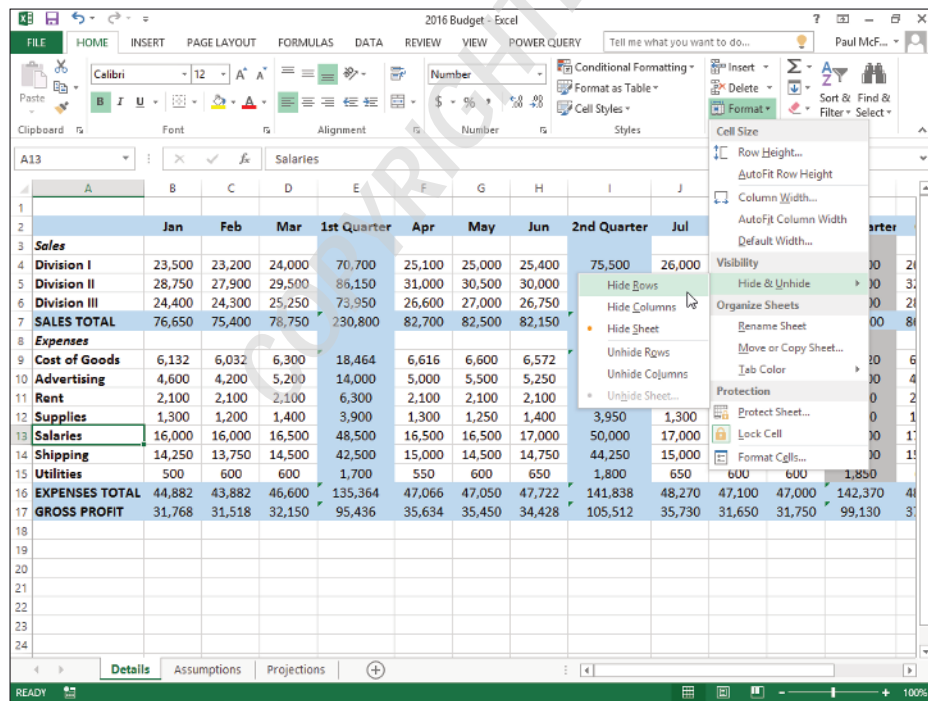


CHAPTER 1

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.



The screenshot displays the Microsoft Excel interface with a budget spreadsheet titled "2016 Budget - Excel". The spreadsheet is organized into columns for months (Jan, Feb, Mar, Apr, May, Jun, Jul) and quarters (1st Quarter, 2nd Quarter). The data is categorized into Sales and Expenses. A context menu is open over the "Salaries" row, showing options like "Hide Rows", "Hide Columns", "Unhide Rows", and "Unhide Columns".

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

Select a Range4
Fill a Range with the Same Data6
Fill a Range with a Series of Values8
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.

	A	B	C	D	F	G	H
1							
2		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 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**.

	A	B	C	D	F	G	H
1							
2		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 Row

- 1 Position the mouse (☒) over the header of the row you want to select (☒ changes to →).
- 2 Click the row header.
- 3 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.

	A	B	C	D	E	F	G	H
2		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.
- 3 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.

	A	B	C	D	E	F	G	H	I
1									
2		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).

	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.
- A Excel fills the range with the initial cell value.

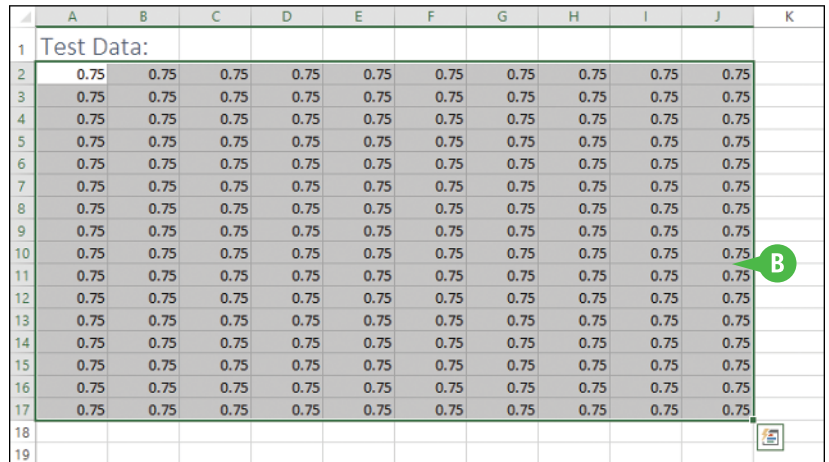
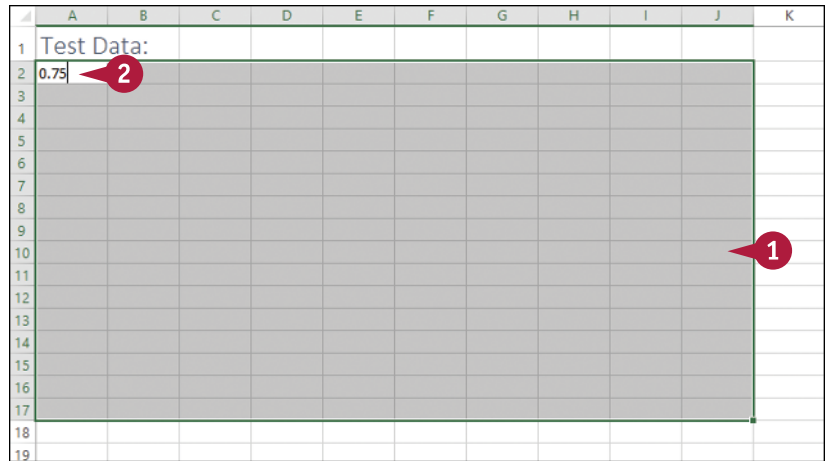
	A	B	C	
1	Category Name	Product Name	Quantity Per Unit	Image
2	Beverages	Chai	10 boxes x 20 bags	
3		Chang	24 - 12 oz bottles	
4		Chartreuse verte	750 cc per bottle	
5		Côte de Blaye	12 - 75 cl bottles	
6		Ipoh Coffee	16 - 500 g tins	
7		Lakkalikööri	500 ml	
8		Laughing Lumberjack Lager	24 - 12 oz bottles	
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		Chief Anton'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		Chief Anton's Cajun Seasoning	48 - 6 oz jars	
15		Genen Shouyu	24 - 250 ml bottles	

Fill a Selected Range

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

- B** Excel fills the range with the value you typed.



