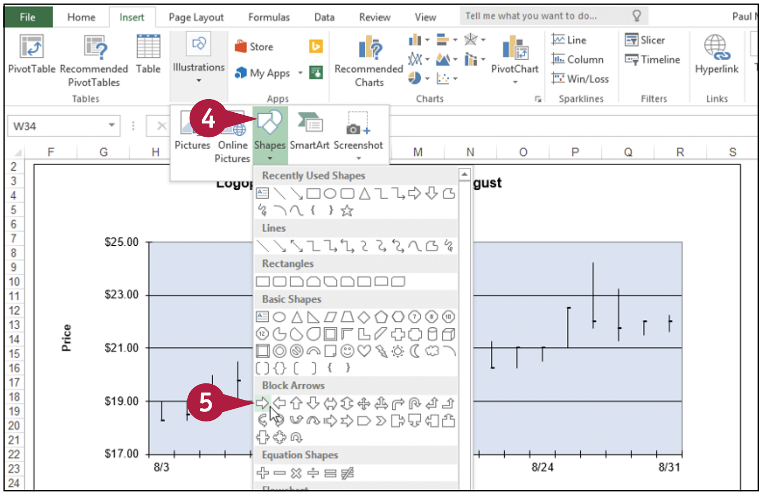
Draw a Shape

You can add visual appeal or enhance the readability of your worksheets by adding one or more shapes. The Excel Shapes gallery comes with more than 150 predefined objects called *shapes* (or sometimes *AutoShapes*) that enable you to quickly and easily draw anything from simple geometric figures such as lines, rectangles, and ovals, to more elaborate items such as starbursts, flowchart symbols, and callout boxes. You can add these shapes to a worksheet either to enhance the aesthetics of your data or to help other people read and understand your work.

Draw a Shape


Charts - Excel Preview
File
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
Store
My Apps
Apps
Recommended Charts
PivotChart
Charts
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
Hyperlink
Links
W34
Logophilia Limited - Stock Prices for August
Price
$25.00
$23.00
$21.00
$19.00
$17.00
8/3
8/10
8/17
8/24
8/31
August, 2015
1
2
3

1. Display the worksheet on which you want to draw the shape.
2. Click the **Insert** tab.
3. Click **Illustrations**.

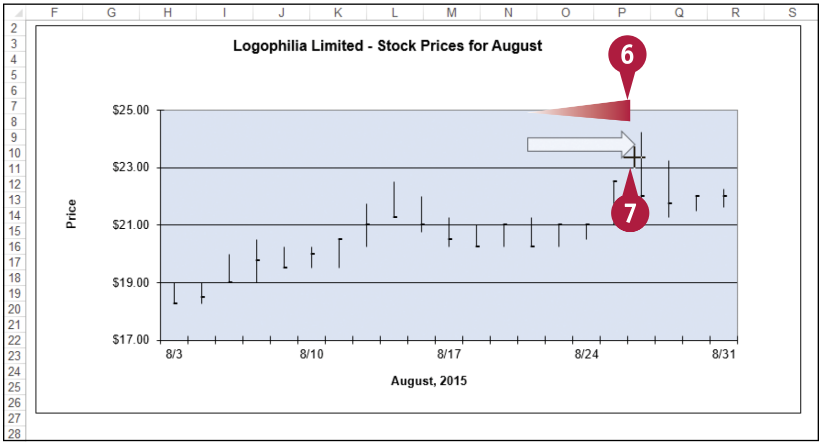

File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
Store
My Apps
Apps
Recommended Charts
PivotChart
Charts
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
Hyperlink
Links
W34
Pictures
Online Pictures
Shapes
SmartArt
Screenshot
Recently Used Shapes
Lines
Rectangles
Basic Shapes
Block Arrows
Equation Shapes
Flowchart
Price
$25.00
$23.00
$21.00
$19.00
$17.00
8/3
8/24
8/31
4
5

4. Click **Shapes**.
5. Click the shape you want to draw.

↖ changes to ✚.

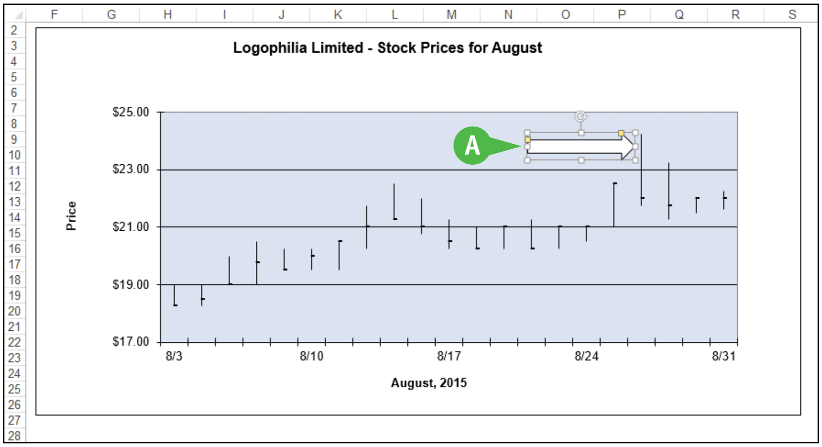
6 Click and drag the mouse ✚ to draw the shape.

7 When the shape is the size you want, release the mouse button.


Logophilia Limited - Stock Prices for August
Price
$25.00
$23.00
$21.00
$19.00
$17.00
8/3
8/10
8/17
8/24
8/31
August, 2015
6
7

A The program draws the shape and adds edit handles around the shape's edges.

Note: If you need to move or size the shape, see the "Move or Resize a Graphic" section later in this chapter.


Logophilia Limited - Stock Prices for August
Price
$25.00
$23.00
$21.00
$19.00
$17.00
8/3
8/10
8/17
8/24
8/31
August, 2015
A

TIPS

Is there an easy way to draw a perfect circle or square?

Yes, Excel offers an easy technique for drawing circles and squares. Hold down the Shift key as you click and drag the shape to constrain the shape into a perfect circle or square. When you finish drawing the shape, release the Shift key.

Can I add text to a shape?

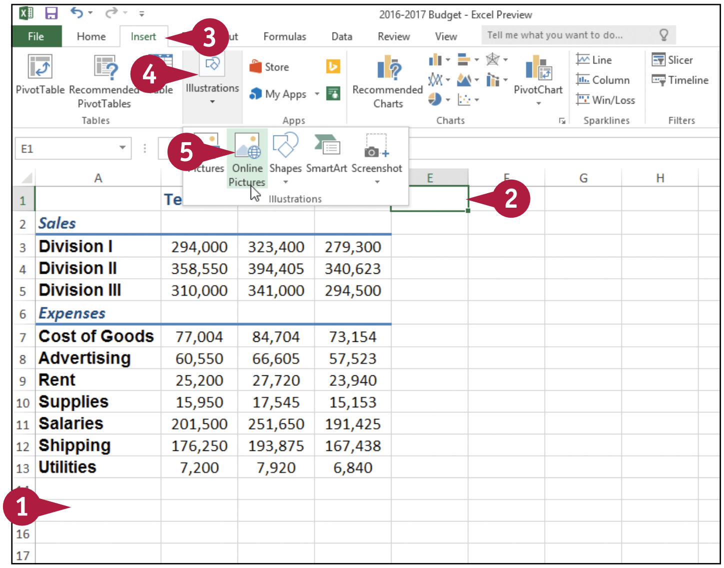
Yes. You can add text to the interior of any 2-D shape (that is, any shape that is not a line). After you draw the shape, right-click the shape, click **Edit Text**, and then type your text inside the shape. You can use the Home tab's Font controls to format the text. When you finish, click outside of the shape.

Insert a Clip Art Image

You can improve the look of an Excel worksheet by adding a clip art image to the sheet. *Clip art* refers to small images or artwork that you can insert into your documents. Excel 2016 does not come with its own clip art, but it does give you access to online clip art collections that contains thousands of images from various categories, such as business, people, nature, and symbols. By default, these images are licensed under Creative Commons, so you can use them without charge.

Insert a Clip Art Image

1. Display the worksheet on which you want to insert the clip art image.
2. Click the cell where you want the upper-left corner of the image to appear.
3. Click the **Insert** tab.
4. Click **Illustrations**.
5. Click **Online Pictures**.


2016-2017 Budget - Excel Preview
File
Home
Insert
Formulas
Data
Review
View
Tell me what you want to do...
PivotTable
Recommended PivotTables
Tables
Illustrations
Store
My Apps
Apps
Recommended Charts
Charts
PivotChart
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
E1
Pictures
Online Pictures
Shapes
SmartArt
Screenshot
Illustrations
A
E
F
G
H
1
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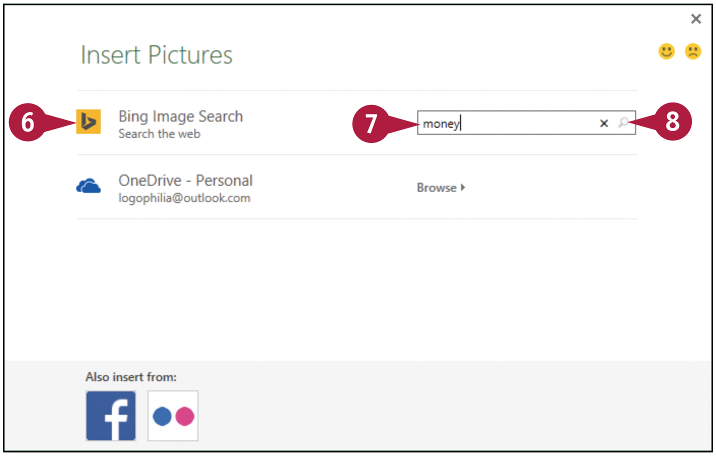
3
4
5

Te			
Sales			
Division I	294,000	323,400	279,300
Division II	358,550	394,405	340,623
Division III	310,000	341,000	294,500
Expenses			
Cost of Goods	77,004	84,704	73,154
Advertising	60,550	66,605	57,523
Rent	25,200	27,720	23,940
Supplies	15,950	17,545	15,153
Salaries	201,500	251,650	191,425
Shipping	176,250	193,875	167,438
Utilities	7,200	7,920	6,840

The Insert Pictures window appears.

6. Click **Bing Image Search**.
7. Use the text box to type a word that describes the kind of clip art image you want to insert.
8. Click **Search** (🔍).


Insert Pictures
Bing Image Search
Search the web
OneDrive - Personal
logophilia@outlook.com
Browse
Also insert from:
6
7
8

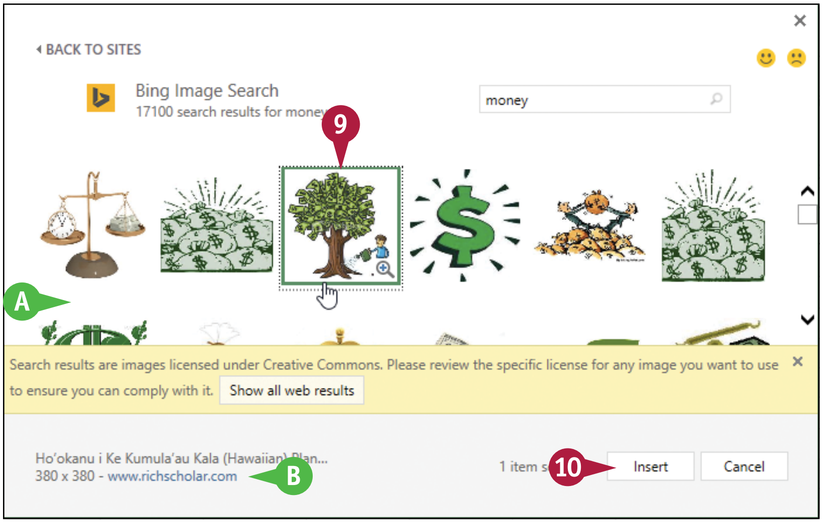
money

Ⓐ Excel displays a list of clip art images that match your search term.

9 Click the clip art image you want to use.

Ⓑ The address of the website that offers the image appears here.

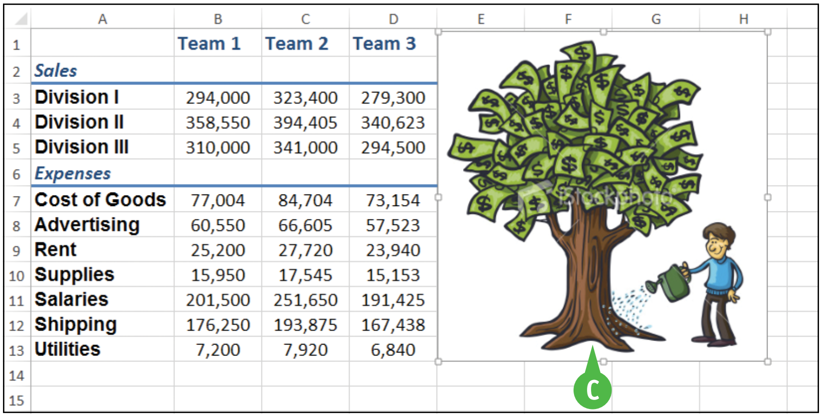
10 Click **Insert**.


BACK TO SITES
Bing Image Search
17100 search results for money
money
9
A
Show all web results
Ho'okanu i Ke Kumula'au Kala (Hawaiian) Plan...
380 x 380 - www.richscholar.com
B
1 item s
10
Insert
Cancel

Search results are images licensed under Creative Commons. Please review the specific license for any image you want to use to ensure you can comply with it.

Ⓒ Excel inserts the clip art.

Note: If you need to move or size the clip art, see the "Move or Resize a Graphic" section later in this chapter.



	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				
15				

TIPS

What is a Creative Commons license?

Creative Commons (http://creativecommons.org) is a non-profit organization that enables artists to license their works for other people to use free of charge. There are several different Creative Commons licenses, so you should visit the website that offers the image you select to check the specifics of the license.

Can I insert other online images?

Yes. If you have connected your Facebook or your Flickr account to Windows 8 or later, you can also use the Facebook or Flickr option to choose a photo. If you are using a Microsoft account with Windows 8 or later, you can use the OneDrive option to select an image from your OneDrive.

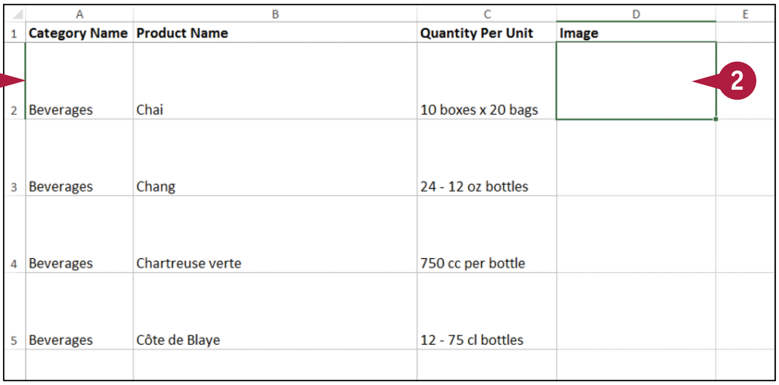
Insert a Photo

You can enhance the visual appeal and strengthen the message of an Excel worksheet by adding a photo to the file.

Excel can work with the most popular picture formats, including BMP, JPEG, TIFF, PNG, and GIF. This means that you can insert almost any photo that you have stored on your computer. If you would like to insert a photo that is located online instead, see the tips in the previous section, "Insert a Clip Art Image."

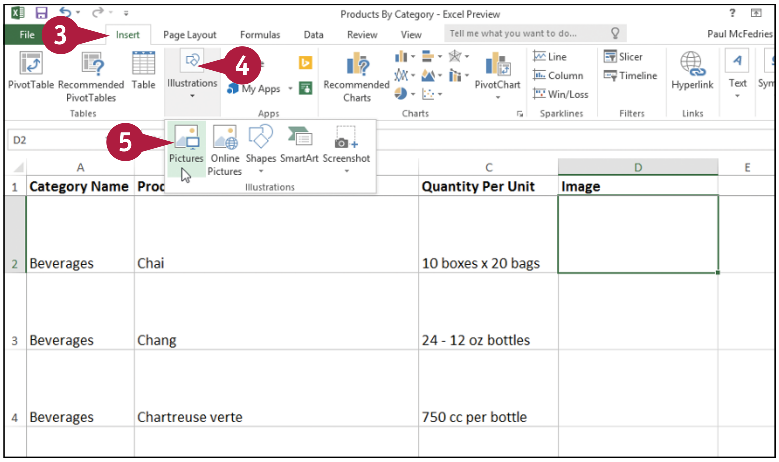
Insert a Photo

1. Open the worksheet where you want to insert the photo.
2. Click the cell where you want the upper-left corner of the photo to appear.



	A	B	C	D	E
1	Category Name	Product Name	Quantity Per Unit	Image	
2	Beverages	Chai	10 boxes x 20 bags		
3	Beverages	Chang	24 - 12 oz bottles		
4	Beverages	Chartreuse verte	750 cc per bottle		
5	Beverages	Côte de Blaye	12 - 75 cl bottles		

3. Click the **Insert** tab.
4. Click **Illustrations**.
5. Click **Pictures**.


Products By Category - Excel Preview
Paul McFedries
File
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
My Apps
Apps
Recommended Charts
PivotChart
Charts
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
Hyperlink
Links
Text
Sym
D2
Pictures
Online Pictures
Shapes
SmartArt
Screenshot
Illustrations
3
4
5
A
C
D
E

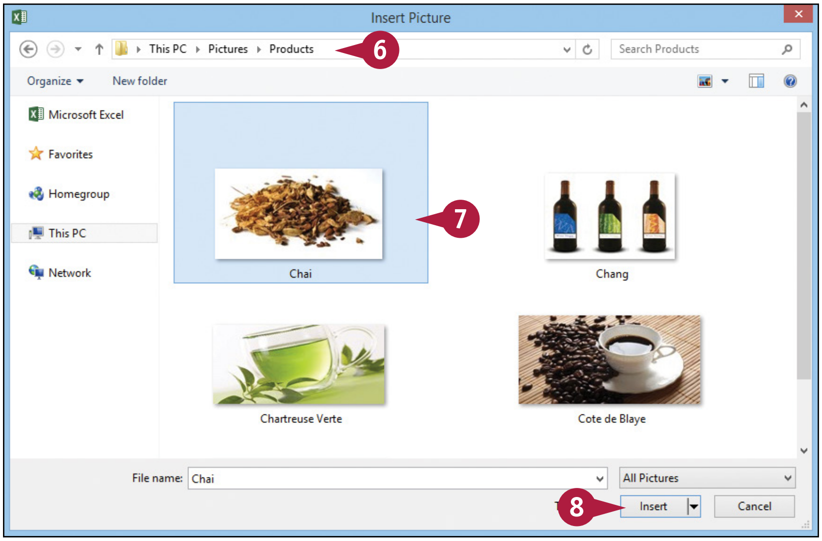
	A	B	C	D	E
1	Category Name	Proc	Quantity Per Unit	Image	
2	Beverages	Chai	10 boxes x 20 bags		
3	Beverages	Chang	24 - 12 oz bottles		
4	Beverages	Chartreuse verte	750 cc per bottle		

The Insert Picture dialog box appears.

6 Open the folder that contains the photo you want to insert.

7 Click the photo.

8 Click **Insert**.

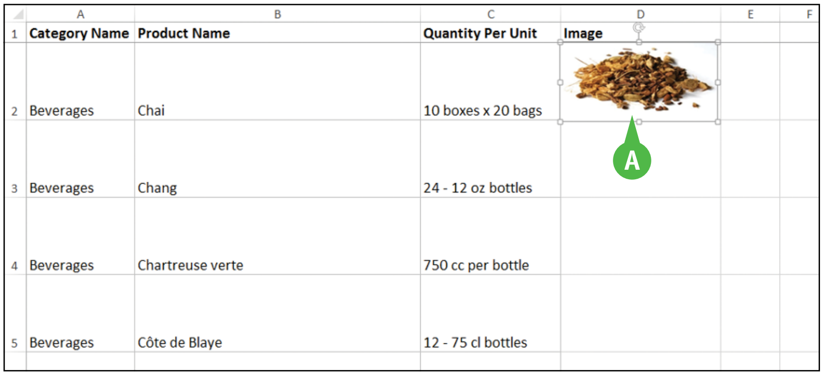

Insert Picture
This PC ▸ Pictures ▸ Products
6
Search Products
Organize ▾
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
Chai
7
Chang
Chartreuse Verte
Cote de Blaye
8
Insert
Cancel

File name: Chai

All Pictures

A Excel inserts the photo into the worksheet.

Note: If you need to move or size the photo, see the "Move or Resize a Graphic" section later in this chapter.



	A	B	C	D	E	F
1	**Category Name**	**Product Name**	**Quantity Per Unit**	**Image**		
2	Beverages	Chai	10 boxes x 20 bags			
3	Beverages	Chang	24 - 12 oz bottles			
4	Beverages	Chartreuse verte	750 cc per bottle			
5	Beverages	Côte de Blaye	12 - 75 cl bottles			

TIPS

My photo has a distracting background. Can I remove it?

Yes. Excel comes with a Background Removal feature that can eliminate the background in most photos. Click the photo, click the **Format** tab, and then click **Remove Background** (). If part of the foreground is in the removal color, click **Mark Areas to Keep** and then click and drag a line through the part you want to retain. When you are finished, click **Keep Changes**.

Is there a way to reduce the size of a workbook that has a lot of photos?

Yes, you can use the Compress Pictures feature to convert the photos to a lower resolution and so reduce the size of the workbook. Click any image in the workbook, click the **Format** tab, and then click **Compress Pictures** (). Click **Apply only to this picture** (☑ changes to ☐), click a **Target output** (○ changes to ●), and then click **OK**.

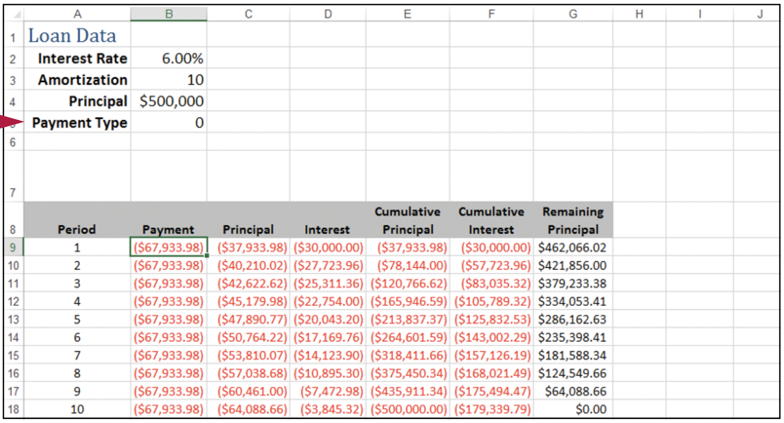
Insert a WordArt Image

You can add some pizzazz to your Excel workbooks by inserting a WordArt image. A WordArt image is a graphic object that contains text stylized with shadows, outlines, reflections, and other predefined effects.

WordArt images enable you to apply sophisticated and fun effects to text with just a few mouse clicks. However, some of the more elaborate WordArt effects can make text difficult to read, so make sure that whatever WordArt image you use does not detract from your worksheet message.

Insert a WordArt Image

1. Open the worksheet in which you want to insert the WordArt image.

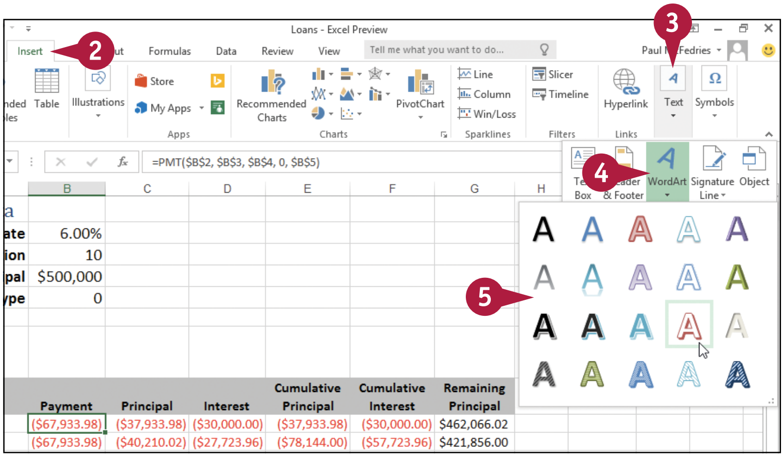


	A	B	C	D	E	F	G
1	Loan Data						
2	Interest Rate	6.00%					
3	Amortization	10					
4	Principal	$500,000					
5	Payment Type	0					
6							
7							
8	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
9	1	($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34
16	8	($67,933.98)	($57,038.68)	($10,895.30)	($375,450.34)	($168,021.49)	$124,549.66
17	9	($67,933.98)	($60,461.00)	($7,472.98)	($435,911.34)	($175,494.47)	$64,088.66
18	10	($67,933.98)	($64,088.66)	($3,845.32)	($500,000.00)	($179,339.79)	$0.00

2. Click the **Insert** tab.
3. Click **Text**.
4. Click **WordArt**.

   The WordArt gallery appears.

5. Click the WordArt style you want to use.

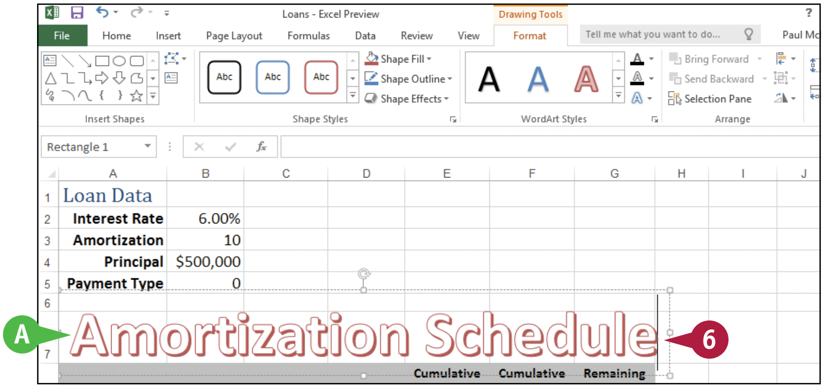

Loans - Excel Preview
Insert
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Table
Illustrations
Store
My Apps
Apps
Recommended Charts
Charts
PivotChart
Line
Column
Win/Loss
Sparklines
Slicer
Timeline
Filters
Hyperlink
Links
Text
Symbols
Text Box
Header & Footer
WordArt
Signature Line
Object
2
3
4
5

=PMT($B$2, $B$3, $B$4, 0, $B$5)

B	C	D	E	F	G
6.00%					
10					
$500,000					
0					
Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
($67,933.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02
($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00

A The WordArt image appears in the worksheet.

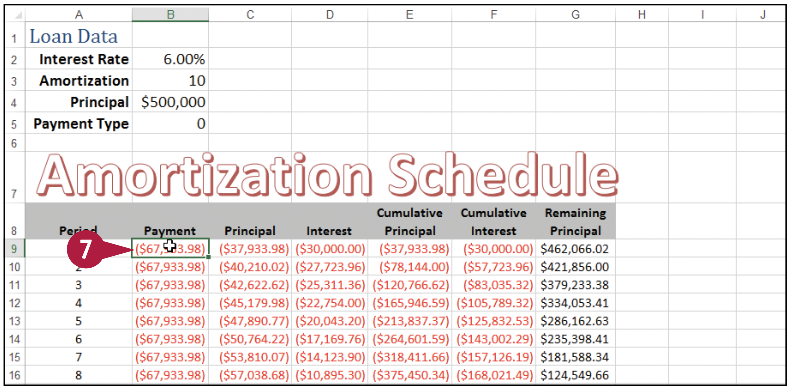
6 Type the text that you want to appear in the WordArt image.


Loans - Excel Preview
Drawing Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Format
Tell me what you want to do...
Paul Mc
Shape Fill
Shape Outline
Shape Effects
Bring Forward
Send Backward
Selection Pane
Insert Shapes
Shape Styles
WordArt Styles
Arrange
Rectangle 1
A
6

	A	B	C	D	E	F	G	H	I	J
1	Loan Data									
2	**Interest Rate**	6.00%								
3	**Amortization**	10								
4	**Principal**	$500,000								
5	**Payment Type**	0								
6										
7	Amortization Schedule									
					Cumulative	**Cumulative**	**Remaining**			

7 Click outside the image to set it.

Note: You will likely have to move the WordArt image into position; see the "Move or Resize a Graphic" section later in this chapter.



	A	B	C	D	E	F	G	H	I	J
1	Loan Data									
2	**Interest Rate**	6.00%								
3	**Amortization**	10								
4	**Principal**	$500,000								
5	**Payment Type**	0								
6										
7	Amortization Schedule									
8	**Period**	**Payment**	**Principal**	**Interest**	**Cumulative Principal**	**Cumulative Interest**	**Remaining Principal**			
9		($67,[illegible]3.98)	($37,933.98)	($30,000.00)	($37,933.98)	($30,000.00)	$462,066.02			
10	2	($67,933.98)	($40,210.02)	($27,723.96)	($78,144.00)	($57,723.96)	$421,856.00			
11	3	($67,933.98)	($42,622.62)	($25,311.36)	($120,766.62)	($83,035.32)	$379,233.38			
12	4	($67,933.98)	($45,179.98)	($22,754.00)	($165,946.59)	($105,789.32)	$334,053.41			
13	5	($67,933.98)	($47,890.77)	($20,043.20)	($213,837.37)	($125,832.53)	$286,162.63			
14	6	($67,933.98)	($50,764.22)	($17,169.76)	($264,601.59)	($143,002.29)	$235,398.41			
15	7	($67,933.98)	($53,810.07)	($14,123.90)	($318,411.66)	($157,126.19)	$181,588.34			
16	8	($67,933.98)	($57,038.68)	($10,895.30)	($375,450.34)	($168,021.49)	$124,549.66			

TIPS

Can I change the default WordArt formatting?

Yes. Click the WordArt image to select it, and then use the Home tab's Font controls to adjust the WordArt text font. Click the **Format** tab. In the WordArt Styles group, use the **Text Fill** (A), **Text Outline** (A), and **Text Effects** (A) galleries to format the WordArt image. You can also use the Quick Styles gallery to select a different WordArt style.

Can I make my WordArt text run vertically?

Yes. Click the WordArt image to select it. Click the **Format** tab, and then click the dialog box launcher (↘) in the **WordArt Styles** group. In the Format Shape task pane, click **Text Options** and then click the **Textbox** icon (▤). Click the **Text direction** ▾ and then click **Stacked**. Click **Close**. Excel displays the WordArt text vertically.

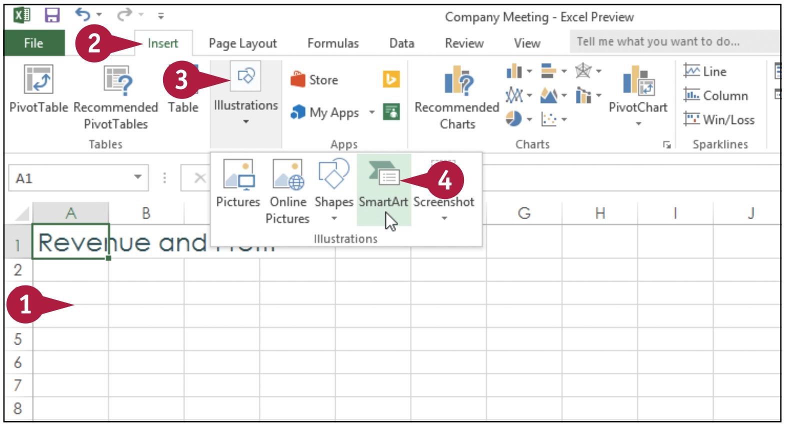
Insert a SmartArt Graphic

You can add a SmartArt graphic to a workbook to help present information in a compact, visual format. A SmartArt graphic is a collection of *nodes* — shapes with some text inside — that enables you to convey information visually.

For example, you can use a SmartArt graphic to present a company organization chart, the progression of steps in a workflow, the parts that make up a whole, and much more.

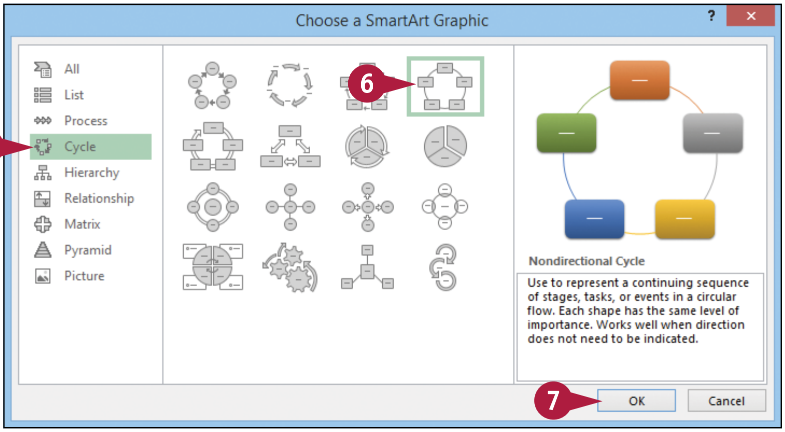
Insert a SmartArt Graphic

1. Open the worksheet in which you want to insert the SmartArt image.
2. Click the **Insert** tab.
3. Click **Illustrations**.
4. Click **SmartArt**.


Company Meeting - Excel Preview
File
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
PivotTable
Recommended PivotTables
Table
Tables
Illustrations
Store
My Apps
Apps
Recommended Charts
Charts
PivotChart
Line
Column
Win/Loss
Sparklines
A1
Pictures
Online Pictures
Shapes
SmartArt
Screenshot
Illustrations
Revenue and Profit
1
2
3
4

The Choose a SmartArt Graphic dialog box appears.

5. Click a SmartArt category.
6. Click the SmartArt style you want to use.
7. Click **OK**.


Choose a SmartArt Graphic
All
List
Process
Cycle
Hierarchy
Relationship
Matrix
Pyramid
Picture
OK
Cancel
5
6
7

Nondirectional Cycle

Use to represent a continuing sequence of stages, tasks, or events in a circular flow. Each shape has the same level of importance. Works well when direction does not need to be indicated.

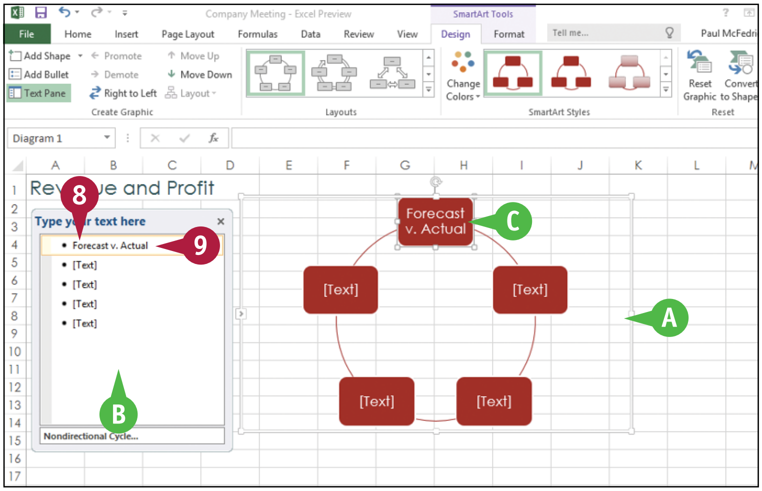
A The SmartArt graphic appears in the document.

B You use the Text pane to type the text for each node and to add and delete nodes.

8 Click a node in the Text pane.

9 Type the text that you want to appear in the node.

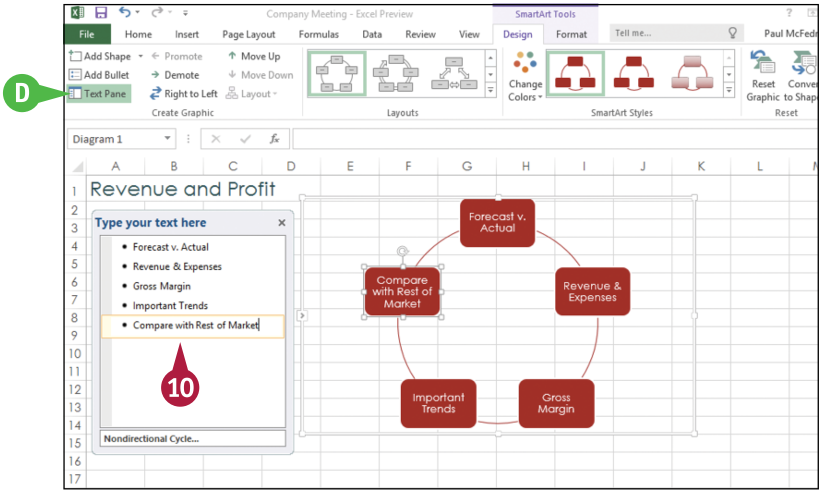
C The text appears automatically in the associated shape.


Company Meeting - Excel Preview
SmartArt Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Format
Tell me...
Paul McFedri
Add Shape
Add Bullet
Text Pane
Promote
Demote
Right to Left
Move Up
Move Down
Layout
Create Graphic
Layouts
Change Colors
SmartArt Styles
Reset Graphic
Convert to Shape
Reset
Diagram 1
Revenue and Profit
Type your text here
Forecast v. Actual
[Text]
[Text]
[Text]
[Text]
Nondirectional Cycle...
Forecast v. Actual
[Text]
[Text]
[Text]
[Text]
8
9
A
B
C

10 Repeat steps 8 and 9 to fill in the other nodes in the SmartArt graphic.

D You can click **Text Pane** (▤) to hide the Text pane.

Note: You will likely have to move the SmartArt graphic into position; see the following section, "Move or Resize a Graphic."


Company Meeting - Excel Preview
SmartArt Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Format
Tell me...
Paul McFedr
Add Shape
Add Bullet
Text Pane
Promote
Demote
Right to Left
Move Up
Move Down
Layout
Create Graphic
Layouts
Change Colors
SmartArt Styles
Reset Graphic
Convert to Shape
Reset
Diagram 1
Revenue and Profit
Type your text here
Forecast v. Actual
Revenue & Expenses
Gross Margin
Important Trends
Compare with Rest of Market
Nondirectional Cycle...
Forecast v. Actual
Compare with Rest of Market
Revenue & Expenses
Important Trends
Gross Margin
D
10

TIPS

How do I add a node to my SmartArt graphic?

To add a node to the SmartArt graphic, first decide where you want that node to appear in the current image. That is, decide which existing node you want the new node to come before or after. Click the existing node, click the **Design** tab, click the **Add Shape** ▼, and then click **Add Shape After**. (If you want the new node to appear before the existing node, click **Add Shape Before**.)

Can I use shapes other than the ones supplied in the default SmartArt graphics?

Yes. Begin by clicking the node you want to change. Click the **Format** tab, and then click the **Change Shape** ▼ to display the Shapes gallery. Click the shape you want to use. Excel updates the SmartArt graphic node with the new shape.

Move or Resize a Graphic

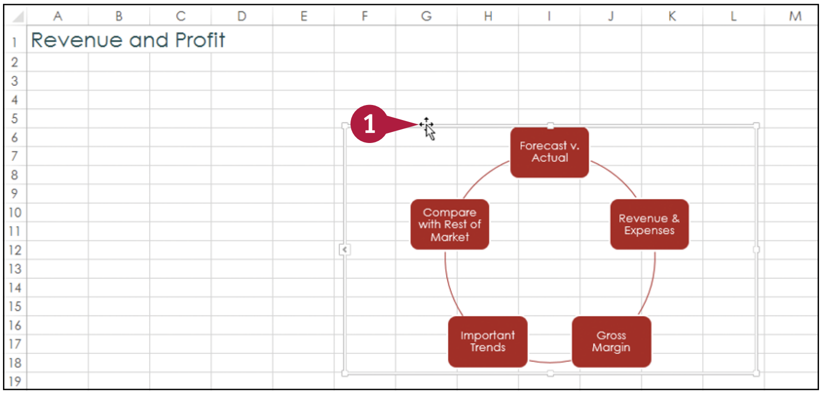
To ensure that a graphic is ideally placed within an Excel worksheet, you can move the graphic to a new location or you can resize the graphic in its current location. For example, you might want to move or resize a graphic so that it does not cover existing worksheet text. Similarly, you might want to move or resize a graphic so that it is positioned near a particular worksheet element or fits within an open worksheet area. You can move or resize any graphic, including shapes, clip art, pictures, WordArt images, and SmartArt graphics.

Move or Resize a Graphic

Move a Graphic

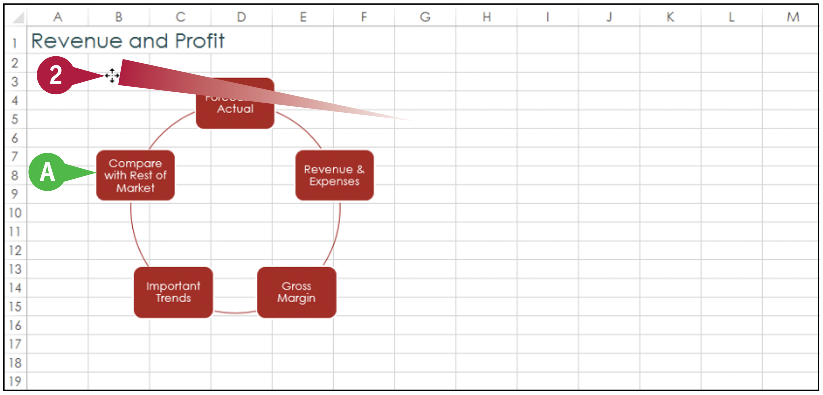
① Move the mouse pointer over an edge of the graphic you want to move.

The mouse ↖ changes to ✥.


A
B
C
D
E
F
G
H
I
J
K
L
M
Revenue and Profit
1
Forecast v. Actual
Compare with Rest of Market
Revenue & Expenses
Important Trends
Gross Margin

② Drag the graphic to the location you prefer.

Ⓐ Excel moves the graphic to the new location.


A
B
C
D
E
F
G
H
I
J
K
L
M
Revenue and Profit
2
Actual
A
Compare with Rest of Market
Revenue & Expenses
Important Trends
Gross Margin

Resize a Graphic

1. Click the graphic.

   B Sizing handles appear around the edges.

2. Move the mouse ↖ over a sizing handle.

   C Use a left or right handle (↖ changes to ⇔) to adjust the width.

   D Use a top or bottom handle (↖ changes to ⇕) to adjust the height.

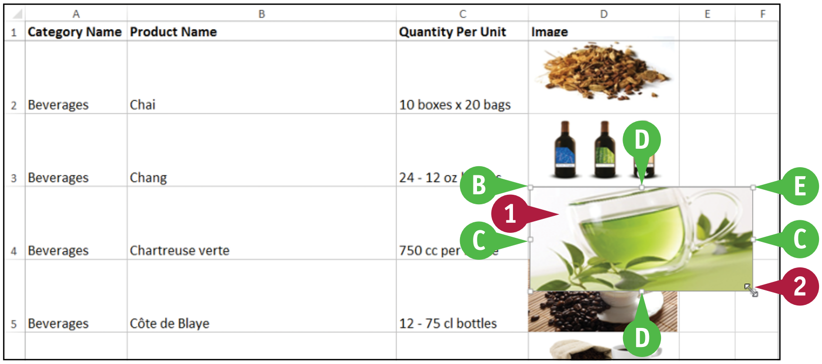
   E Use a corner handle (↖ changes to ⤢) to adjust the two sides adjacent to the corner.