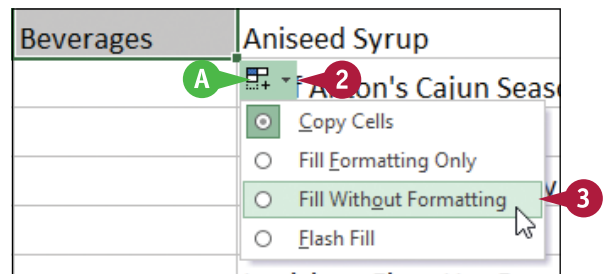
TIP

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.



Fill a Range with a Series of Values

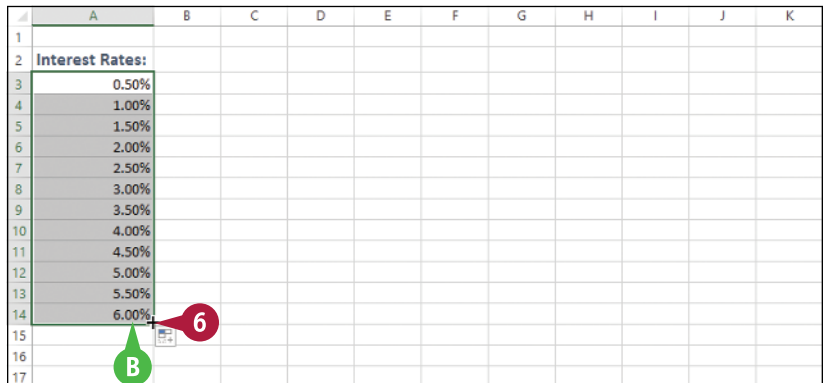
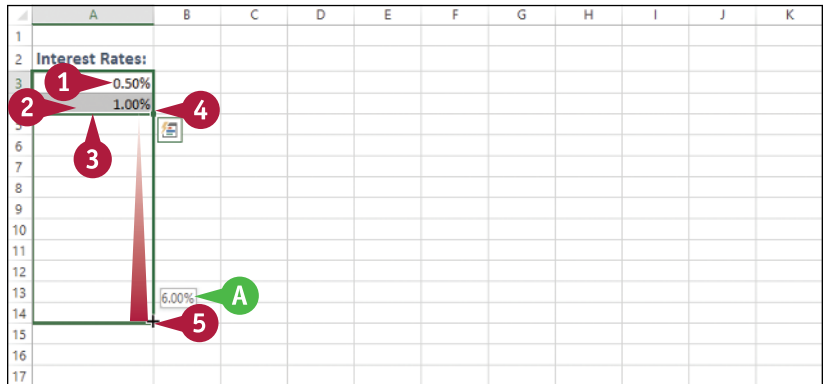
If you need to fill a range with a series of values, you can save time by using the AutoFill feature to create the series for you. AutoFill can fill a series of numeric values such as 5, 10, 15, 20, and so on; a series of date values such as January 1, 2016, January 2, 2016, and so on; or a series of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

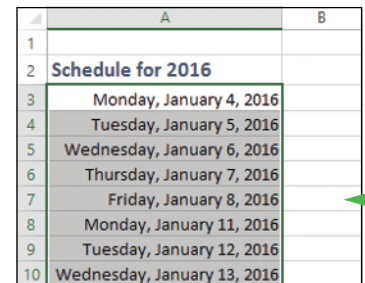
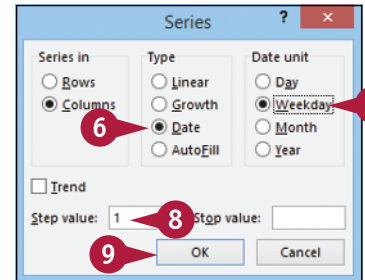
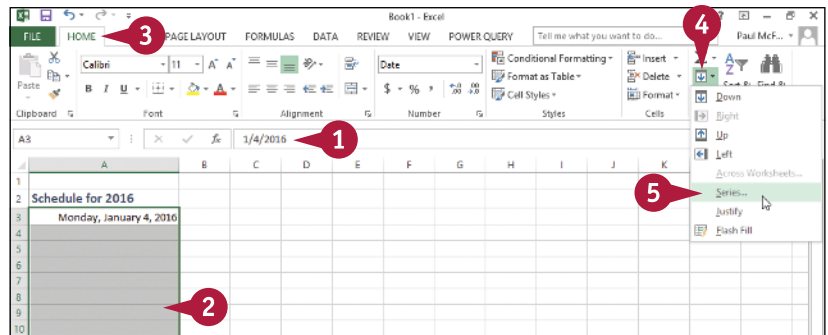


Fill a Custom Series of Values

- 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.