3. Drag the sizing handle (the mouse pointer changes to ✛).

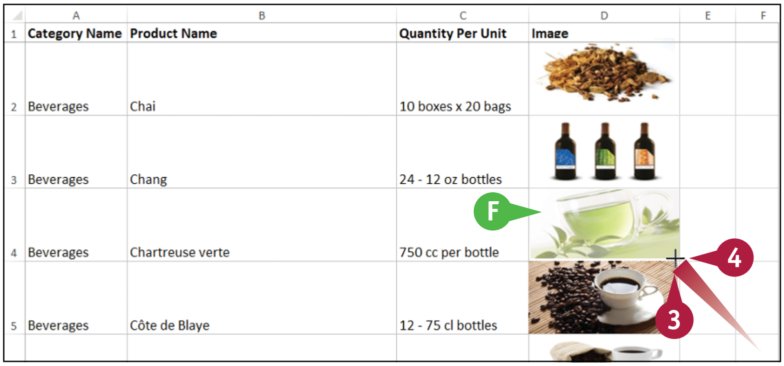
4. Release the mouse button when the handle is in the position you want.

   F Excel resizes the graphic.

5. Repeat steps **2** to **4** to resize other sides of the graphic, as necessary.



	A	B	C	D	E	F
1	Category Name	Product Name	Quantity Per Unit	Image		
2	Beverages	Chai	10 boxes x 20 bags			
3	Beverages	Chang	24 - 12 oz			
4	Beverages	Chartreuse verte	750 cc per			
5	Beverages	Côte de Blaye	12 - 75 cl bottles			



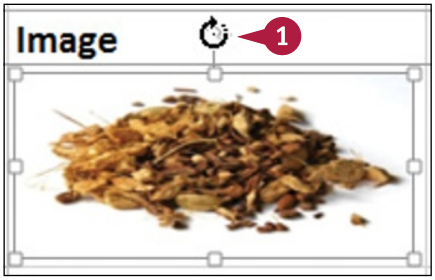
	A	B	C	D	E	F
1	Category Name	Product Name	Quantity Per Unit	Image		
2	Beverages	Chai	10 boxes x 20 bags			
3	Beverages	Chang	24 - 12 oz bottles			
4	Beverages	Chartreuse verte	750 cc per bottle			
5	Beverages	Côte de Blaye	12 - 75 cl bottles			

TIPS

Can I rotate a graphic?

Yes. Most graphic objects come with a rotate handle. Follow these steps:

1. Move the mouse ↖ over the rotate handle (↖ changes to ↻).
2. Click and drag the rotate handle clockwise or counterclockwise to rotate the graphic.
3. Release the mouse button when the graphic is in the position you want.



Is it possible to resize a graphic in all directions at once to keep the proportions the same?

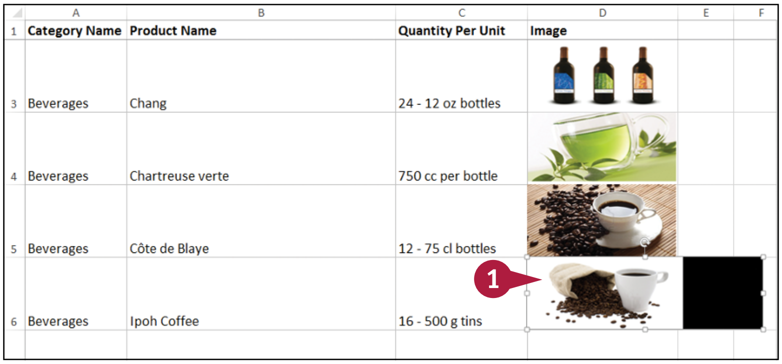
Yes. You normally resize one side at a time by dragging a side handle, or two sides at a time by dragging a corner handle. To resize all four sides at once, hold down the Ctrl key and then click and drag any corner handle.

Crop a Picture

If a picture contains extraneous material near the outside edges of the image, you can often cut out those elements using a process called *cropping*. When you crop a picture, you specify a rectangular area of the image that you want to keep. Excel discards everything outside of the rectangle.

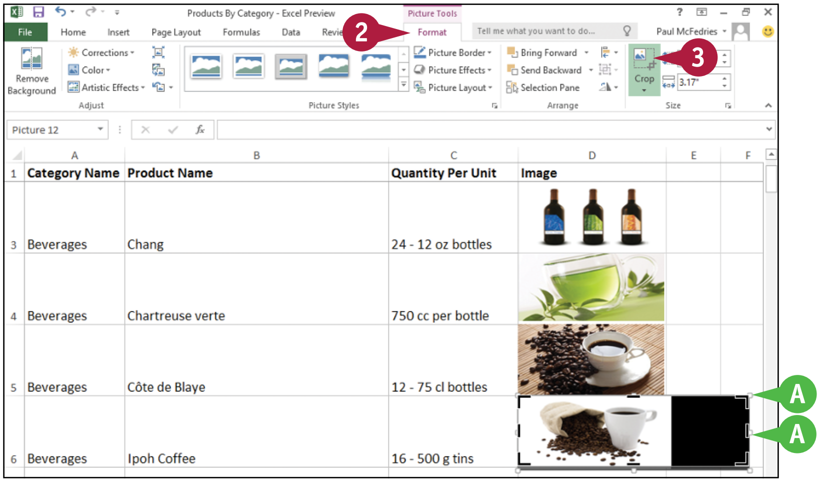
Cropping is a useful feature because it can help viewers focus on the subject of a picture. Cropping is also useful for removing extraneous elements that appear on or near the edges of a photo.

Crop a Picture



	Category Name	Product Name	Quantity Per Unit	Image
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl bottles	
6	Beverages	Ipoh Coffee	16 - 500 g tins	

1. Click the picture you want to crop.


Products By Category - Excel Preview
Picture Tools
File
Home
Insert
Page Layout
Formulas
Data
Revie
Format
Tell me what you want to do...
Paul McFedries
Remove Background
Corrections
Color
Artistic Effects
Adjust
Picture Styles
Picture Border
Picture Effects
Picture Layout
Bring Forward
Send Backward
Selection Pane
Arrange
Crop
3.17"
Size
Picture 12
2
3
A
A

	Category Name	Product Name	Quantity Per Unit	Image
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl bottles	
6	Beverages	Ipoh Coffee	16 - 500 g tins	

2. Click the **Format** tab.
3. Click the **Crop** button ().

Ⓐ Crop handles appear around the picture.

4 Click and drag a crop handle.

The mouse ✥ changes to +.

B Click and drag a side handle to crop that side.

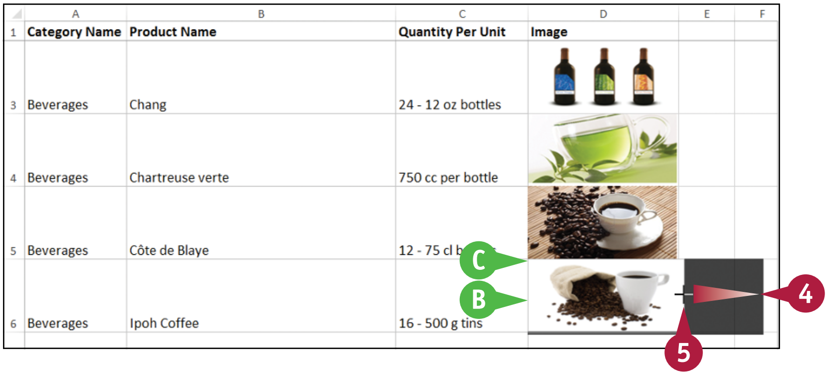
C Click and drag a corner handle to crop the two sides adjacent to the corner.

5 Release the mouse button when the handle is in the position you want.

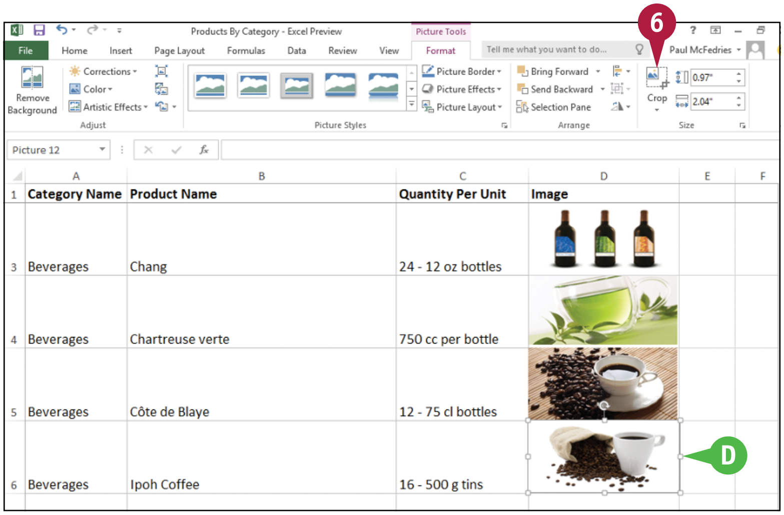
6 Click ⊡.

Excel turns off the Crop feature.

D Excel crops the picture.


A
B
C
D
E
F
C
B
4
5

	Category Name	Product Name	Quantity Per Unit	Image
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl b	
6	Beverages	Ipoh Coffee	16 - 500 g tins	


Products By Category - Excel Preview
Picture Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Format
Tell me what you want to do...
Paul McFedries
Remove Background
Corrections
Color
Artistic Effects
Adjust
Picture Styles
Picture Border
Picture Effects
Picture Layout
Bring Forward
Send Backward
Selection Pane
Arrange
Crop
0.97"
2.04"
Size
Picture 12
6
D

	Category Name	Product Name	Quantity Per Unit	Image
3	Beverages	Chang	24 - 12 oz bottles	
4	Beverages	Chartreuse verte	750 cc per bottle	
5	Beverages	Côte de Blaye	12 - 75 cl bottles	
6	Beverages	Ipoh Coffee	16 - 500 g tins	

TIPS

If I have a picture with the main element in the middle, is it possible to crop in all directions at once to keep just that middle element?

Yes. You normally crop one side at a time by clicking and dragging a side crop handle, or two sides at a time by clicking and dragging a corner crop handle. To crop all four sides at once, hold down the Ctrl key and then click and drag any corner crop handle.

Can I crop a picture to a particular aspect ratio or shape?

Yes. Excel offers a couple of cropping options. If you know the aspect ratio (the ratio of the width to the height) you want, click the **Crop** ▾, click **Aspect Ratio**, and then click the ratio, such as 3:5 or 4:6. If you prefer to crop to a shape, such as an oval or arrow, click the **Crop** ▾, click **Crop to Shape**, and then click the shape.

Format a Picture

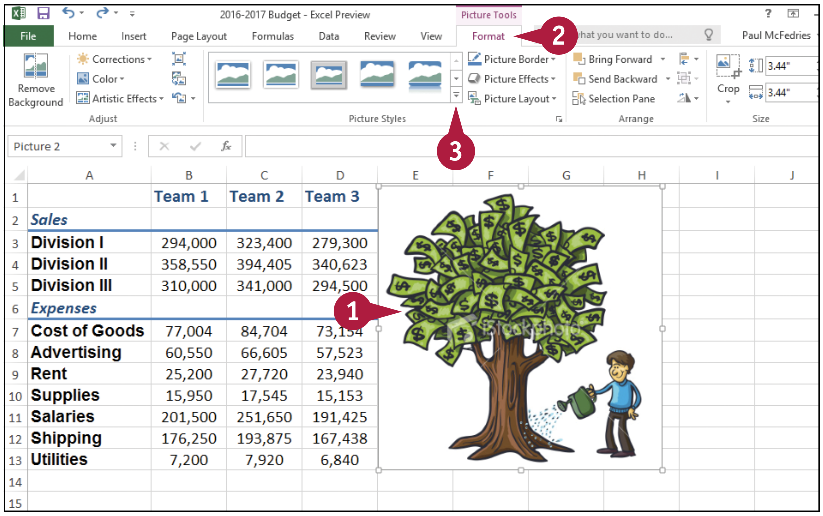
You can enhance your shapes, clip art, photos, WordArt images, and SmartArt graphics by formatting the images. For example, Excel offers more than two dozen picture styles, which are predefined formats that apply various combinations of shadows, reflections, borders, and layouts.

Excel also offers a dozen picture effects, which are preset combinations of special effects such as glows, soft edges, bevels, and 3-D rotations.

Format a Picture

Apply a Picture Style

1. Click the picture you want to format.
2. Click the **Format** tab.
3. Click the **Picture Styles** ▾.

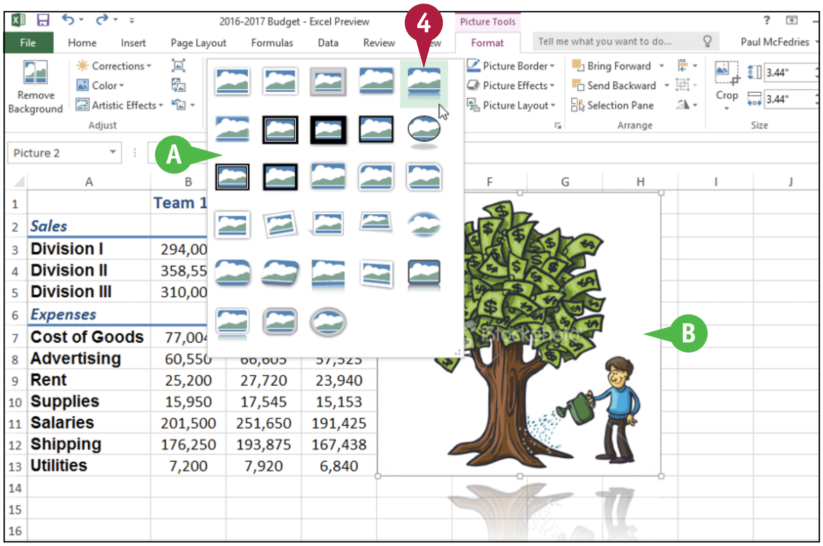

2016-2017 Budget - Excel Preview
Picture Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Format
Paul McFedries
Remove Background
Corrections
Color
Artistic Effects
Adjust
Picture Styles
Picture Border
Picture Effects
Picture Layout
Bring Forward
Send Backward
Selection Pane
Arrange
Crop
3.44"
3.44"
Size
Picture 2
1
2
3

	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				
15				

Ⓐ Excel displays the Picture Styles gallery.

4. Click the picture style you want to use.

Ⓑ Excel applies the style to the picture.


2016-2017 Budget - Excel Preview
Picture Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
Format
Tell me what you want to do...
Paul McFedries
Remove Background
Corrections
Color
Artistic Effects
Adjust
Picture Border
Picture Effects
Picture Layout
Bring Forward
Send Backward
Selection Pane
Arrange
Crop
3.44"
3.44"
Size
Picture 2
4
A
B

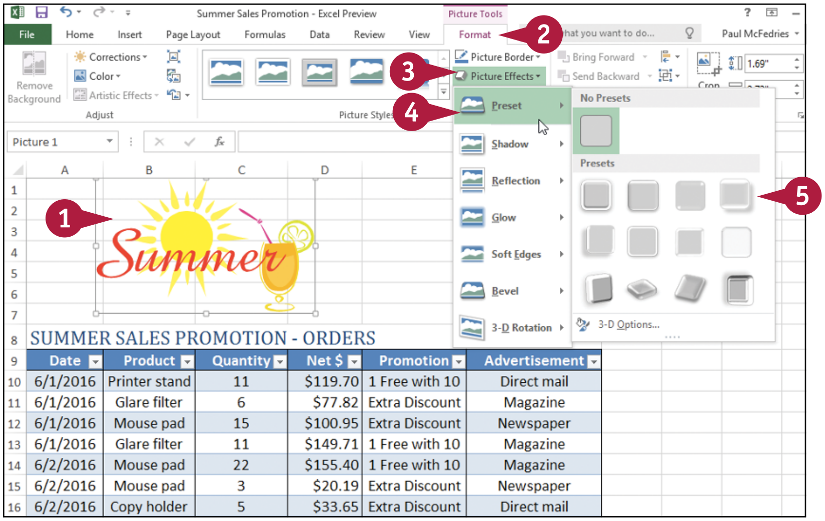
	A	B	C	D
1		Team 1		
2	*Sales*			
3	Division I	294,00		
4	Division II	358,55		
5	Division III	310,00		
6	*Expenses*			
7	Cost of Goods	77,004		
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				
15				
16				

Apply a Picture Effect

1. Click the picture you want to format.
2. Click the **Format** tab.
3. Click the **Picture Effects** button ( ).

Note: If the image is a shape, the button is named **Shape Effects**.

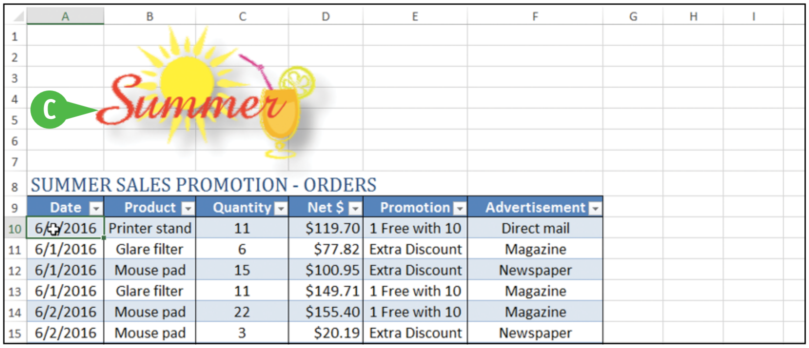
4. Click **Preset**.
5. Click the effect you want to apply.


Summer Sales Promotion - Excel Preview
Picture Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Format
Paul McFedries
Remove Background
Corrections
Color
Artistic Effects
Adjust
Picture Styles
Picture Border
Picture Effects
Bring Forward
Send Backward
Crop
1.69"
Picture 1
Preset
Shadow
Reflection
Glow
Soft Edges
Bevel
3-D Rotation
No Presets
Presets
3-D Options...
Summer
1
2
3
4
5

SUMMER SALES PROMOTION - ORDERS

Date	Product	Quantity	Net $	Promotion	Advertisement
6/1/2016	Printer stand	11	$119.70	1 Free with 10	Direct mail
6/1/2016	Glare filter	6	$77.82	Extra Discount	Magazine
6/1/2016	Mouse pad	15	$100.95	Extra Discount	Newspaper
6/1/2016	Glare filter	11	$149.71	1 Free with 10	Magazine
6/2/2016	Mouse pad	22	$155.40	1 Free with 10	Magazine
6/2/2016	Mouse pad	3	$20.19	Extra Discount	Newspaper
6/2/2016	Copy holder	5	$33.65	Extra Discount	Direct mail

C Excel applies the effect to the picture.



SUMMER SALES PROMOTION - ORDERS

Date	Product	Quantity	Net $	Promotion	Advertisement
6/1/2016	Printer stand	11	$119.70	1 Free with 10	Direct mail
6/1/2016	Glare filter	6	$77.82	Extra Discount	Magazine
6/1/2016	Mouse pad	15	$100.95	Extra Discount	Newspaper
6/1/2016	Glare filter	11	$149.71	1 Free with 10	Magazine
6/2/2016	Mouse pad	22	$155.40	1 Free with 10	Magazine
6/2/2016	Mouse pad	3	$20.19	Extra Discount	Newspaper

TIPS

I applied a style to a picture, but now I want to change the picture to something else. Do I have to start over?

No. You can simply replace the existing picture with the other picture, and Excel preserves the style so you do not have to repeat your work. Click the existing picture, click the **Format** tab, and then click the **Change Picture** button ( ). Select the new picture you want to use and then click **Insert**.

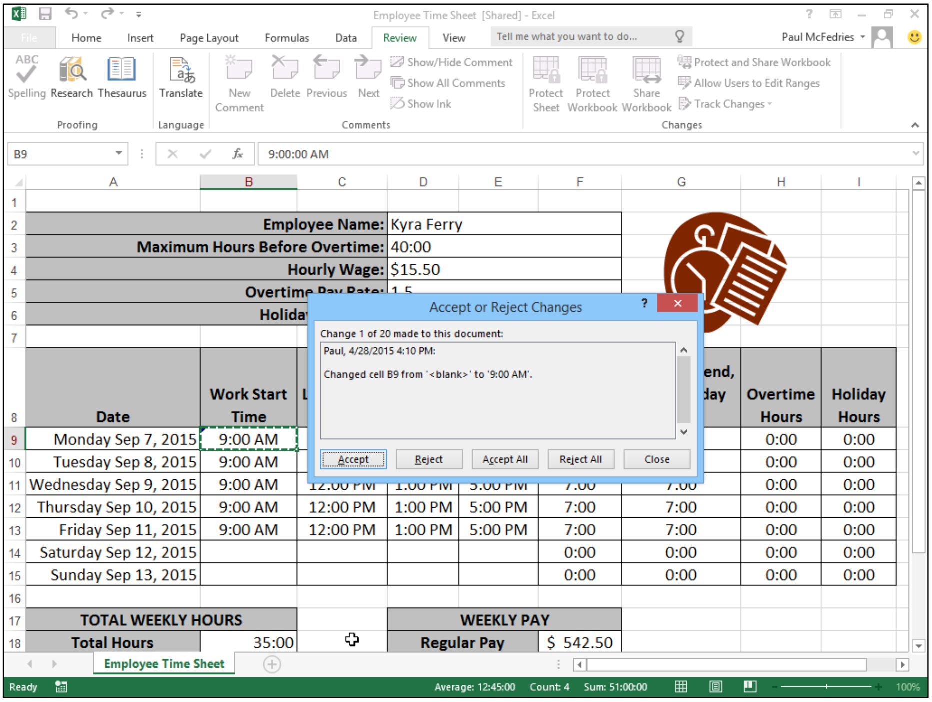
If I do not like the formatting that I have applied to a picture, can I return the picture to its original look?

Yes. If you have not performed any other tasks since applying the formatting, click **Undo** ( ) until Excel has removed the formatting. Alternatively, click , click **Preset**, and then click the icon in the **No Presets** section. To reverse all the changes you have made to a picture since you inserted the image, click the picture, click **Format**, and then click **Reset Picture** ( ).

CHAPTER 14

Collaborating with Others

If you want to collaborate with other people on a workbook, Excel gives you several ways to do this, including adding comments, sharing a workbook, and even working on a spreadsheet online. You can also control your collaborations by protecting worksheet data and tracking the changes that others make.


Employee Time Sheet [Shared] - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Spelling
Research
Thesaurus
Translate
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Protect Sheet
Protect Workbook
Share Workbook
Protect and Share Workbook
Allow Users to Edit Ranges
Track Changes
Proofing
Language
Comments
Changes
B9
9:00:00 AM
Accept or Reject Changes
Accept
Reject
Accept All
Reject All
Close
Employee Time Sheet
Ready
Average: 12:45:00
Count: 4
Sum: 51:00:00
100%

Change 1 of 20 made to this document:

Paul, 4/28/2015 4:10 PM:

Changed cell B9 from '<blank>' to '9:00 AM'.

	A	B	C	D	E	F	G	H	I
1									
2	**Employee Name:**			Kyra Ferry					
3	**Maximum Hours Before Overtime:**			40:00					
4	**Hourly Wage:**			$15.50					
5	**Overtime**								
6	**Holida**								
7									
8	**Date**	**Work Start Time**	**L**				**end, day**	**Overtime Hours**	**Holiday Hours**
9	Monday Sep 7, 2015	9:00 AM						0:00	0:00
10	Tuesday Sep 8, 2015	9:00 AM						0:00	0:00
11	Wednesday Sep 9, 2015	9:00 AM						0:00	0:00
12	Thursday Sep 10, 2015	9:00 AM	12:00 PM	1:00 PM	5:00 PM	7:00	7:00	0:00	0:00
13	Friday Sep 11, 2015	9:00 AM	12:00 PM	1:00 PM	5:00 PM	7:00	7:00	0:00	0:00
14	Saturday Sep 12, 2015					0:00	0:00	0:00	0:00
15	Sunday Sep 13, 2015					0:00	0:00	0:00	0:00
16									
17	**TOTAL WEEKLY HOURS**			**WEEKLY PAY**					
18	**Total Hours**	35:00		**Regular Pay**		$ 542.50			

Add a Comment to a Cell 306
Protect a Worksheet's Data 308
Protect a Workbook's Structure 310
Share a Workbook with Other Users 312
Track Workbook Changes 314
Accept or Reject Workbook Changes. 316
Save a Workbook to Your OneDrive 318
Send a Workbook as an E-Mail Attachment 320
Save Excel Data as a Web Page 322
Make a Workbook Compatible with Earlier Versions of Excel 324
Mark Up a Worksheet with a Digital Pen. 326
Collaborate on a Workbook Online 328

Add a Comment to a Cell

If you have received a workbook from another person, you can provide feedback to that person by adding a comment to a cell in the workbook. A comment is often the best way to provide corrections, questions, critiques, and other feedback because it does not change anything on the actual worksheet.

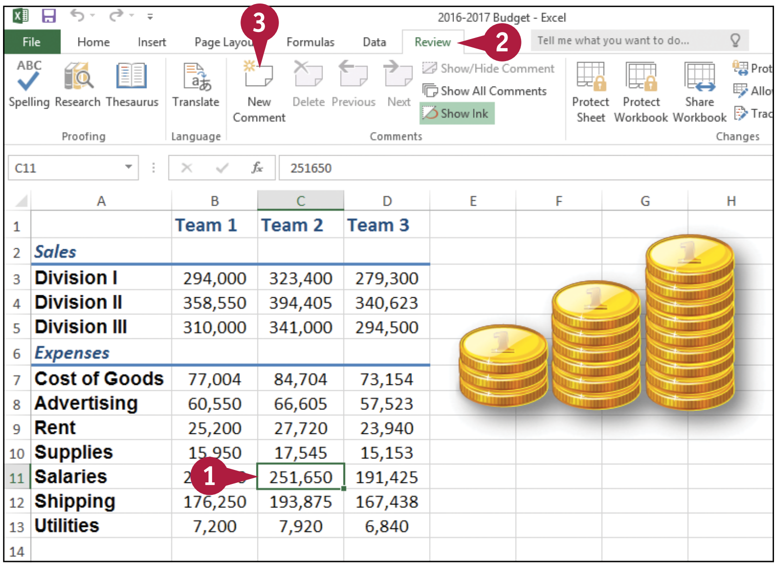
Each comment is attached to a particular cell and Excel uses a comment indicator to mark which cells have comments. When you view a comment, Excel displays the comment in a balloon.

Add a Comment to a Cell

Add a Comment

1. Click the cell you want to comment on.
2. Click the **Review** tab.
3. Click **New Comment** ( ).

Note: You can also right-click the cell and then click **Insert Comment**.

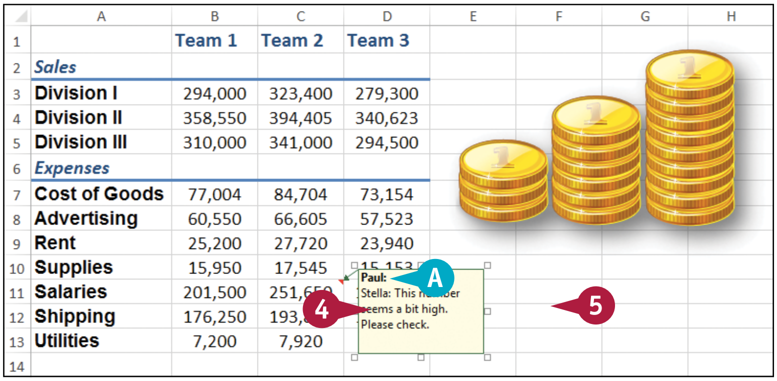

2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
Tell me what you want to do...
ABC
Spelling
Research
Thesaurus
Translate
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Protect Sheet
Protect Workbook
Share Workbook
Prot
Allo
Trac
Proofing
Language
Comments
Changes
C11
251650
1
2
3

	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	[illegible]	251,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				

Excel displays a comment balloon.

- **A** Excel precedes the comment with your Excel username.

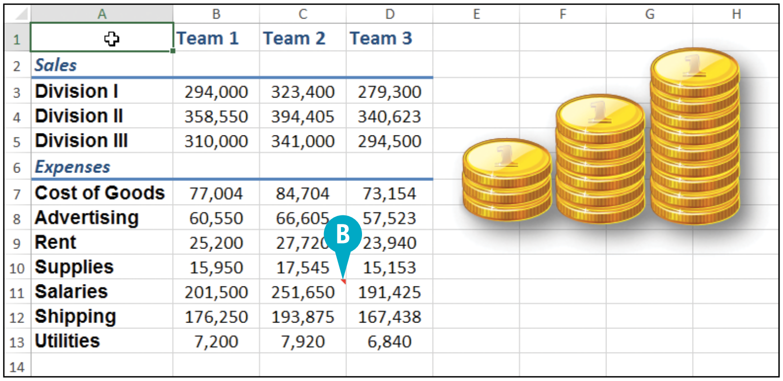
4. Type your comment.
5. Click outside the comment balloon.



	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,6	
12	Shipping	176,250	193,	
13	Utilities	7,200	7,920	
14				

Paul:
Stella: This number seems a bit high. Please check.

B Excel adds a comment indicator (◥) to the top-right corner of the cell.



	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				

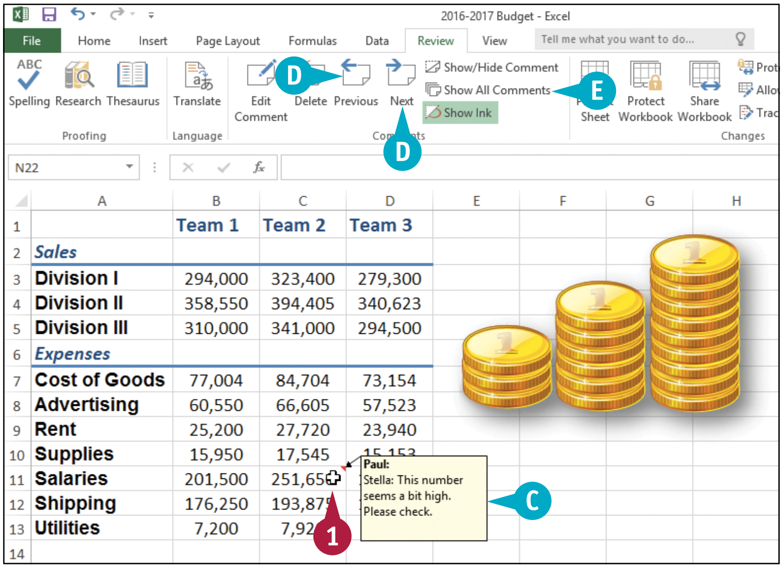
View a Comment

1. Move the mouse ✚ over the cell.

C Excel displays the comment in a balloon.

D In the Review tab, you can also click **Next** ( ) and **Previous** ( ) to run through the comments.

E In the Review tab, you can also click **Show All Comments** ( ) to display every comment at once.



N22

	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	
12	Shipping	176,250	193,875	
13	Utilities	7,200	7,920	
14				

Paul:
Stella: This number seems a bit high. Please check.

2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
ABC
Spelling
Research
Thesaurus
Translate
Edit Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Sheet
Protect Workbook
Share Workbook
Prot
Allo
Trac
Proofing
Language
Comments
Changes
fx
A
B
C
D
E
F
G
H
D
D
E
C
1

TIPS

Can I edit or remove a comment?

Yes. To edit an existing comment, click the cell that contains the comment, click the **Review** tab, click **Edit Comment** ( ) to open the comment in a balloon, and then edit the balloon text. To remove a comment, click the cell that contains the comment, click the **Review** tab, and then click **Delete Comment** ( ).

How do I change my Excel username?

When collaborating, your username is important because it tells other people who added the comments. If you current username consists of only your first name or your initials, you can change it. Click **File** and then click **Options** to open the Excel Options dialog box. Click the **General** tab and then use the **User name** text box to edit the name. Click **OK**. Note, however, that this does not change your username in any existing comments.

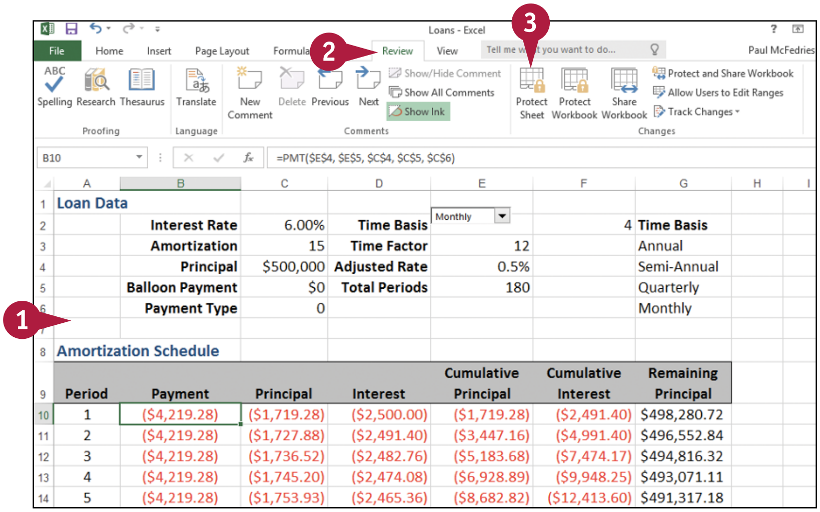
Protect a Worksheet's Data

If you will be distributing a workbook to other people, you can enable the options in Excel for safeguarding worksheet data by activating the sheet's protection feature. You can also configure the worksheet to require a password to unprotect it.

There are two main methods you can use to safeguard worksheet data: You can unlock only those cells that users are allowed to edit and you can configure a range to require a password before it can be edited.

Protect a Worksheet's Data

1. Display the worksheet you want to protect.
2. Click the **Review** tab.
3. Click **Protect Sheet** (▦).



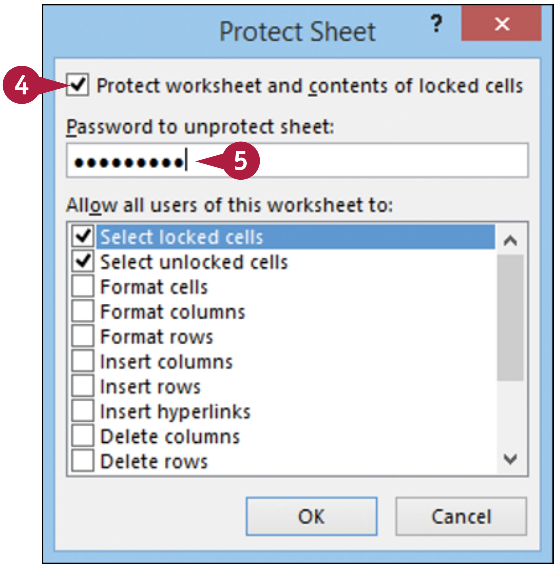
Loans - Excel
File
Home
Insert
Page Layout
Formulas
Review
View
Tell me what you want to do...
Paul McFedries
Spelling
Research
Thesaurus
Translate
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Protect Sheet
Protect Workbook
Share Workbook
Protect and Share Workbook
Allow Users to Edit Ranges
Track Changes
Proofing
Language
Comments
Changes
1
2
3

B10 =PMT($E$4, $E$5, $C$4, $C$5, $C$6)

	A	B	C	D	E	F	G
1	Loan Data						
2		Interest Rate	6.00%	Time Basis	Monthly	4	Time Basis
3		Amortization	15	Time Factor	12		Annual
4		Principal	$500,000	Adjusted Rate	0.5%		Semi-Annual
5		Balloon Payment	$0	Total Periods	180		Quarterly
6		Payment Type	0				Monthly
7							
8	Amortization Schedule						
9	Period	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Remaining Principal
10	1	($4,219.28)	($1,719.28)	($2,500.00)	($1,719.28)	($2,491.40)	$498,280.72
11	2	($4,219.28)	($1,727.88)	($2,491.40)	($3,447.16)	($4,991.40)	$496,552.84
12	3	($4,219.28)	($1,736.52)	($2,482.76)	($5,183.68)	($7,474.17)	$494,816.32
13	4	($4,219.28)	($1,745.20)	($2,474.08)	($6,928.89)	($9,948.25)	$493,071.11
14	5	($4,219.28)	($1,753.93)	($2,465.36)	($8,682.82)	($12,413.60)	$491,317.18

Excel displays the Protect Sheet dialog box.

4. Make sure the **Protect worksheet and contents of locked cells** check box is selected (☑).
5. Use the **Password to unprotect sheet** text box to type a password.



Protect Sheet
?
×
OK
Cancel
4
5

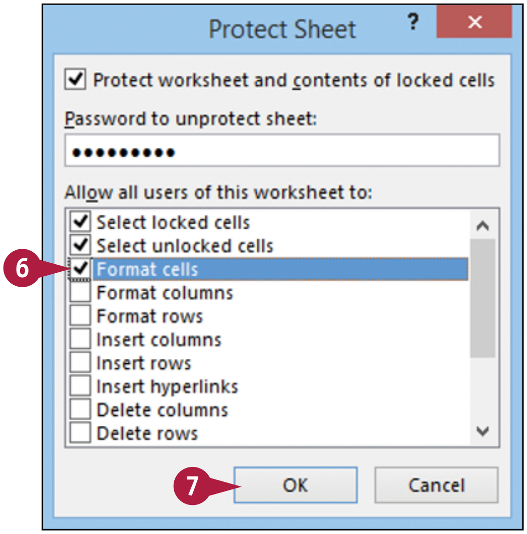
☑ Protect worksheet and contents of locked cells

Password to unprotect sheet: •••••••••

Allow all users of this worksheet to:

☑ Select locked cells
☑ Select unlocked cells
☐ Format cells
☐ Format columns
☐ Format rows
☐ Insert columns
☐ Insert rows
☐ Insert hyperlinks
☐ Delete columns
☐ Delete rows

6. Select the check box beside each action that you want to allow unauthorized users to perform (☐ changes to ☑).
7. Click **OK**.



Protect Sheet

☑ Protect worksheet and contents of locked cells

Password to unprotect sheet: •••••••••

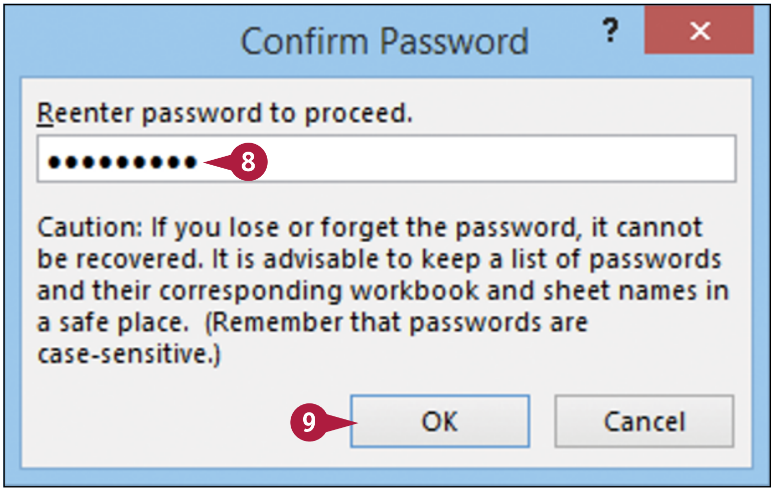
Allow all users of this worksheet to:

- ☑ Select locked cells
- ☑ Select unlocked cells
- ☑ Format cells
- ☐ Format columns
- ☐ Format rows
- ☐ Insert columns
- ☐ Insert rows
- ☐ Insert hyperlinks
- ☐ Delete columns
- ☐ Delete rows

Excel asks you to confirm the password.

8. Type the password.
9. Click **OK**.

If you want to make changes to a worksheet, click the **Review** tab, click **Unprotect Sheet** (🔒), type the unprotect password, and then click **OK**.



Confirm Password

Reenter password to proceed. ••••••••••

Caution: If you lose or forget the password, it cannot be recovered. It is advisable to keep a list of passwords and their corresponding workbook and sheet names in a safe place. (Remember that passwords are case-sensitive.)

TIPS

When I protect a worksheet, no one can edit any of the cells. Is there a way to allow users to edit some of the cells?

Yes. This is useful if you have a data entry area or other range that you want other people to be able to edit but you do not want them to alter any other part of the worksheet. First, unprotect the sheet if it is currently protected. Select the range you want to unlock, click **Home**, click **Format**, and then click **Lock Cell** to turn off that option for the selected range.

When I protect a worksheet, can I configure a range to require a password before a user can edit the range?

Yes. First, unprotect the sheet if it is currently protected. Select the range you want to protect, click the **Review** tab, and then click **Allow Users to Edit Ranges**. In the Allow Users to Edit Ranges dialog box, click **New** to open the New Range dialog box. Type a title for the range, use the **Range** text box to type a password, and then click **OK**. When Excel prompts you to reenter the password, type the password and then click **OK**.

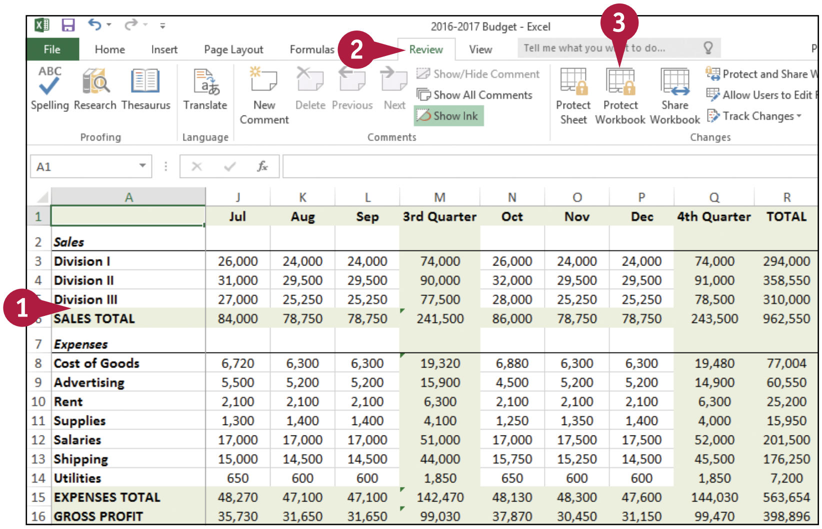
Protect a Workbook's Structure

You can prevent unwanted changes to a workbook by activating protection for the workbook's structure. You can also configure the workbook to require a password to unprotect it.

Protecting a workbook's structure means preventing users from inserting new worksheets, renaming or deleting existing worksheets, moving or copying worksheets, hiding and unhiding worksheets, and more. See the tips to learn which commands Excel disables when you protect a workbook's structure.