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
1	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	Martin Sommer	Martin	Owner	3175558600	
10	Laurence Leblan	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	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	Martin Sommer	Martin	Owner	3175558600	
10	Laurence Leblan	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 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	Martin Sommer	Martin	Owner	3175558600	(317) 555-8600	
10	Laurence Leblanc	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	Martin Sommer	Martin	Owner	3175558600	(317) 555-8600	
10	Laurence Leblanc	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

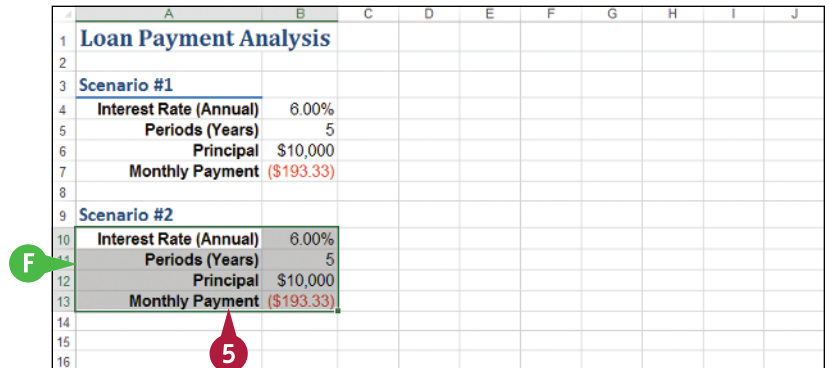
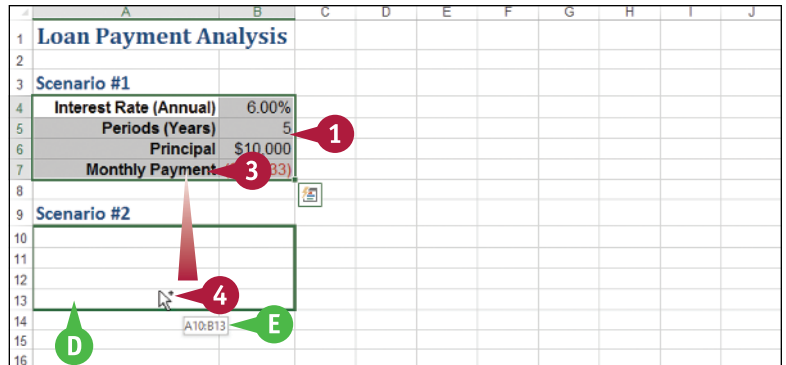
- 1 Select the range you want to move.
 - 2 Position the mouse (☒) over any outside border of the range (☒ changes to ☒).
 - 3 Click and drag the range to the new location (☒ changes to ☒).
 - 4 Release the mouse button.
- A Excel displays an outline of the range.
- B Excel displays the address of the new location.
- C Excel moves the range to the new location.

	A	B	C	D	E	F	G	H	I
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									
14									
15									
16									
17									
18									
19									
20									
21									

	A	B	C	D	E	F	G	H	I
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)					
21									

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.



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** (📄).

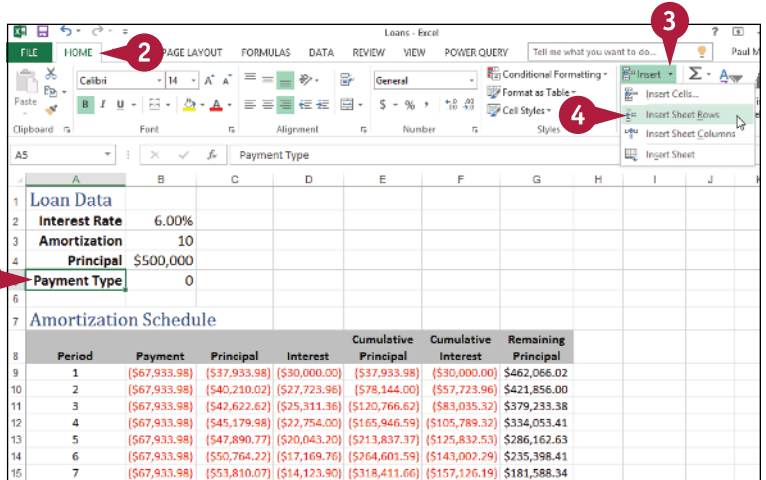
Insert a Row or Column




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.

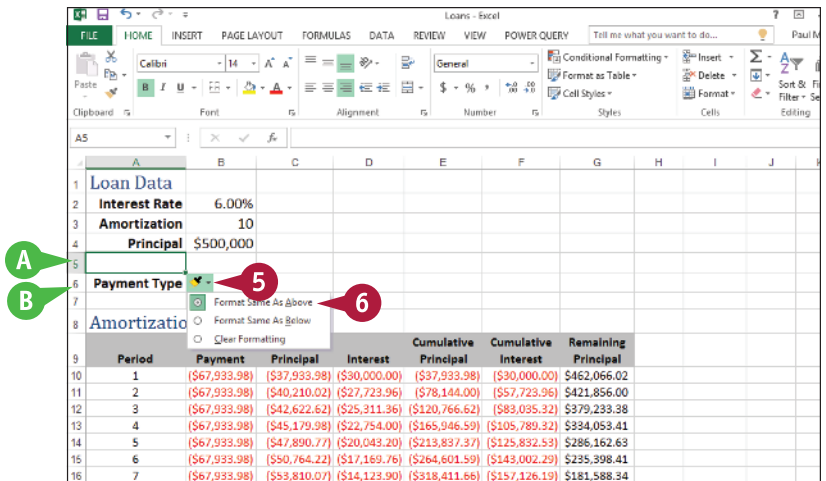
Insert a Row or Column

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**.