Protect a Workbook's Structure

1. Display the workbook you want to protect.
2. Click the **Review** tab.
3. Click **Protect Workbook** (▦).

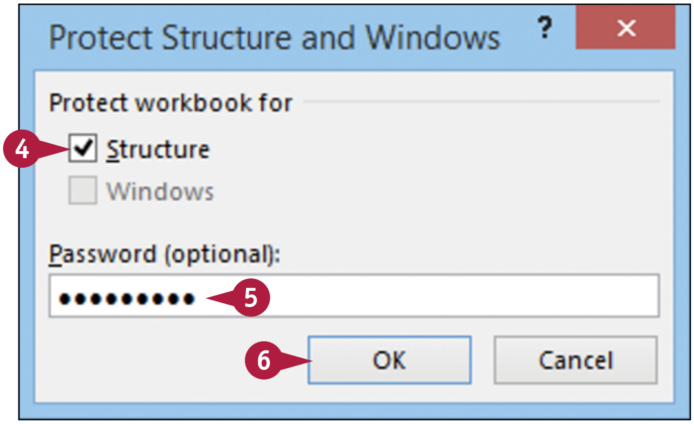


2016-2017 Budget - Excel
File
Home
Insert
Page Layout
Formulas
Review
View
Tell me what you want to do...
ABC
Spelling
Research
Thesaurus
Proofing
Translate
Language
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Comments
Protect Sheet
Protect Workbook
Share Workbook
Protect and Share W
Allow Users to Edit R
Track Changes
Changes
A1
1
2
3

	A	J	K	L	M	N	O	P	Q	R
1		Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec	4th Quarter	TOTAL
2	*Sales*									
3	Division I	26,000	24,000	24,000	74,000	26,000	24,000	24,000	74,000	294,000
4	Division II	31,000	29,500	29,500	90,000	32,000	29,500	29,500	91,000	358,550
5	Division III	27,000	25,250	25,250	77,500	28,000	25,250	25,250	78,500	310,000
6	SALES TOTAL	84,000	78,750	78,750	241,500	86,000	78,750	78,750	243,500	962,550
7	*Expenses*									
8	Cost of Goods	6,720	6,300	6,300	19,320	6,880	6,300	6,300	19,480	77,004
9	Advertising	5,500	5,200	5,200	15,900	4,500	5,200	5,200	14,900	60,550
10	Rent	2,100	2,100	2,100	6,300	2,100	2,100	2,100	6,300	25,200
11	Supplies	1,300	1,400	1,400	4,100	1,250	1,350	1,400	4,000	15,950
12	Salaries	17,000	17,000	17,000	51,000	17,000	17,500	17,500	52,000	201,500
13	Shipping	15,000	14,500	14,500	44,000	15,750	15,250	14,500	45,500	176,250
14	Utilities	650	600	600	1,850	650	600	600	1,850	7,200
15	EXPENSES TOTAL	48,270	47,100	47,100	142,470	48,130	48,300	47,600	144,030	563,654
16	GROSS PROFIT	35,730	31,650	31,650	99,030	37,870	30,450	31,150	99,470	398,896

Excel displays the Protect Structure and Windows dialog box.

4. Select the **Structure** check box (☐ changes to ☑).
5. Type a password in the **Password** text box, if required.
6. Click **OK**.



Protect Structure and Windows
?
×
4
5
6
OK
Cancel

Protect workbook for

☑ Structure

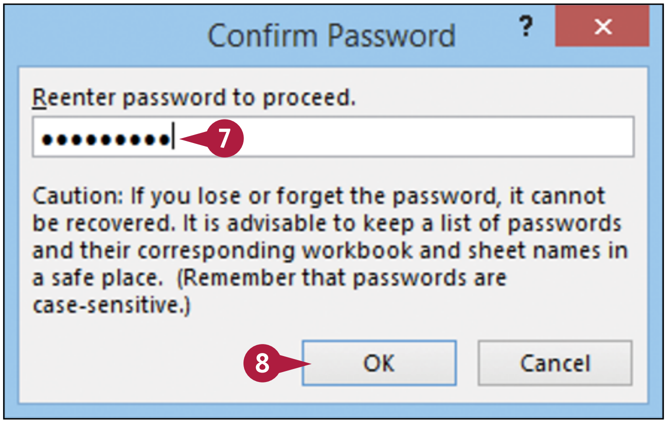
☐ Windows

Password (optional): ●●●●●●●●●●

If you specified a password, Excel asks you to confirm it.

7 Type the password.

8 Click **OK**.



Confirm Password

Reenter password to proceed.

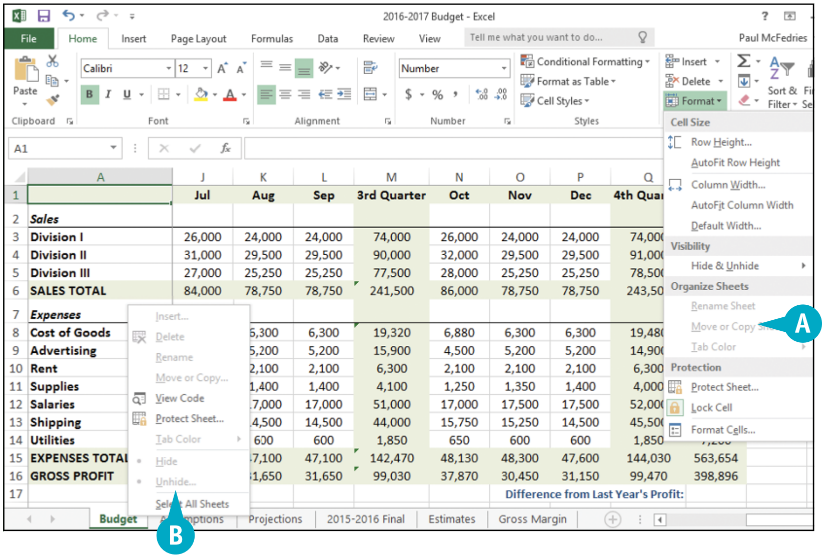
•••••••••

Caution: If you lose or forget the password, it cannot be recovered. It is advisable to keep a list of passwords and their corresponding workbook and sheet names in a safe place. (Remember that passwords are case-sensitive.)

?
✕
7
8
OK
Cancel

A Excel disables most worksheet-related commands on the Ribbon.

B Excel disables most worksheet-related commands on the worksheet shortcut menu.



2016-2017 Budget - Excel

	A	J	K	L	M	N	O	P	Q	
1		Jul	Aug	Sep	3rd Quarter	Oct	Nov	Dec	4th Quar	
2	*Sales*									
3	Division I	26,000	24,000	24,000	74,000	26,000	24,000	24,000	74,00	
4	Division II	31,000	29,500	29,500	90,000	32,000	29,500	29,500	91,00	
5	Division III	27,000	25,250	25,250	77,500	28,000	25,250	25,250	78,50	
6	SALES TOTAL	84,000	78,750	78,750	241,500	86,000	78,750	78,750	243,50	
7	*Expenses*									
8	Cost of Goods		6,300	6,300	19,320	6,880	6,300	6,300	19,48	
9	Advertising		5,200	5,200	15,900	4,500	5,200	5,200	14,90	
10	Rent		2,100	2,100	6,300	2,100	2,100	2,100	6,300	
11	Supplies		1,400	1,400	4,100	1,250	1,350	1,400	4,000	
12	Salaries		7,000	17,000	51,000	17,000	17,500	17,500	52,00	
13	Shipping		4,500	14,500	44,000	15,750	15,250	14,500	45,50	
14	Utilities		600	600	1,850	650	600	600	1,850	
15	EXPENSES TOTAL		7,100	47,100	142,470	48,130	48,300	47,600	144,030	563,654
16	GROSS PROFIT		1,650	31,650	99,030	37,870	30,450	31,150	99,470	398,896
17							Difference from Last Year's Profit:			

File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Paste
Clipboard
Calibri
12
Font
Alignment
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Sort & Filter
A1
Cell Size
Row Height...
AutoFit Row Height
Column Width...
AutoFit Column Width
Default Width...
Visibility
Hide & Unhide
Organize Sheets
Rename Sheet
Move or Copy Sheet
Tab Color
Protection
Protect Sheet...
Lock Cell
Format Cells...
Insert...
Delete
Rename
Move or Copy...
View Code
Protect Sheet...
Tab Color
Hide
Unhide...
Select All Sheets
Budget
Assumptions
Projections
2015-2016 Final
Estimates
Gross Margin
A
B

TIPS

What happens when I protect a workbook's structure?

Excel disables most worksheet-related commands, including Insert Sheet, Delete Sheet, Rename Sheet, Move or Copy Sheet, Tab Color, Hide Sheet, and Unhide Sheet. Excel also prevents the Scenario Manager from creating a summary report.

How do I remove workbook structure protection?

If you no longer require your workbook structure to be protected, you can remove the protection by following steps 1 to 3. If you protected your workbook with a password, type the password and then click **OK**. Excel removes the workbook's structure protection.

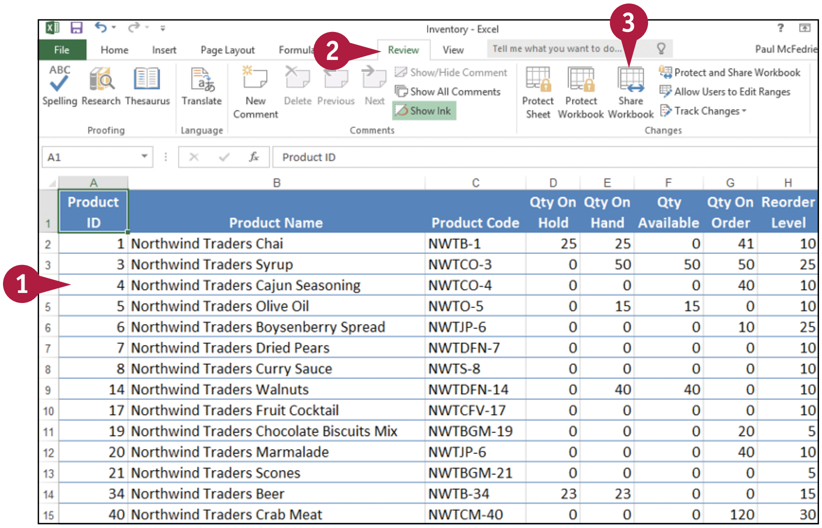
Share a Workbook with Other Users

You can allow multiple users to modify a workbook simultaneously by sharing the workbook. Once you have shared a workbook, other users can open the workbook via a network connection and edit the file at the same time. Note that Excel cannot share a workbook that contains a table, so you need to convert any tables to ranges before performing this task. See Chapter 10 for more information.

When you share a workbook, Excel automatically begins tracking the changes made to the file. For more information on this feature, see the following section, "Track Workbook Changes."

Share a Workbook with Other Users

1. Display the workbook you want to share.
2. Click the **Review** tab.
3. Click **Share Workbook** (▦).

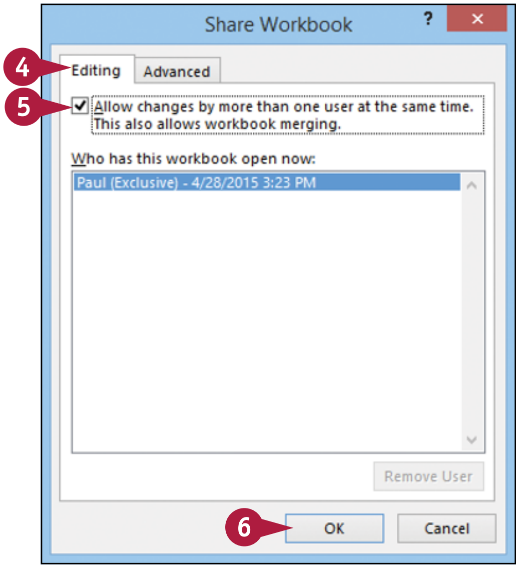


Inventory - Excel
Paul McFedries
File
Home
Insert
Page Layout
Formulas
Review
View
Tell me what you want to do...
Spelling
Research
Thesaurus
Proofing
Translate
Language
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Comments
Protect Sheet
Protect Workbook
Share Workbook
Protect and Share Workbook
Allow Users to Edit Ranges
Track Changes
Changes
A1
Product ID
1
2
3

Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
1	Northwind Traders Chai	NWTB-1	25	25	0	41	10
3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10
8	Northwind Traders Curry Sauce	NWTS-8	0	0	0	0	10
14	Northwind Traders Walnuts	NWTDFN-14	0	40	40	0	10
17	Northwind Traders Fruit Cocktail	NWTCFV-17	0	0	0	0	10
19	Northwind Traders Chocolate Biscuits Mix	NWTBGM-19	0	0	0	20	5
20	Northwind Traders Marmalade	NWTJP-6	0	0	0	40	10
21	Northwind Traders Scones	NWTBGM-21	0	0	0	0	5
34	Northwind Traders Beer	NWTB-34	23	23	0	0	15
40	Northwind Traders Crab Meat	NWTCM-40	0	0	0	120	30

The Share Workbook dialog box appears.

4. Click the **Editing** tab.
5. Select the **Allow changes by more than one user at the same time** check box (☐ changes to ☑).
6. Click **OK**.



Share Workbook
?
×
Editing
Advanced
Remove User
OK
Cancel
4
5
6

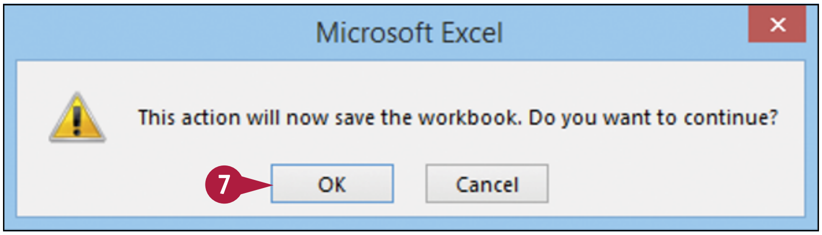
☑ Allow changes by more than one user at the same time. This also allows workbook merging.

Who has this workbook open now:

Paul (Exclusive) - 4/28/2015 3:23 PM

Excel tells you that it will now save the workbook.

7 Click **OK**.



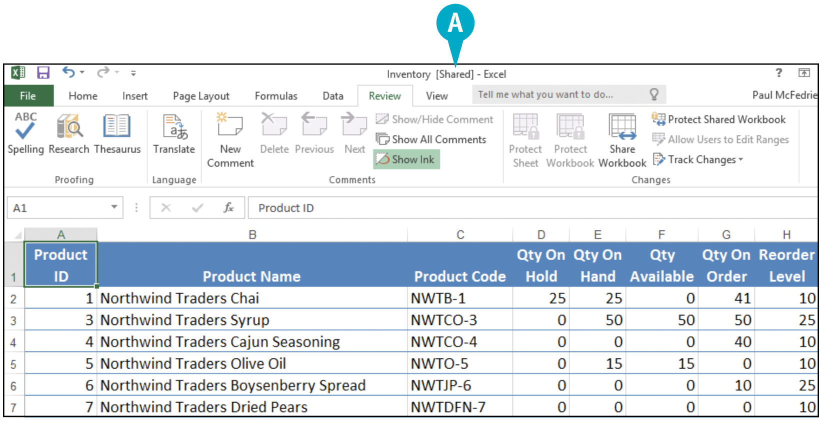
Microsoft Excel

This action will now save the workbook. Do you want to continue?

Excel saves the workbook and activates sharing.

A Excel displays [Shared] in the title bar.

You and users on your network can now edit the workbook at the same time.



A
Inventory [Shared] - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedrie
Spelling
Research
Thesaurus
Proofing
Translate
Language
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Comments
Protect Sheet
Protect Workbook
Share Workbook
Protect Shared Workbook
Allow Users to Edit Ranges
Track Changes
Changes
A1
Product ID

	A	B	C	D	E	F	G	H
1	Product ID	Product Name	Product Code	Qty On Hold	Qty On Hand	Qty Available	Qty On Order	Reorder Level
2	1	Northwind Traders Chai	NWTB-1	25	25	0	41	10
3	3	Northwind Traders Syrup	NWTCO-3	0	50	50	50	25
4	4	Northwind Traders Cajun Seasoning	NWTCO-4	0	0	0	40	10
5	5	Northwind Traders Olive Oil	NWTO-5	0	15	15	0	10
6	6	Northwind Traders Boysenberry Spread	NWTJP-6	0	0	0	10	25
7	7	Northwind Traders Dried Pears	NWTDFN-7	0	0	0	0	10

TIP

How do I know if other people currently have the workbook open?

The Editing tab of the Share Workbook dialog box maintains a list of the users who have the workbook open. To see this list, follow these steps:

1 Display the shared workbook.

2 Click the **Review** tab.

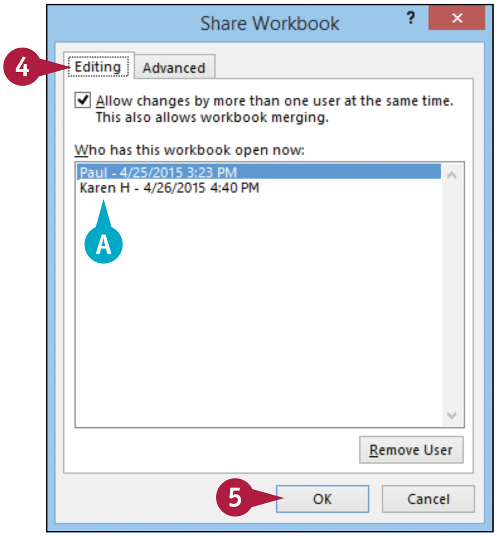
3 Click ▦.

The Share Workbook dialog box appears.

4 Click the **Editing** tab.

A The **Who has this workbook open now** list displays the users who are currently editing the file.

5 Click **OK**.



Share Workbook

☑ Allow changes by more than one user at the same time. This also allows workbook merging.

Who has this workbook open now:

Paul - 4/25/2015 3:23 PM
Karen H - 4/26/2015 4:40 PM

?
4
Editing
Advanced
A
Remove User
5
OK
Cancel

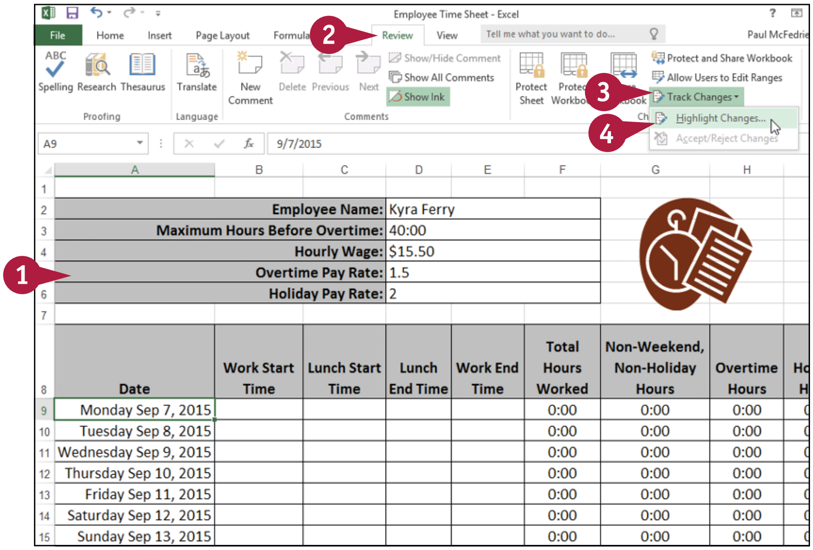
Track Workbook Changes

If you want other people to make changes to a workbook, you can keep track of those changes so you can either accept or reject them (see the following section, “Accept or Reject Workbook Changes”). The Track Changes feature in Excel enables you to do this.

When you turn on Track Changes, Excel monitors the activity of each reviewer and stores that reviewer’s cell edits, row and column additions and deletions, range moves, worksheet insertions, and worksheet renames.

Track Workbook Changes

1. Display the workbook you want to track.
2. Click the **Review** tab.
3. Click **Track Changes** (📝).
4. Click **Highlight Changes**.



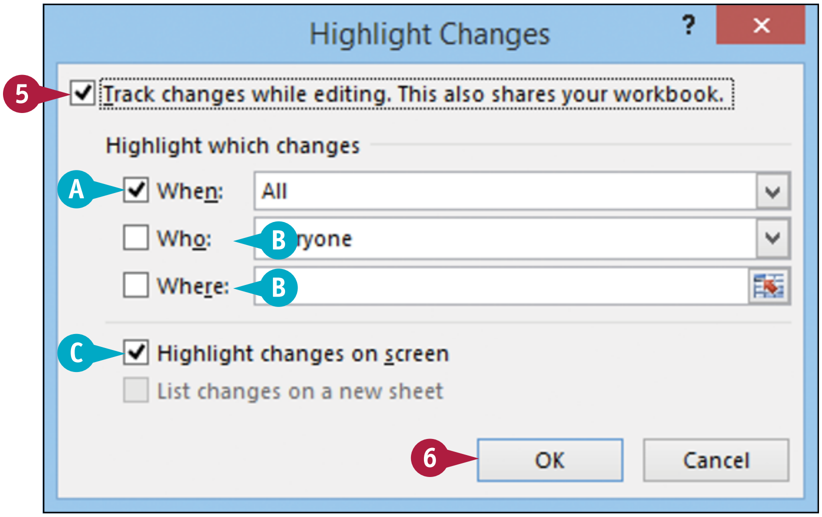
Employee Time Sheet - Excel
File
Home
Insert
Page Layout
Formula
Review
View
Tell me what you want to do...
Paul McFedrie
ABC
Spelling
Research
Thesaurus
Translate
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Protect Sheet
Protec Workbo
Protect and Share Workbook
Allow Users to Edit Ranges
Track Changes
Highlight Changes...
Accept/Reject Changes
Proofing
Language
Comments
Ch
A9
fx
1
2
3
4

9/7/2015

	A	B	C	D	E	F	G	H
1								
2	Employee Name:			Kyra Ferry				
3	Maximum Hours Before Overtime:			40:00				
4	Hourly Wage:			$15.50				
5	Overtime Pay Rate:			1.5				
6	Holiday Pay Rate:			2				
7								
8	Date	Work Start Time	Lunch Start Time	Lunch End Time	Work End Time	Total Hours Worked	Non-Weekend, Non-Holiday Hours	Overtime Hours
9	Monday Sep 7, 2015					0:00	0:00	0:00
10	Tuesday Sep 8, 2015					0:00	0:00	0:00
11	Wednesday Sep 9, 2015					0:00	0:00	0:00
12	Thursday Sep 10, 2015					0:00	0:00	0:00
13	Friday Sep 11, 2015					0:00	0:00	0:00
14	Saturday Sep 12, 2015					0:00	0:00	0:00
15	Sunday Sep 13, 2015					0:00	0:00	0:00

The Highlight Changes dialog box appears.