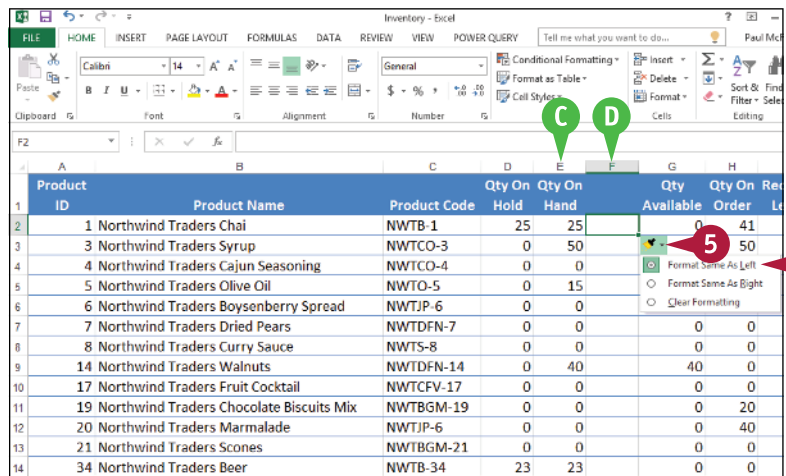
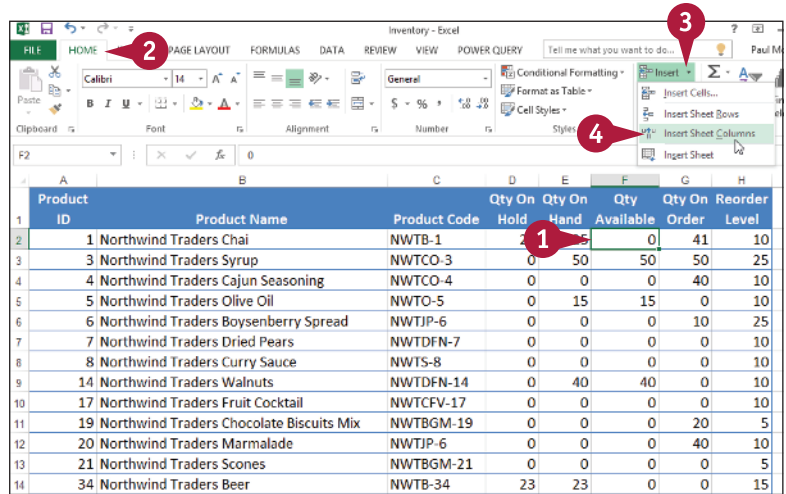


- A Excel inserts the new row.
- B The rows below the new row are shifted down.
- 5 Click the **Insert Options** smart tag .
- 6 Select a formatting option for the new row ( changes to .



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** button.
 - 4 Click **Insert Sheet Columns**.
- 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 ●).



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.

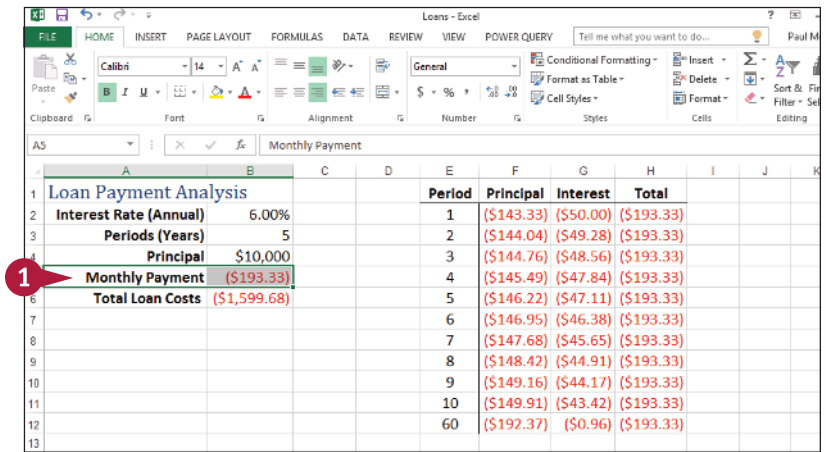
Insert a Cell or Range

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.

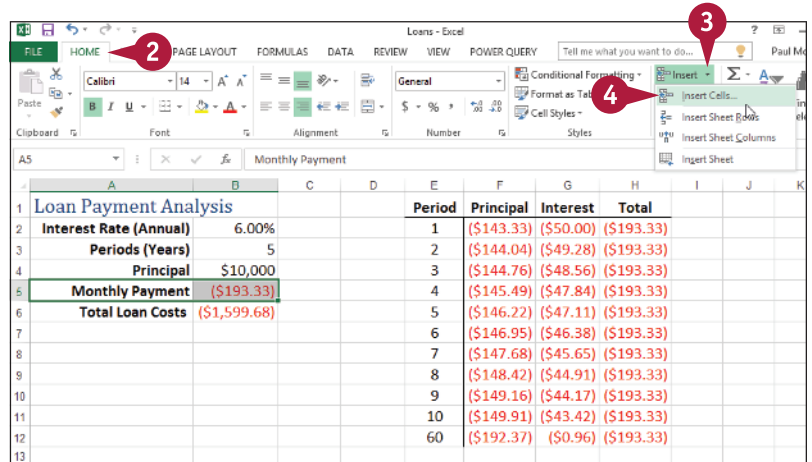
Insert a Cell or Range

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



- 2 Click the **Home** tab.
- 3 Click the **Insert** button.
- 4 Click **Insert Cells**.

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



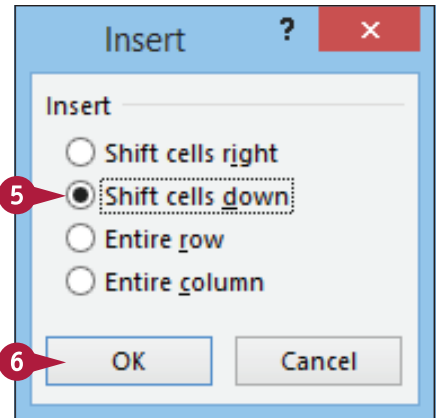
The Insert dialog box appears.

- 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 .



	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)			6
8					7
9					8
10					9

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

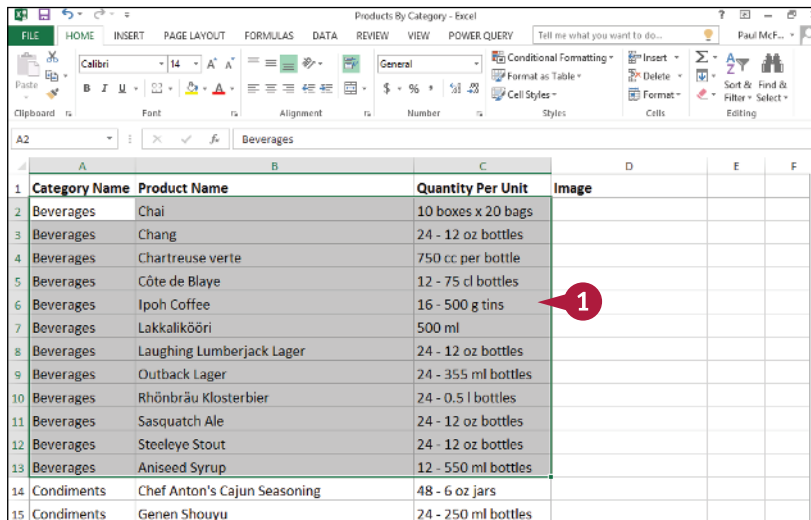
If your worksheet has a range that contains data you no longer need, you can delete that data. This helps to reduce worksheet clutter and makes your worksheet easier to read.

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

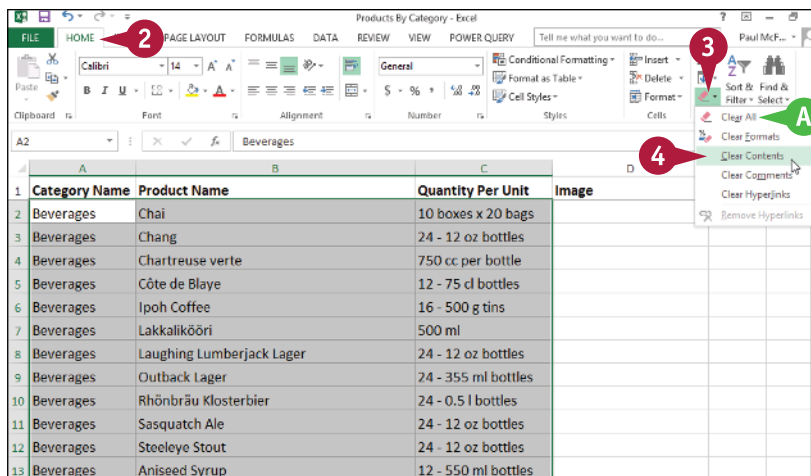
1 Select the range that contains the data you want to delete.



2 Click the **Home** tab.

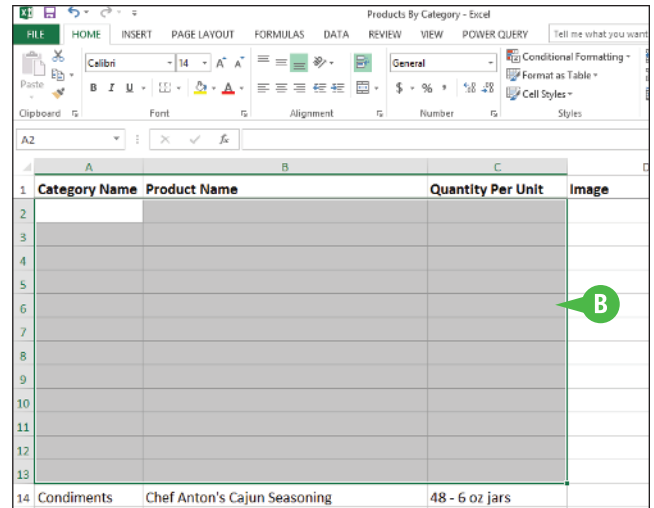
3 Click **Clear** ().

4 Click **Clear Contents**.





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

- B Excel removes the range data.

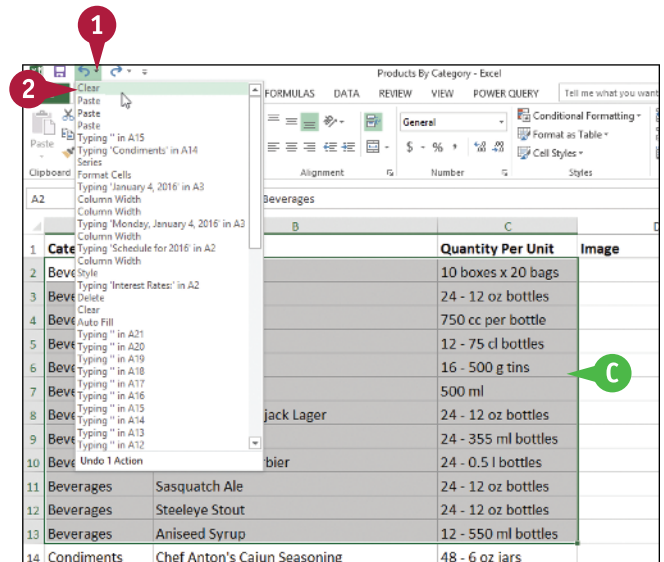


Undo Range Data Deletion

- 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.





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?