5. Select the **Track changes while editing** check box (☐ changes to ☑).
   - A Leave the **When** check box selected (☑) and leave **All** selected in the list.
   - B To learn more about the **Who** and **Where** options, see the tips.
   - C Leave the **Highlight changes on screen** check box selected (☑) to view the workbook changes.
6. Click **OK**.



Highlight Changes
?
×
5
A
B
B
C
6
OK
Cancel

☑ Track changes while editing. This also shares your workbook.

Highlight which changes

☑ When: All

☐ Who: ryone

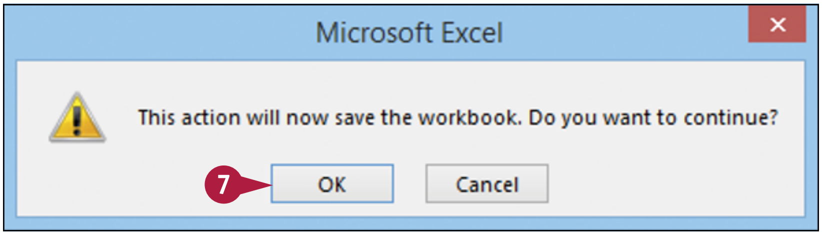
☐ Where:

☑ Highlight changes on screen

☐ List changes on a new sheet

Excel tells you it will now save the workbook.

7 Click **OK**.

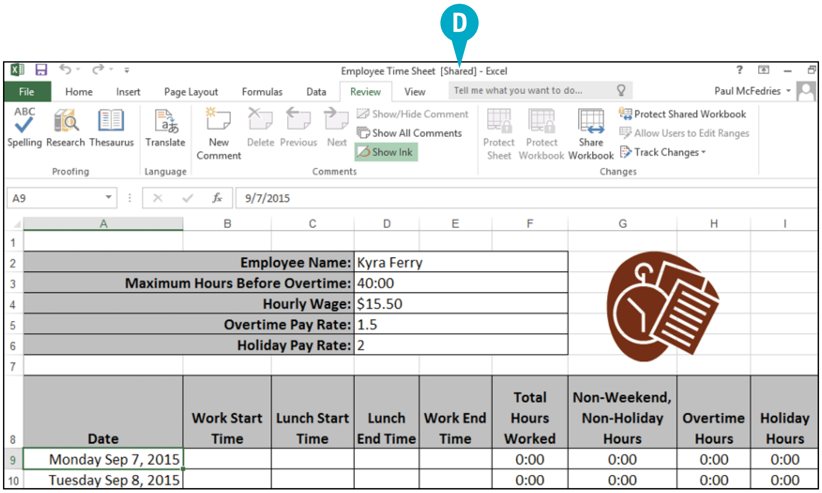

Microsoft Excel
7
OK
Cancel

This action will now save the workbook. Do you want to continue?

Excel activates the Track Changes feature.

D Excel shares the workbook and indicates this by displaying [Shared] beside the workbook name.

Note: See the previous section, "Share a Workbook with Other Users," to learn more about workbook sharing.


D
Employee Time Sheet [Shared] - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paul McFedries
Spelling
Research
Thesaurus
Proofing
Translate
Language
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Comments
Protect Sheet
Protect Workbook
Share Workbook
Protect Shared Workbook
Allow Users to Edit Ranges
Track Changes
Changes
A9
9/7/2015

Employee Name:	Kyra Ferry
Maximum Hours Before Overtime:	40:00
Hourly Wage:	$15.50
Overtime Pay Rate:	1.5
Holiday Pay Rate:	2

Date	Work Start Time	Lunch Start Time	Lunch End Time	Work End Time	Total Hours Worked	Non-Weekend, Non-Holiday Hours	Overtime Hours	Holiday Hours
Monday Sep 7, 2015					0:00	0:00	0:00	0:00
Tuesday Sep 8, 2015					0:00	0:00	0:00	0:00

TIPS

Is there a way to avoid having my own changes highlighted?

Yes, you can configure the workbook to show every user's changes but your own. Follow steps 1 to 4 to open the Highlight Changes dialog box. Select the **Who** check box (☐ changes to ☑), click the **Who** ▼, and then click **Everyone but Me**. Click **OK** to put the new setting into effect.

Can I track changes in just part of the worksheet?

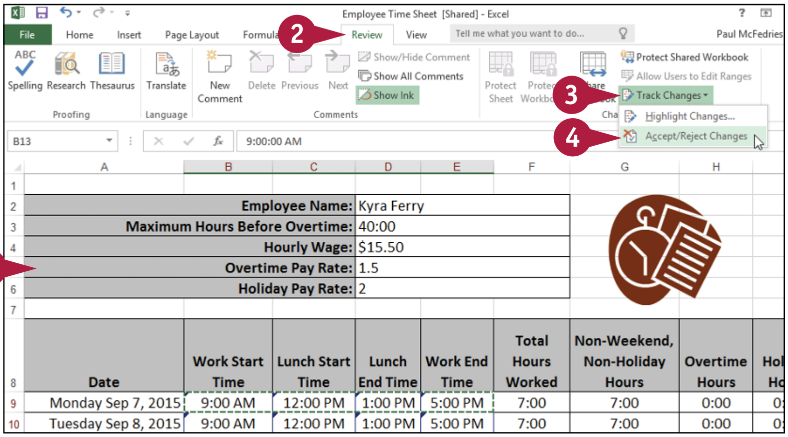
Yes, you can modify this task so that Excel only tracks changes in a specific range. Follow steps 1 to 4 to open the Highlight Changes dialog box. Select the **Where** check box (☐ changes to ☑), click inside the **Where** range box, and then select the range you want to track. Click **OK** to put the new setting into effect.

Accept or Reject Workbook Changes

After you turn on the Track Changes features in Excel, as described in the previous section, “Track Workbook Changes,” you can accept or reject the changes that other users make to the workbook. As a general rule, you should accept the changes that other users make to a workbook. The exception is when you know a change is incorrect. If you are not sure, it is best to talk to the other user before rejecting a change. If you and another user make changes to the same cell, Excel lets you resolve the conflict by accepting your edit or the other user’s edit.

Accept or Reject Workbook Changes

1. Display the workbook you are tracking.
2. Click the **Review** tab.
3. Click **Track Changes** (📝).
4. Click **Accept/Reject Changes**.

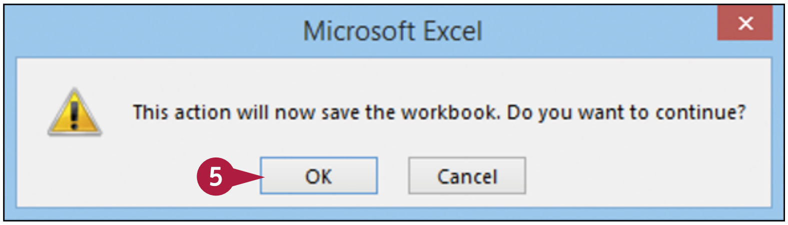

Employee Time Sheet [Shared] - Excel
File
Home
Insert
Page Layout
Formula
Review
View
Tell me what you want to do...
Paul McFedries
ABC
Spelling
Research
Thesaurus
Translate
New Comment
Delete
Previous
Next
Show/Hide Comment
Show All Comments
Show Ink
Protect Sheet
Protec Workb
are
Protect Shared Workbook
Allow Users to Edit Ranges
Track Changes
Highlight Changes...
Accept/Reject Changes
Proofing
Language
Comments
Cha
B13
9:00:00 AM
1
2
3
4

Employee Name: Kyra Ferry
Maximum Hours Before Overtime: 40:00
Hourly Wage: $15.50
Overtime Pay Rate: 1.5
Holiday Pay Rate: 2

Date	Work Start Time	Lunch Start Time	Lunch End Time	Work End Time	Total Hours Worked	Non-Weekend, Non-Holiday Hours	Overtime Hours	Hol Ho
Monday Sep 7, 2015	9:00 AM	12:00 PM	1:00 PM	5:00 PM	7:00	7:00	0:00	0:
Tuesday Sep 8, 2015	9:00 AM	12:00 PM	1:00 PM	5:00 PM	7:00	7:00	0:00	0:

If your workbook has unsaved changes, Excel tells you it will now save the workbook.

5. Click **OK**.


Microsoft Excel
OK
Cancel
5

This action will now save the workbook. Do you want to continue?

The Select Changes to Accept or Reject dialog box appears.

A Leave the **When** check box selected (☑) and leave **Not yet reviewed** selected in the list.

B If you only want to review changes made by a particular user, select the **Who** check box (☐ changes to ☑), click the **Who** ▼, and then click the user's name.

6 Click **OK**.

The Accept or Reject Changes dialog box appears.

C Excel displays the details of the current change.

7 Click an action for the change.

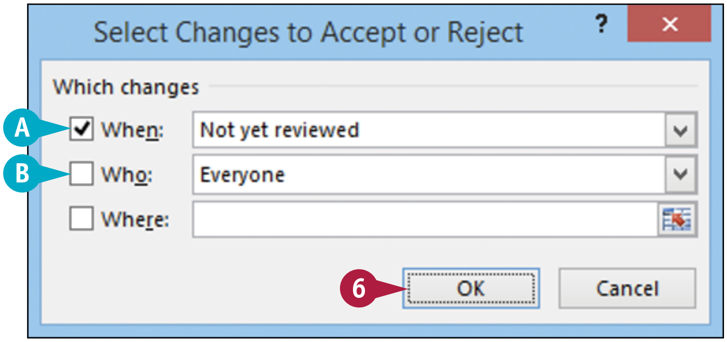
D Click **Accept** to leave the change in the workbook.

E Click **Reject** to remove the change from the workbook.

Excel displays the next change.

8 Repeat step 7 to review all the changes.

F You can also click **Accept All** or **Reject All** to accept or reject all changes at once.



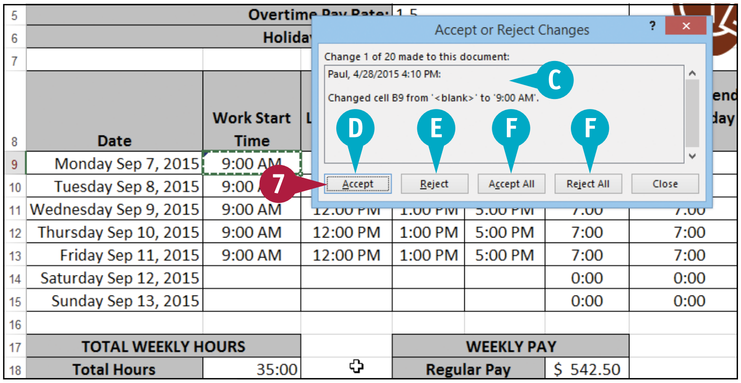
Select Changes to Accept or Reject

Which changes

☑ When: Not yet reviewed

☐ Who: Everyone

☐ Where:



Accept or Reject Changes

Change 1 of 20 made to this document:

Paul, 4/28/2015 4:10 PM:

Changed cell B9 from '<blank>' to '9:00 AM'.

	Date	Work Start Time					
9	Monday Sep 7, 2015	9:00 AM					
10	Tuesday Sep 8, 2015	9:00					
11	Wednesday Sep 9, 2015	9:00 AM	12:00 PM	1:00 PM	5:00 PM	7:00	7:00
12	Thursday Sep 10, 2015	9:00 AM	12:00 PM	1:00 PM	5:00 PM	7:00	7:00
13	Friday Sep 11, 2015	9:00 AM	12:00 PM	1:00 PM	5:00 PM	7:00	7:00
14	Saturday Sep 12, 2015					0:00	0:00
15	Sunday Sep 13, 2015					0:00	0:00
17	TOTAL WEEKLY HOURS			WEEKLY PAY			
18	Total Hours	35:00		Regular Pay		$ 542.50	

TIPS

What happens if I and another user make changes that affect the same cell?

In this situation, when you save the workbook, Excel displays the Accept or Reject Changes dialog box, which shows the change you made as well as the change the other user made. Click whatever change is the correct one and then click **Accept**. If there are multiple conflicts, you can save time by clicking your change or the other user's change and then clicking either **Accept All** or **Reject All**.

When I complete my review, should I turn off the tracking feature?

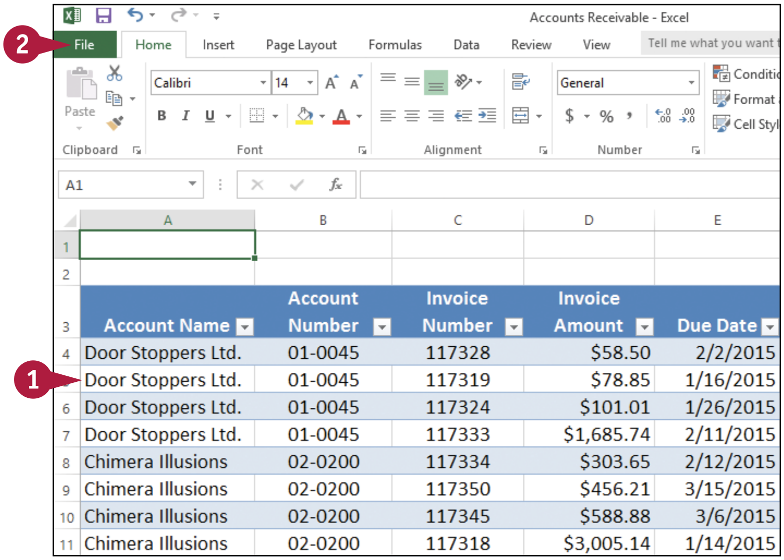
Unless you know that other people still require access to the workbook, you should turn off the tracking feature when your review is complete. To do this, click the **Review** tab, click , and then click **Highlight Changes** to open the Highlight Changes dialog box. Select the **Track changes while editing** check box (☑ changes to ☐), and then click **OK**.

Save a Workbook to Your OneDrive

If you are using Windows 8 or later under a Microsoft account, then as part of that account you get a free online storage area called *OneDrive*. You can use Excel to add any of your workbooks to your OneDrive. This is useful if you are going to be away from your computer but still require access to a workbook. Because the OneDrive is accessible anywhere you have web access, you can view and work with your spreadsheet without using your computer.

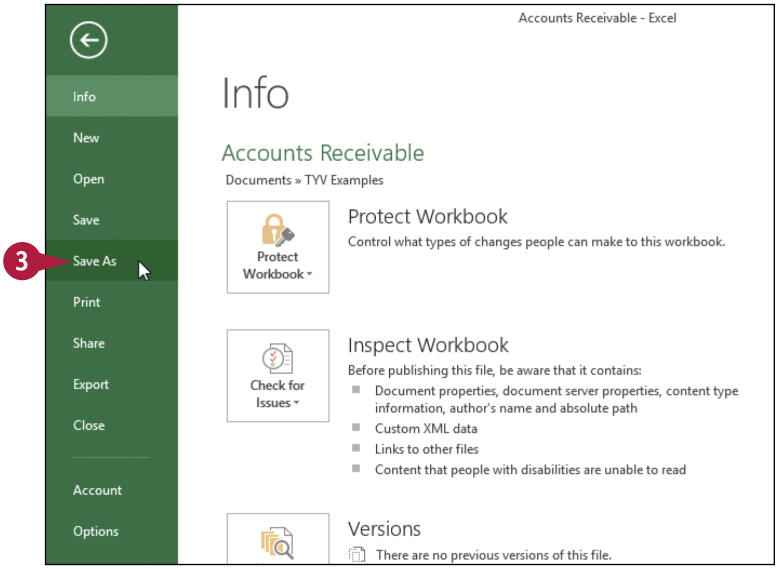
Save a Workbook to Your OneDrive

1. Open the workbook you want to save to your OneDrive.
2. Click the **File** tab.


Accounts Receivable - Excel
2
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want t
Paste
Calibri
14
General
Conditi
Format
Cell Styl
Clipboard
Font
Alignment
Number
A1
1

Account Name	Account Number	Invoice Number	Invoice Amount	Due Date
Door Stoppers Ltd.	01-0045	117328	$58.50	2/2/2015
Door Stoppers Ltd.	01-0045	117319	$78.85	1/16/2015
Door Stoppers Ltd.	01-0045	117324	$101.01	1/26/2015
Door Stoppers Ltd.	01-0045	117333	$1,685.74	2/11/2015
Chimera Illusions	02-0200	117334	$303.65	2/12/2015
Chimera Illusions	02-0200	117350	$456.21	3/15/2015
Chimera Illusions	02-0200	117345	$588.88	3/6/2015
Chimera Illusions	02-0200	117318	$3,005.14	1/14/2015

3. Click **Save As**.


Accounts Receivable - Excel
Info
New
Open
Save
3
Save As
Print
Share
Export
Close
Account
Options
Protect Workbook
Check for Issues

Info

Accounts Receivable

Documents » TYV Examples

Protect Workbook

Control what types of changes people can make to this workbook.

Inspect Workbook

Before publishing this file, be aware that it contains:

- Document properties, document server properties, content type information, author's name and absolute path
- Custom XML data
- Links to other files
- Content that people with disabilities are unable to read

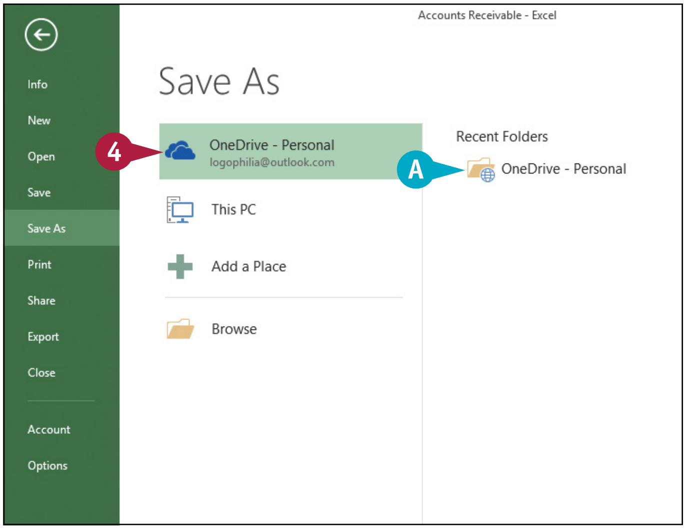
Versions

There are no previous versions of this file.

The Save As tab appears.

4 Double-click **OneDrive**.

A If you see the OneDrive folder you want to use to store the workbook, click it and skip to step 6.

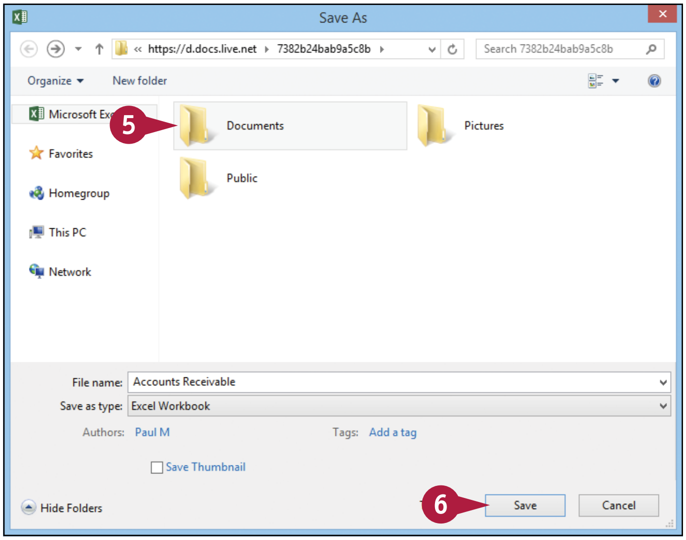

Accounts Receivable - Excel
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Save As
4
OneDrive - Personal
logophilia@outlook.com
This PC
Add a Place
Browse
Recent Folders
A
OneDrive - Personal

The Save As dialog box appears.

5 Double-click the folder you want to use to store the workbook.

6 Click **Save**.

Excel saves the workbook to your OneDrive.


Save As
« https://d.docs.live.net › 7382b24bab9a5c8b ›
Search 7382b24bab9a5c8b
Organize ▾
New folder
Microsoft Ex
Favorites
Homegroup
This PC
Network
5
Documents
Pictures
Public
Hide Folders
6
Save
Cancel

File name: Accounts Receivable

Save as type: Excel Workbook

Authors: Paul M

Tags: Add a tag

☐ Save Thumbnail

TIP

How do I open a workbook that has been saved to my OneDrive?

Follow these steps:

1 Click the **File** tab.

2 Click **Open**.

3 Double-click **OneDrive**.

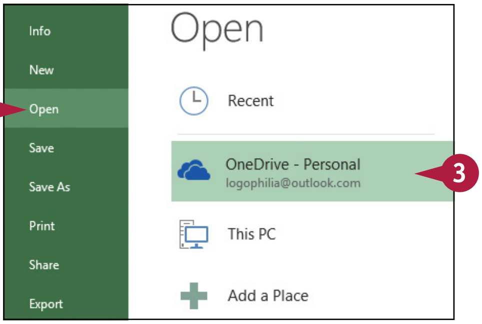
The Open dialog box appears.

4 Open the OneDrive folder that contains the workbook.

5 Click the workbook.

6 Click **Open**.

Excel opens the OneDrive workbook.