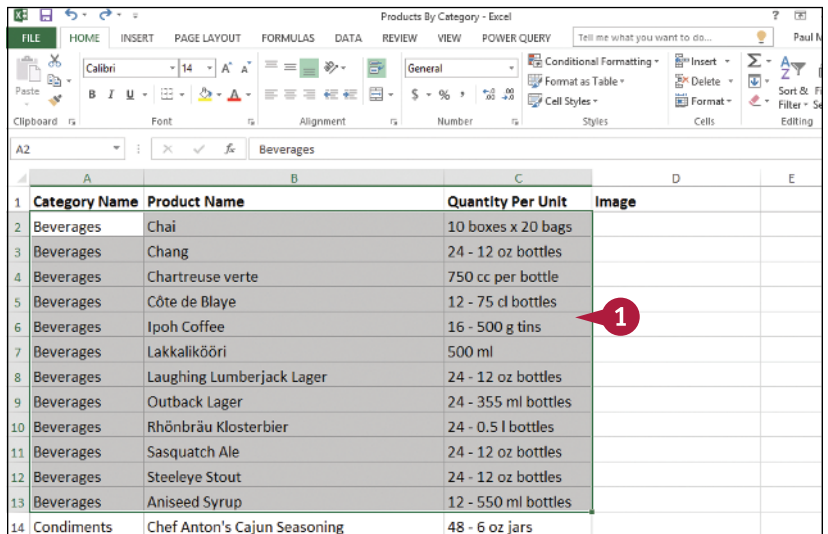
Yes. Select the range with the formatting that you want to remove, click **Home**, click , and then click **Clear Formats**. Excel removes all the formatting from the selected range. If you prefer to delete only the numeric formatting, click **Home**, click the **Number Format** , and then click **General**.

Delete a Range

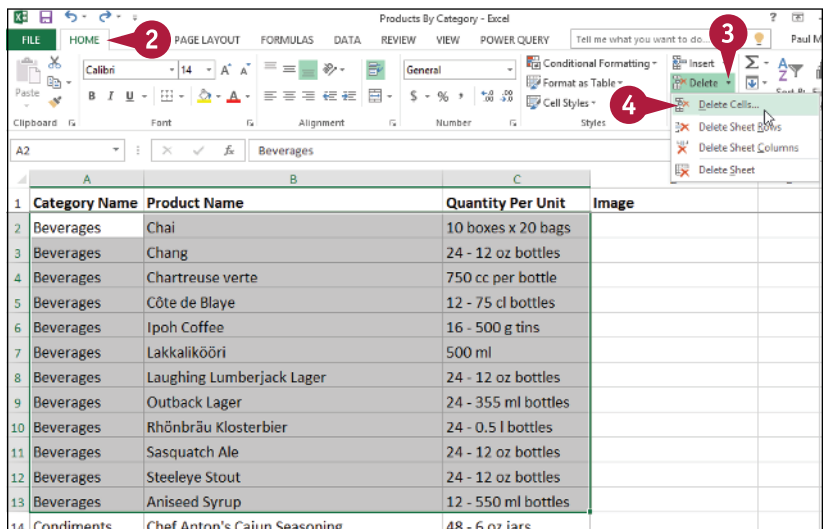
If your worksheet contains a range that you no longer need, you can delete that range. Note that this is not the same as deleting the data within a cell or range, as described in the previous section, “Delete Data from a Range.” When you delete a range, Excel deletes not just the data within the range, 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.



- 2 Click the **Home** tab.
- 3 Click the **Delete** button.
- 4 Click **Delete Cells**.



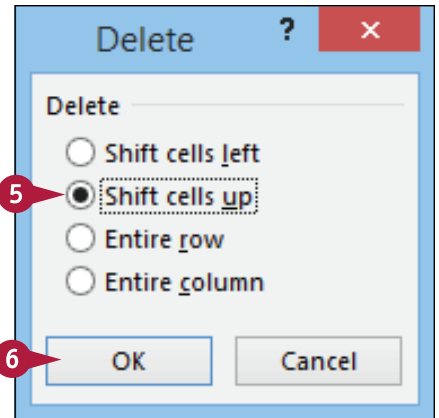
The Delete dialog box appears.

- 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.





	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.

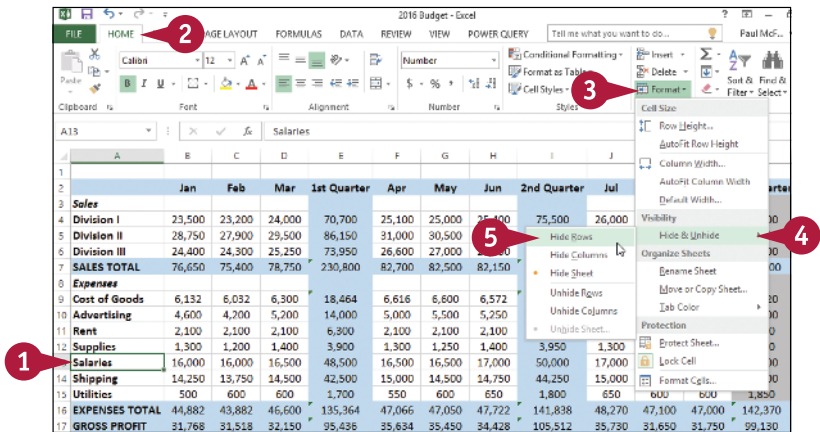
Hiding a row or column does not affect other parts of your worksheet. In particular, formulas that use or rely on data in the hidden rows and columns still display the same results.

Hide a Row or Column

Hide a Row

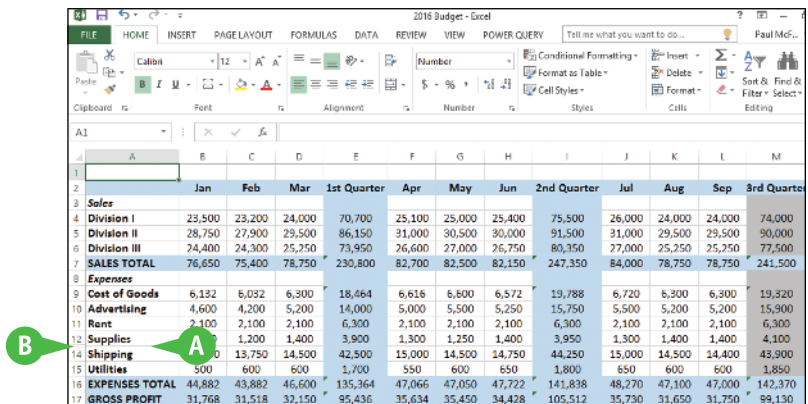
- 1 Click in any cell in the row you want to hide.
- 2 Click the **Home** tab.
- 3 Click **Format**.
- 4 Click **Hide & Unhide**.
- 5 Click **Hide Rows**.

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



- A Excel removes the row from the worksheet display.
- B 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.



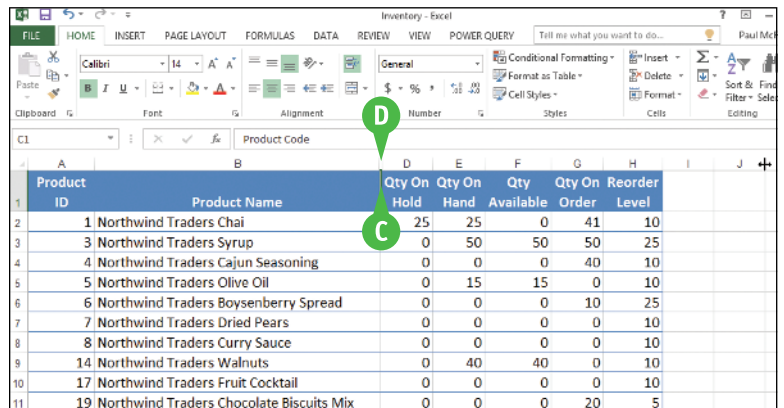
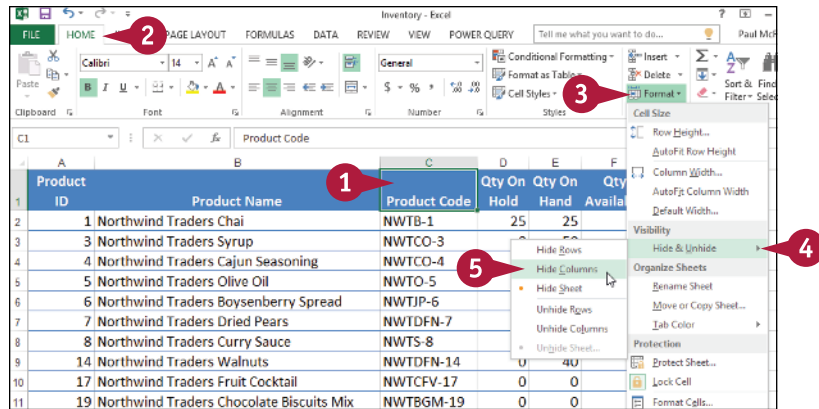
Hide a Column

- 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**.

- 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.



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

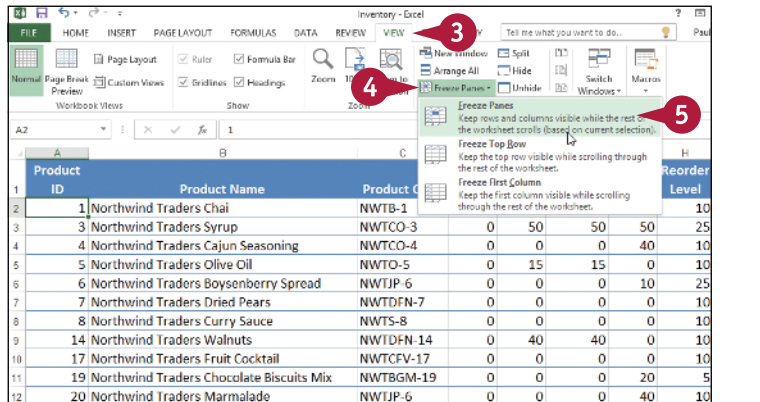
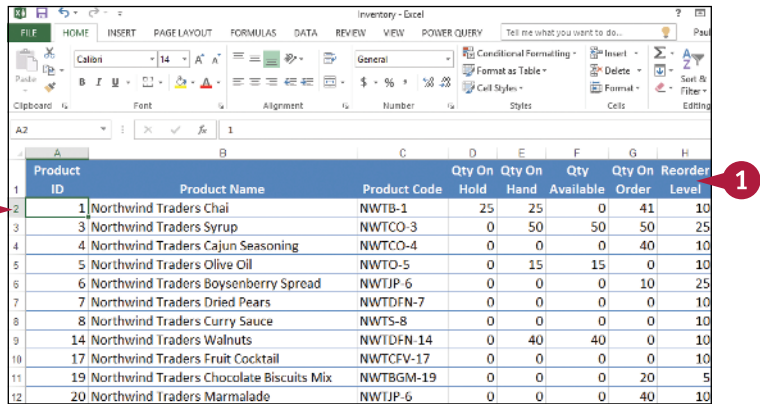
Freeze Rows

- 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.

- 3 Click the **View** tab.
- 4 Click **Freeze Panes**.
- 5 Click **Freeze Panes**.