Info
New
2
Open
Save
Save As
Print
Share
Export
Open
Recent
OneDrive - Personal
logophilia@outlook.com
3
This PC
Add a Place

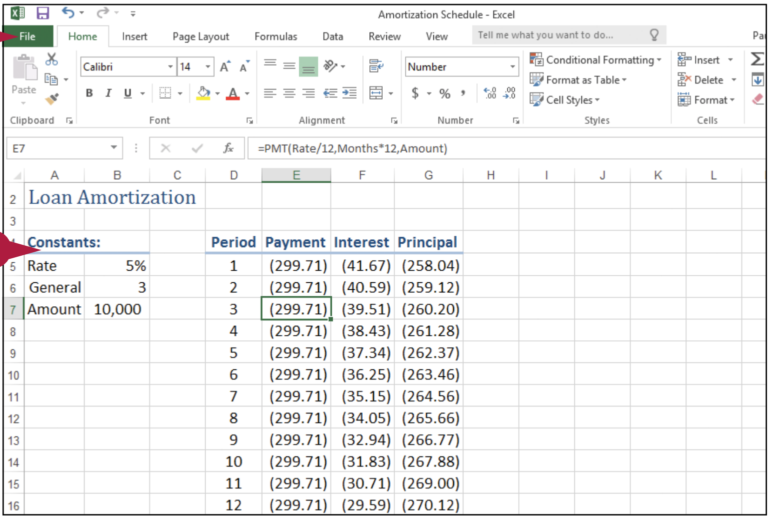
Send a Workbook as an E-Mail Attachment

If you want to send an Excel workbook to another person, you can attach the workbook to an e-mail message and send it to that person's e-mail address.

A typical e-mail message is fine for short notes but you may have something more complex to communicate, such as budget numbers or a loan amortization. Instead of trying to copy that information to an e-mail message, it would be better to send the recipient a workbook that contains the data. That way, the other person can then open the workbook in Excel after receiving your message.

Send a Workbook as an E-Mail Attachment

1. Open the workbook you want to send.
2. Click the **File** tab.

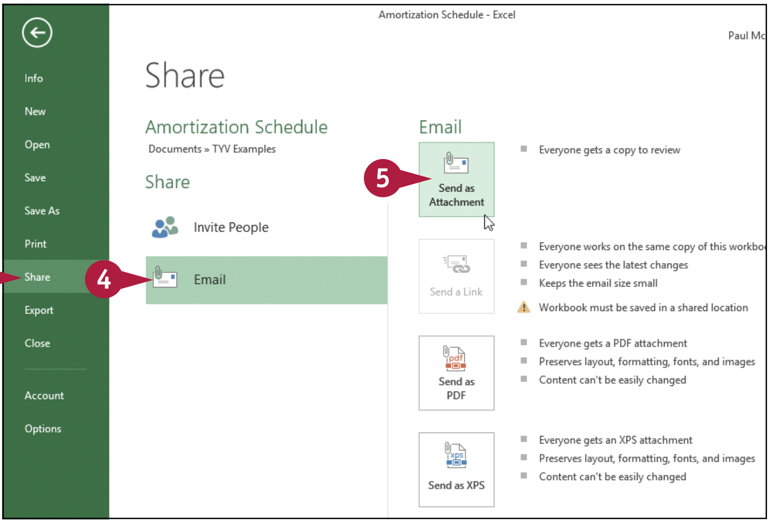

Amortization Schedule - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me what you want to do...
Paste
Clipboard
Calibri
14
Font
Alignment
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
1
2

E7 =PMT(Rate/12,Months*12,Amount)

	A	B	C	D	E	F	G
2	Loan Amortization						
3							
4	Constants:			Period	Payment	Interest	Principal
5	Rate	5%		1	(299.71)	(41.67)	(258.04)
6	General	3		2	(299.71)	(40.59)	(259.12)
7	Amount	10,000		3	(299.71)	(39.51)	(260.20)
8				4	(299.71)	(38.43)	(261.28)
9				5	(299.71)	(37.34)	(262.37)
10				6	(299.71)	(36.25)	(263.46)
11				7	(299.71)	(35.15)	(264.56)
12				8	(299.71)	(34.05)	(265.66)
13				9	(299.71)	(32.94)	(266.77)
14				10	(299.71)	(31.83)	(267.88)
15				11	(299.71)	(30.71)	(269.00)
16				12	(299.71)	(29.59)	(270.12)

3. Click **Share**.
4. Click **Email**.

   Excel displays the Email commands.
5. Click **Send as Attachment**.

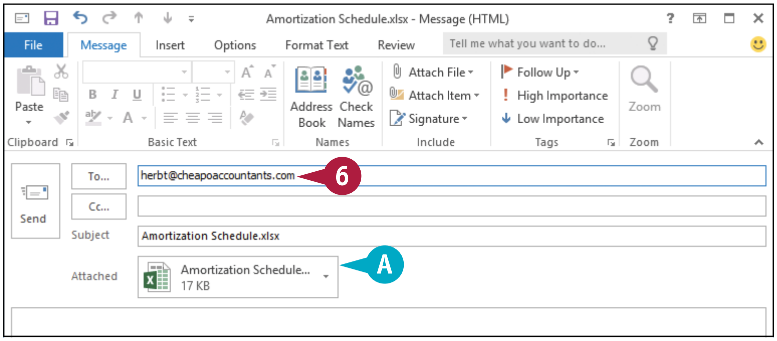

Amortization Schedule - Excel
Paul Mc
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Share
Amortization Schedule
Documents » TYV Examples
Share
Invite People
Email
Email
Send as Attachment
Send a Link
Send as PDF
Send as XPS
3
4
5

- Everyone gets a copy to review
- Everyone works on the same copy of this workbo
- Everyone sees the latest changes
- Keeps the email size small
- Workbook must be saved in a shared location
- Everyone gets a PDF attachment
- Preserves layout, formatting, fonts, and images
- Content can't be easily changed
- Everyone gets an XPS attachment
- Preserves layout, formatting, fonts, and images
- Content can't be easily changed

Outlook creates a new e-mail message.

A Outlook attaches the workbook to the message.

6 Type the address of the recipient.


Amortization Schedule.xlsx - Message (HTML)
File
Message
Insert
Options
Format Text
Review
Tell me what you want to do...
Paste
Clipboard
Basic Text
Address Book
Check Names
Names
Attach File
Attach Item
Signature
Include
Follow Up
High Importance
Low Importance
Tags
Zoom
Send
To...
Cc...
Subject
Attached
6
A

To... herbt@cheapoaccountants.com

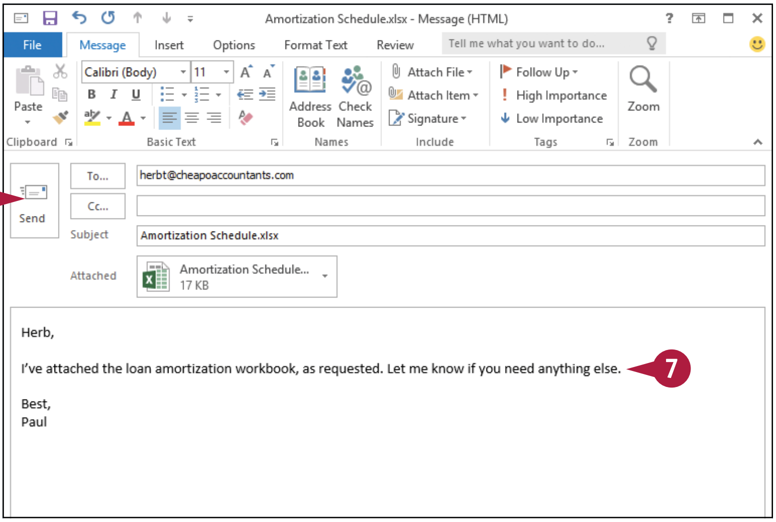
Subject Amortization Schedule.xlsx

Attached Amortization Schedule... 17 KB

7 Type your message text.

8 Click **Send**.

Outlook sends the message.


Amortization Schedule.xlsx - Message (HTML)
File
Message
Insert
Options
Format Text
Review
Tell me what you want to do...
Paste
Calibri (Body)
11
Clipboard
Basic Text
Address Book
Check Names
Names
Attach File
Attach Item
Signature
Include
Follow Up
High Importance
Low Importance
Tags
Zoom
Send
To...
Cc...
Subject
Attached
8
7

To... herbt@cheapoaccountants.com

Subject Amortization Schedule.xlsx

Attached Amortization Schedule... 17 KB

Herb,

I've attached the loan amortization workbook, as requested. Let me know if you need anything else.

Best,
Paul

TIPS

Are there any restrictions related to sending file attachments?

There is no practical limit to the number of workbooks you can attach to a message. However, you should be careful with the total size of the files you send. If you or the recipient has a slow Internet connection, sending or receiving the message can take an extremely long time. Also, many Internet service providers (ISPs) place a limit on the size of a message's attachments, which is usually between 2 and 10MB.

What can I do if the recipient does not have Excel?

If the other person does not use Excel, you can send the workbook in a different format. One possibility would be to save the workbook as a web page (see the following section, "Save Excel Data as a Web Page"). Alternatively, if your recipient can view PDF (Portable Document Format) files, follow steps **1** to **4** to display the Email commands, and then click **Send as PDF**.

Save Excel Data as a Web Page

If you have an Excel range, worksheet, or workbook that you want to share on the web, you can save that data as a web page that you can then upload to your website.

When you save a document as a web page, you can also specify the title text that appears in the browser's title bar and the keywords that search engines use to index the page. You can also choose whether you want to publish the entire workbook to the web, just a single worksheet, or just a range of cells.

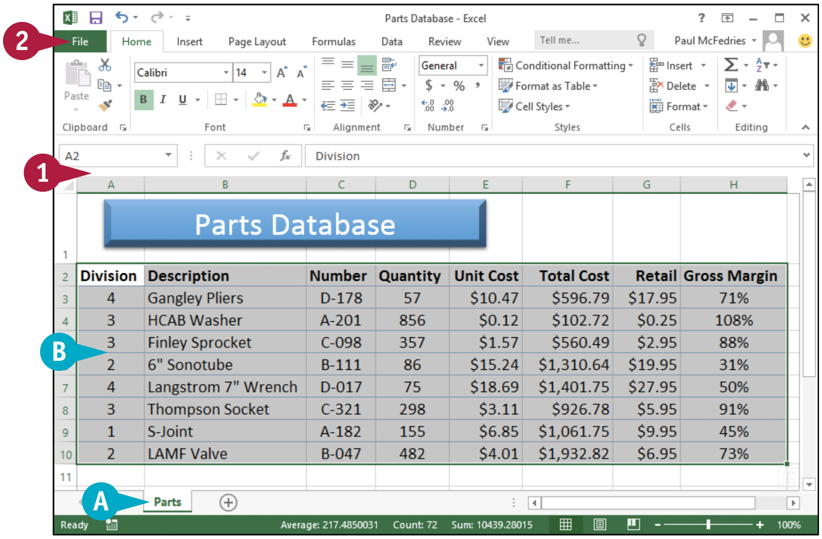
Save Excel Data as a Web Page

1. Open the workbook that contains the data you want to save as a web page.

A. If you want to save a worksheet as a web page, click the worksheet tab.

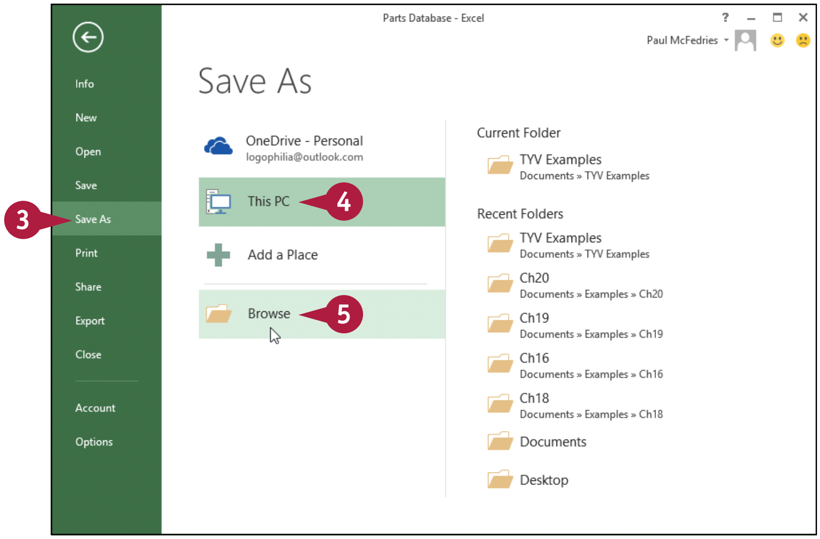
B. If you want to save a range as a web page, select the range.

2. Click the **File** tab.


Parts Database - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Tell me...
Paul McFedries
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
A2
Division
Parts Database
Parts
Ready
Average: 217.4850031
Count: 72
Sum: 10439.28015
100%
2
1
B
A

Division	Description	Number	Quantity	Unit Cost	Total Cost	Retail	Gross Margin
4	Gangley Pliers	D-178	57	$10.47	$596.79	$17.95	71%
3	HCAB Washer	A-201	856	$0.12	$102.72	$0.25	108%
3	Finley Sprocket	C-098	357	$1.57	$560.49	$2.95	88%
2	6" Sonotube	B-111	86	$15.24	$1,310.64	$19.95	31%
4	Langstrom 7" Wrench	D-017	75	$18.69	$1,401.75	$27.95	50%
3	Thompson Socket	C-321	298	$3.11	$926.78	$5.95	91%
1	S-Joint	A-182	155	$6.85	$1,061.75	$9.95	45%
2	LAMF Valve	B-047	482	$4.01	$1,932.82	$6.95	73%

3. Click **Save As**.
4. Click **This PC**.
5. Click **Browse**.


Parts Database - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Account
Options
Save As
OneDrive - Personal
logophilia@outlook.com
This PC
Add a Place
Browse
Current Folder
TYV Examples
Documents » TYV Examples
Recent Folders
TYV Examples
Documents » TYV Examples
Ch20
Documents » Examples » Ch20
Ch19
Documents » Examples » Ch19
Ch16
Documents » Examples » Ch16
Ch18
Documents » Examples » Ch18
Documents
Desktop
3
4
5

The Save As dialog box appears.

6 Click the **Save as type** ▼ and then click **Web Page**.

7 Select the folder where you want to store the web page file.

8 Click **Change Title**.

The Enter Text dialog box appears.

9 Type the page title in the **Page title** text box.

10 Click **OK**.

11 Click **Tags** and then type one or more keywords, separated by semicolons.

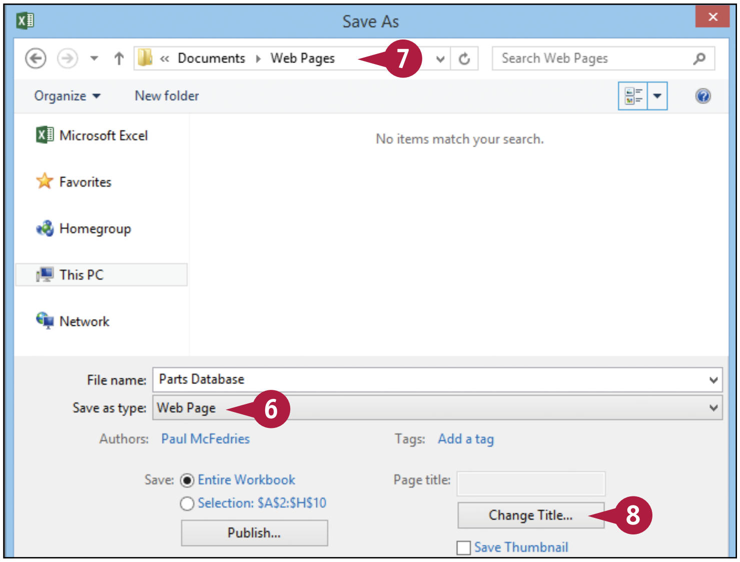
12 Choose which part of the file you want to save as a web page (○ changes to ●):

C Click **Entire Workbook** to save the whole workbook.

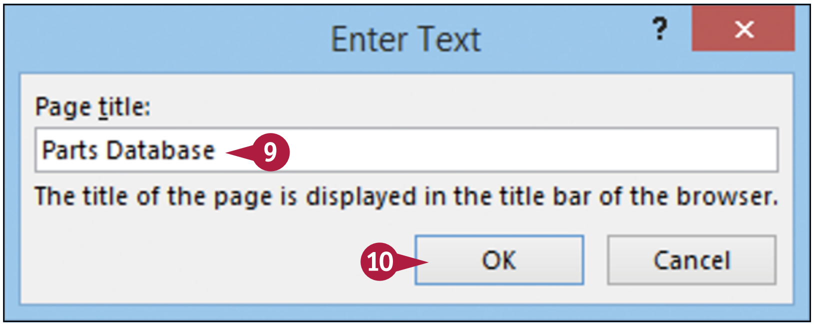
D Click **Selection** to save either the current worksheet or the selected cells.

13 Click **Save**.

Excel saves the data as a web page.

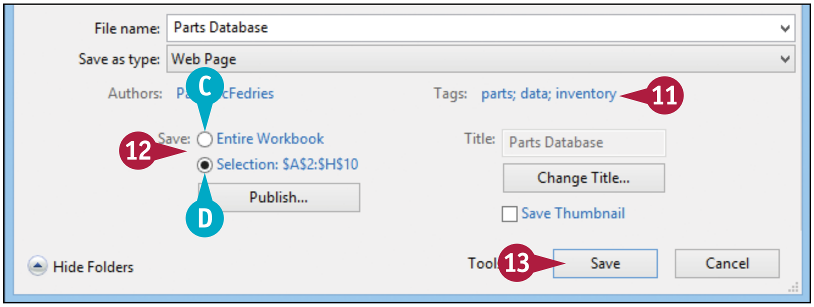

Save As
Documents › Web Pages
Search Web Pages
Organize ▾
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
No items match your search.
Publish...
Change Title...
☐ Save Thumbnail
7
6
8

File name: Parts Database
Save as type: Web Page
Authors: Paul McFedries
Tags: Add a tag
Save: ● Entire Workbook
○ Selection: $A$2:$H$10
Page title:


Enter Text
?
OK
Cancel
9
10

Page title: Parts Database

The title of the page is displayed in the title bar of the browser.


C
12
D
Publish...
Change Title...
☐ Save Thumbnail
Hide Folders
Tools
Save
Cancel
11
13

File name: Parts Database
Save as type: Web Page
Authors: Paul McFedries
Tags: parts; data; inventory
Save: ○ Entire Workbook
● Selection: $A$2:$H$10
Title: Parts Database

TIP

If I make frequent changes to the workbook, do I have to go through this procedure after every change?

No, you can configure the workbook to automatically save your changes to the web page file. This is called AutoRepublish. To set it up, follow steps 1 to 11 to get the workbook ready for the web and then click **Publish**. In the Publish as Web Page dialog box, click **AutoRepublish every time this workbook is saved** (☐ changes to ☑). Click **Publish**. Excel saves the workbook as a web page and will now update the web page file each time you save the workbook.

Make a Workbook Compatible with Earlier Versions of Excel

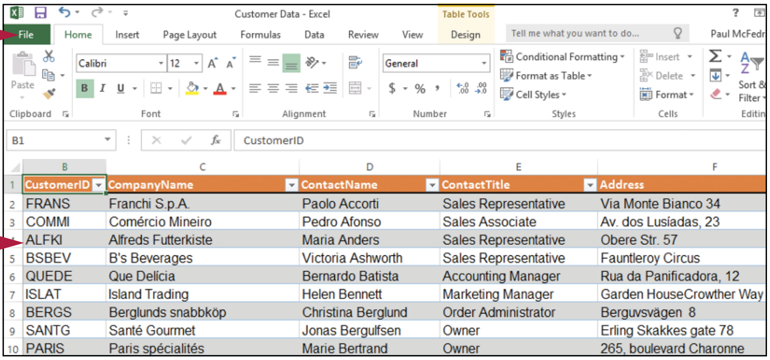
You can save an Excel workbook in a special format that makes it compatible with earlier versions of Excel. This enables you to share your workbook with other Excel users.

If you have another computer that uses a version of Excel prior to Excel 2007, or if the people you work with use earlier Excel versions, those programs cannot read documents in the standard format used by Excel 2016, Excel 2013, Excel 2010, and Excel 2007. By saving a workbook using the Excel 97-2003 Workbook file format, you make that file compatible with earlier Excel versions.

Make a Workbook Compatible with Earlier Versions of Excel

① Open the workbook you want to make compatible.

② Click **File**.

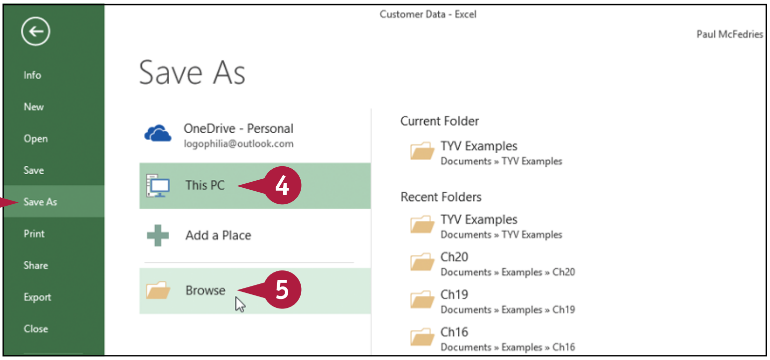

Customer Data - Excel
Table Tools
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Design
Tell me what you want to do...
Paul McFedr
Paste
Calibri
12
General
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
Sort & Filter
Clipboard
Font
Alignment
Number
Styles
Cells
Editin
B1
CustomerID
2
1

	B	C	D	E	F
1	CustomerID	CompanyName	ContactName	ContactTitle	Address
2	FRANS	Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bianco 34
3	COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 23
4	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
5	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
6	QUEDE	Que Delícia	Bernardo Batista	Accounting Manager	Rua da Panificadora, 12
7	ISLAT	Island Trading	Helen Bennett	Marketing Manager	Garden HouseCrowther Way
8	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
9	SANTG	Santé Gourmet	Jonas Bergulfsen	Owner	Erling Skakkes gate 78
10	PARIS	Paris spécialités	Marie Bertrand	Owner	265, boulevard Charonne

③ Click **Save As**.

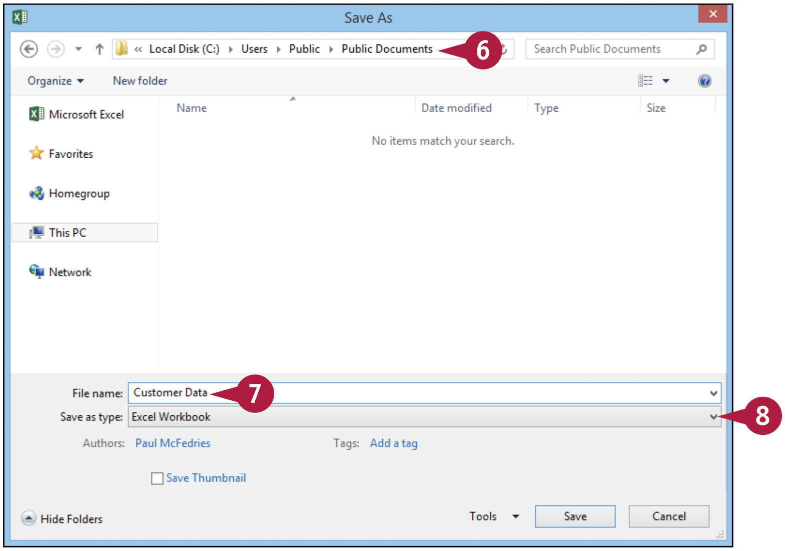
④ Click **This PC**.

⑤ Click **Browse**.


Customer Data - Excel
Paul McFedries
Info
New
Open
Save
Save As
Print
Share
Export
Close
Save As
OneDrive - Personal
logophilia@outlook.com
This PC
Add a Place
Browse
Current Folder
TYV Examples
Documents » TYV Examples
Recent Folders
TYV Examples
Documents » TYV Examples
Ch20
Documents » Examples » Ch20
Ch19
Documents » Examples » Ch19
Ch16
Documents » Examples » Ch16
3
4
5

The Save As dialog box appears.

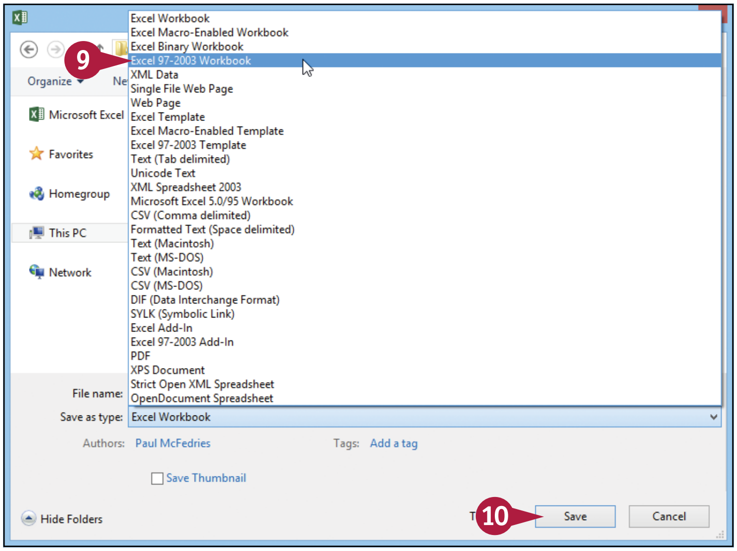
6. Select the folder in which you want to store the new workbook.
7. Click in the **File name** text box and type the name that you want to use for the new workbook.
8. Click the **Save as type** ▼.


Save As
Local Disk (C:) › Users › Public › Public Documents
Search Public Documents
Organize
New folder
Microsoft Excel
Favorites
Homegroup
This PC
Network
Name
Date modified
Type
Size
No items match your search.
Save Thumbnail
Hide Folders
Tools
Save
Cancel
6
7
8

File name: Customer Data
Save as type: Excel Workbook
Authors: Paul McFedries
Tags: Add a tag

9. Click the **Excel 97-2003 Workbook** file format.
10. Click **Save**.

Excel saves the file using the Excel 97-2003 Workbook format.


Excel Workbook
Excel Macro-Enabled Workbook
Excel Binary Workbook
Excel 97-2003 Workbook
XML Data
Single File Web Page
Web Page
Excel Template
Excel Macro-Enabled Template
Excel 97-2003 Template
Text (Tab delimited)
Unicode Text
XML Spreadsheet 2003
Microsoft Excel 5.0/95 Workbook
CSV (Comma delimited)
Formatted Text (Space delimited)
Text (Macintosh)
Text (MS-DOS)
CSV (Macintosh)
CSV (MS-DOS)
DIF (Data Interchange Format)
SYLK (Symbolic Link)
Excel Add-In
Excel 97-2003 Add-In
PDF
XPS Document
Strict Open XML Spreadsheet
OpenDocument Spreadsheet
Organize
Microsoft Excel
Favorites
Homegroup
This PC
Network
Save Thumbnail
Hide Folders
Save
Cancel
9
10

File name:
Save as type: Excel Workbook
Authors: Paul McFedries
Tags: Add a tag

TIPS

Can people using Excel 2013, Excel 2010, and Excel 2007 open my Excel 2016 workbooks?

Yes. The default file format used by Excel 2013, Excel 2010, and Excel 2007 is the same as the one used by Excel 2016. If you only work with people who use these Excel versions, then you should stick with the default file format — which is called Excel Workbook — because it offers many benefits in terms of Excel features.

Which versions of Excel are compatible with the Excel 97-2003 Workbook file format?

For Windows, the Excel 97-2003 Workbook file format is compatible with Excel 97, Excel 2000, Excel XP, and Excel 2003. For the Mac, the Excel 97-2003 Workbook file format is compatible with Excel 98, Excel 2001, and Office 2004. In the unlikely event that you need to share a document with someone using either Excel 5.0 or Excel 95, use the Microsoft Excel 5.0/95 Workbook file format instead.

Mark Up a Worksheet with a Digital Pen

Excel comes with a digital ink feature that enables you to give feedback by marking up a worksheet with pen marks and highlights. This is often easier than adding comments or cell text.

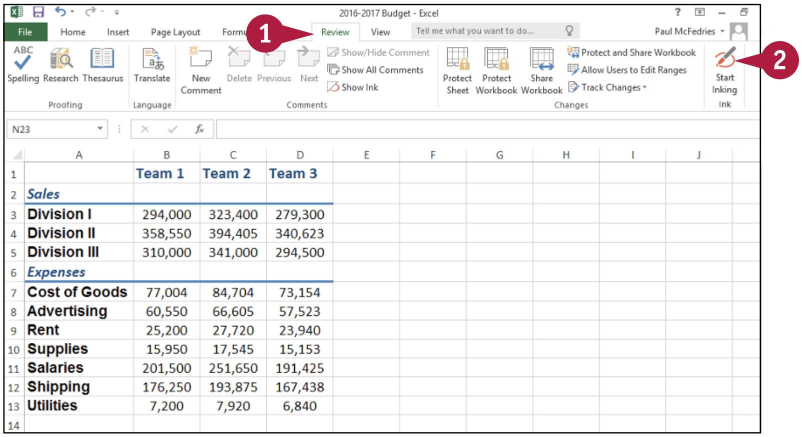
To use digital ink on a worksheet, you must have either a tablet PC or a graphics tablet, each of which comes with a pressure-sensitive screen. You can then use a digital pen — or sometimes your finger — to draw directly on the screen, a technique known as *digital inking*.

Mark Up a Worksheet with a Digital Pen

Activate Digital Inking

1. Tap the **Review** tab.
2. Tap **Start Inking** (✍).

   Excel enables digital inking.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Translate
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Show All Comments
Show Ink
Comments
Protect Sheet
Protect Workbook
Share Workbook
Protect and Share Workbook
Allow Users to Edit Ranges
Track Changes
Changes
Start Inking
Ink
N23
1
2

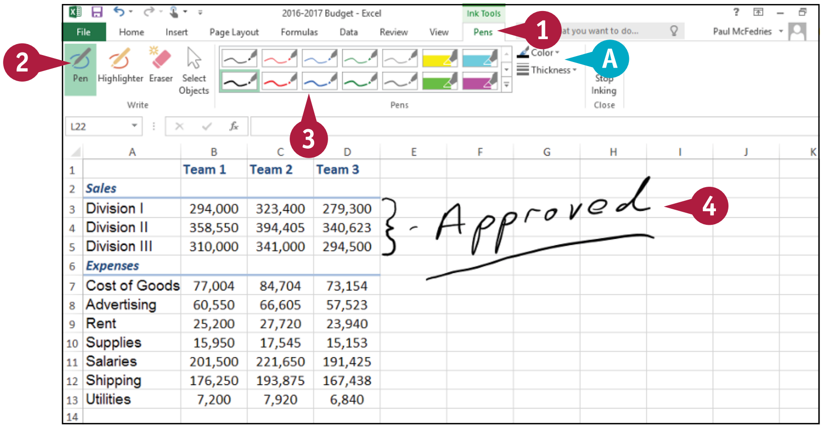
	A	B	C	D
1		Team 1	Team 2	Team 3
2	Sales			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	Expenses			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	251,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				

Mark Up with a Pen

1. Tap the **Pens** tab.
2. Tap **Pen** (✍).
3. Use the **Pens** gallery to select a pen color and thickness.

   Ⓐ You can also use the **Color** (✍) and **Thickness** (☰) buttons to customize the pen.

4. Use your digital pen (or finger) to write your marks or text on the worksheet.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Thickness
Stop Inking
Close
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A

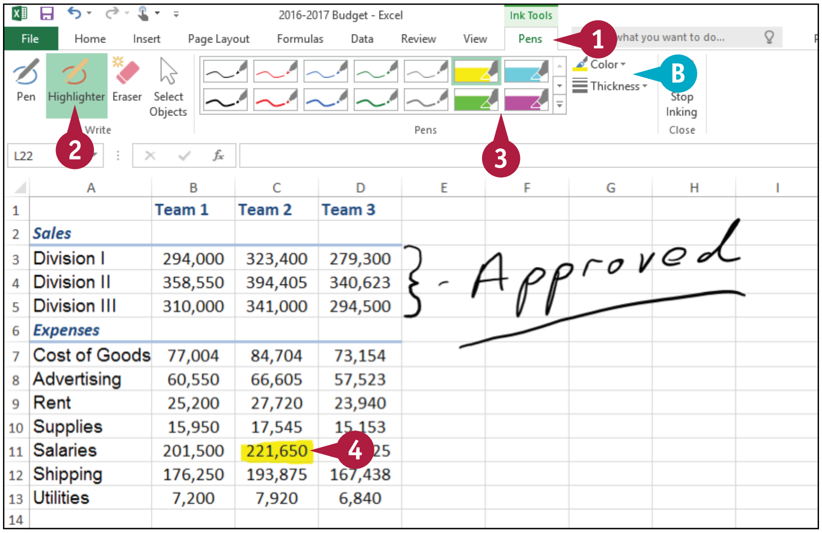
	A	B	C	D
1		Team 1	Team 2	Team 3
2	Sales			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	Expenses			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	221,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				

Mark Up with a Highlighter

1. Tap the **Pens** tab.
2. Tap **Highlighter** (🖍).
3. Use the **Pens** gallery to select a highlighter color and thickness.

B You can also use 🖌 and ≡ to customize the highlighter.

4. Use your digital pen (or finger) to highlight the worksheet text.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Highlighter
Eraser
Select Objects
Write
Pens
Color
Thickness
Stop Inking
Close
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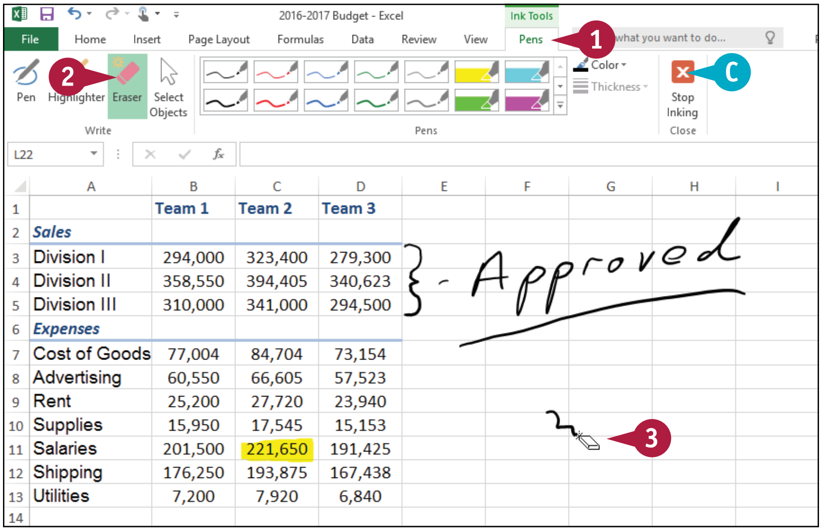
	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	221,650	25
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				

Erase Digital Ink

1. Tap the **Pens** tab.
2. Tap **Eraser** (⌫).
3. Use your digital pen (or finger) to tap the ink you want to remove.

   Excel erases the ink.

C When you no longer need to mark up the worksheet with digital ink, tap **Stop Inking** (☒).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what you want to do...
Pen
Highlighter
Eraser
Select Objects
Write
Pens
Color
Thickness
Stop Inking
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	A	B	C	D
1		Team 1	Team 2	Team 3
2	*Sales*			
3	Division I	294,000	323,400	279,300
4	Division II	358,550	394,405	340,623
5	Division III	310,000	341,000	294,500
6	*Expenses*			
7	Cost of Goods	77,004	84,704	73,154
8	Advertising	60,550	66,605	57,523
9	Rent	25,200	27,720	23,940
10	Supplies	15,950	17,545	15,153
11	Salaries	201,500	221,650	191,425
12	Shipping	176,250	193,875	167,438
13	Utilities	7,200	7,920	6,840
14				

TIP

Is there a way to hide a worksheet's digital ink without deleting that ink?

Yes. This is a good idea if you want to show the worksheet to other people but you do not want them to see the digital ink, either because it contains sensitive information or because it makes the worksheet harder to read. To toggle your digital ink off and on, click the **Review** tab and then click **Show Ink** (🖍).

Collaborate on a Workbook Online

If you have a Microsoft account, you can use the OneDrive feature to store an Excel workbook in an online folder (see the "Save a Workbook to Your OneDrive" section earlier in this chapter) and then allow other users to collaborate on that workbook using the Excel Web App.

Collaboration here means that you and the other users can edit the workbook online at the same time. To allow another person to collaborate with you on your online workbook, it is not necessary that the person have a Microsoft account. However, you can make your online workbooks more secure by requiring collaborators to have a Microsoft account.

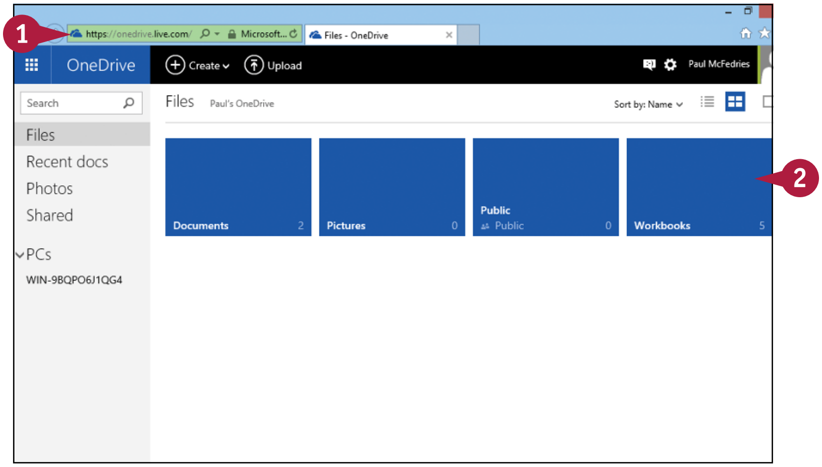
Collaborate on a Workbook Online

1. Use a Web browser to navigate to https://onedrive.live.com.

Note: If you are not already logged in, you are prompted to log on to your Microsoft account.

Your OneDrive appears.

2. Click the folder that contains the workbooks you want to share.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Files - OneDrive
OneDrive
Create
Upload
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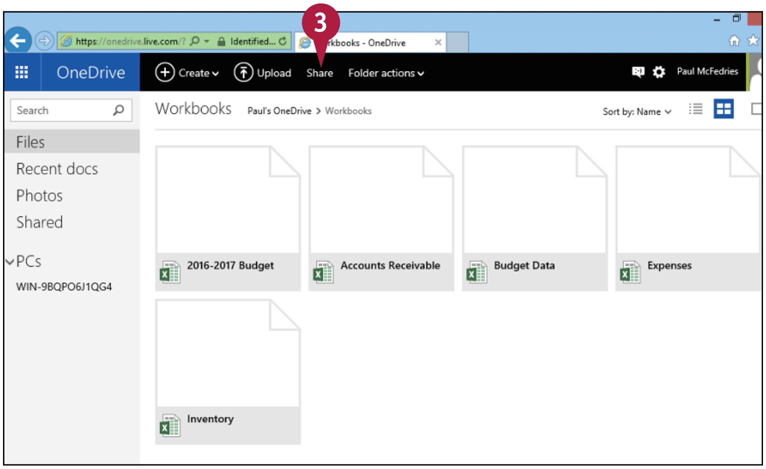
Search
Files
Paul's OneDrive
Sort by: Name
Files
Recent docs
Photos
Shared
PCs
WIN-9BQPO6J1QG4
Documents 2
Pictures 0
Public
Public 0
Workbooks 5
2

3. Click **Share**.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Identified...
Workbooks - OneDrive
OneDrive
Create
Upload
Share
Folder actions
Paul McFedries
Search
Workbooks
Paul's OneDrive > Workbooks
Sort by: Name
Files
Recent docs
Photos
Shared
PCs
WIN-9BQPO6J1QG4
2016-2017 Budget
Accounts Receivable
Budget Data
Expenses
Inventory

The folder's sharing options appear.

4 Click **Invite people**.

5 Type the e-mail address of the person you want to collaborate with.

Note: To add multiple addresses, press Tab after each one.

6 Type a message to the user.

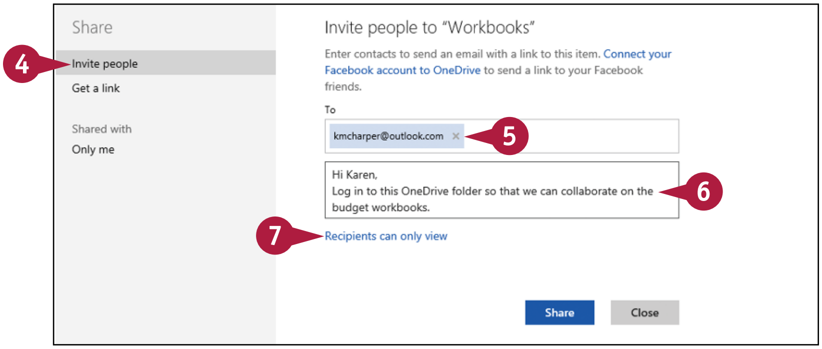
7 Click **Recipients can only view**.

8 Select **Recipients can edit**.

9 If you want to require users to sign in with a Microsoft account, select **Recipients need to sign in with a Microsoft account**.

10 Click **Share**.

OneDrive sends an e-mail message to the user. The user clicks the link in that message, optionally logs on with a Microsoft account, and can then edit a workbook in the shared folder.



Invite people to "Workbooks"

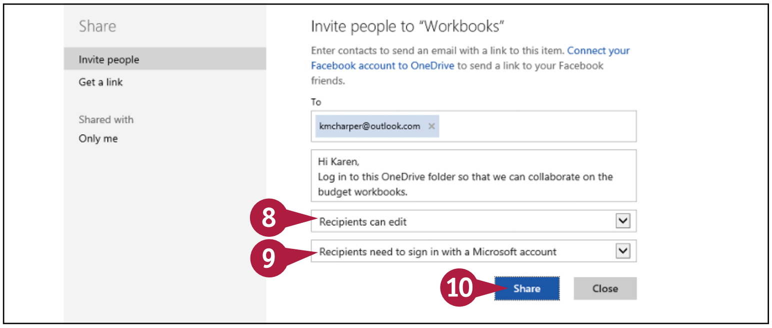
Enter contacts to send an email with a link to this item. Connect your Facebook account to OneDrive to send a link to your Facebook friends.

To

kmcharper@outlook.com ×

Hi Karen,
Log in to this OneDrive folder so that we can collaborate on the budget workbooks.

Recipients can only view



Invite people to "Workbooks"

Enter contacts to send an email with a link to this item. Connect your Facebook account to OneDrive to send a link to your Facebook friends.

To

kmcharper@outlook.com ×

Hi Karen,
Log in to this OneDrive folder so that we can collaborate on the budget workbooks.

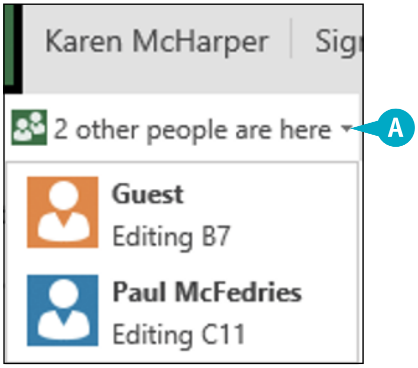
Recipients can edit

Recipients need to sign in with a Microsoft account

TIP

How do I know when other people are also using a workbook online?

When you open a workbook using the Excel Web App, examine the upper-right corner of the Excel screen. If you see ***User* is also editing**, it means another person (named *User*) is collaborating on the workbook with you. If you see ***X* other people are here**, it means that *X* users are collaborating with you. To see who they are, click the ***X* other people are here** message (A), as shown here.



2 other people are here

Guest
Editing B7

Paul McFedries
Editing C11

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