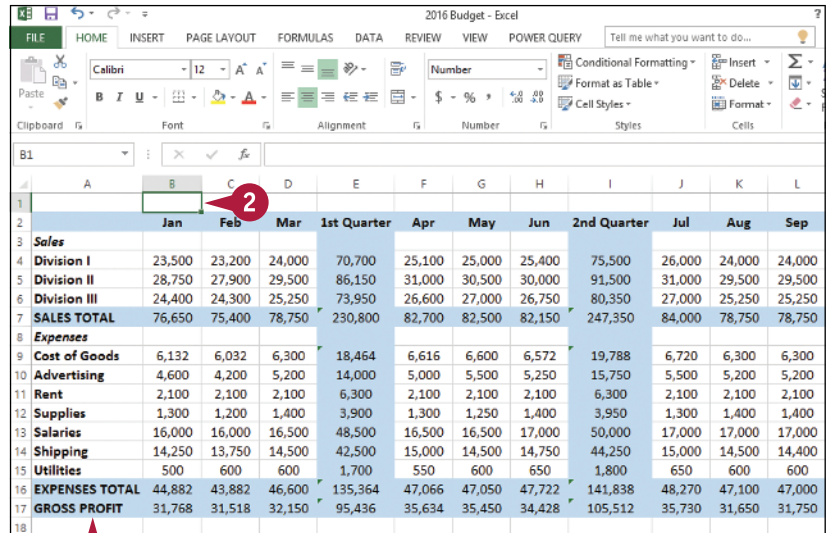
Excel freezes the rows.



Freeze Columns

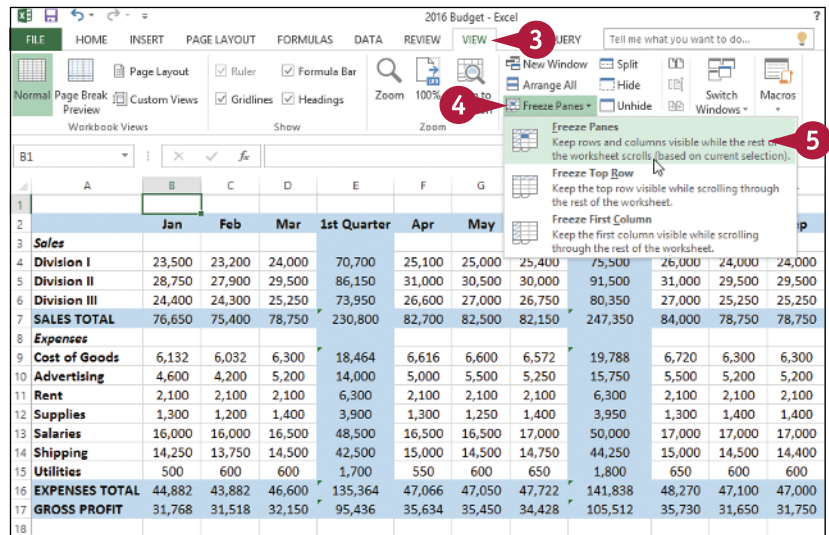
- 1 Scroll the worksheet so that the column or columns that you want to freeze are visible.
- 2 Select the cell in row 1 that is one row to the right of the last column you want to freeze.

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



- 3 Click the **View** tab.
- 4 Click **Freeze Panes**.
- 5 Click **Freeze Panes**.

Excel freezes the columns.



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**.

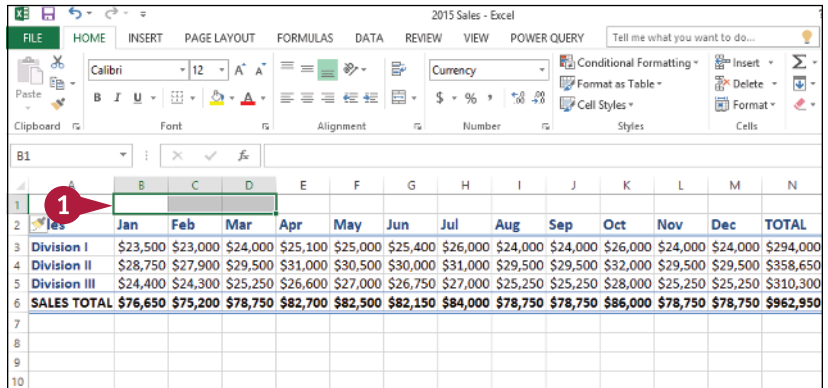
Merge Two or More Cells

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.

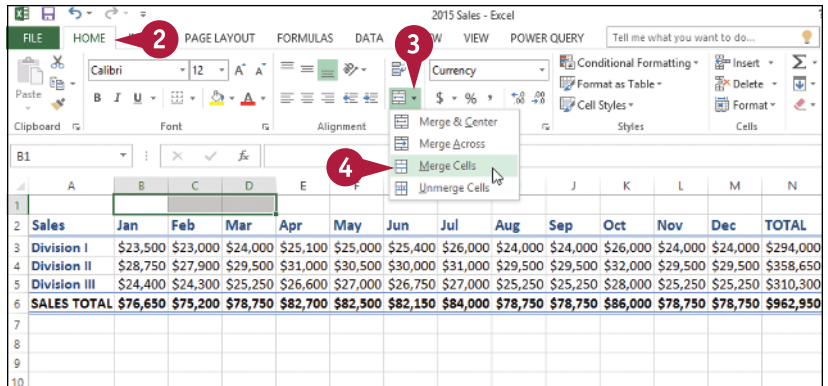
Another common reason for merging cells is to create a label that applies to multiple columns of data. For example, if you have three columns labeled *January*, *February*, and *March*, you could select the three cells in the row above these labels, merge them, and then use the merged cell to add the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

Merge Two or More Cells

- 1 Select the cells that you want to merge.



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



- A** 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														
9														
10														
11														
12														
13														
14														
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														
11														
12														
13														
14														
15														
16														
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.

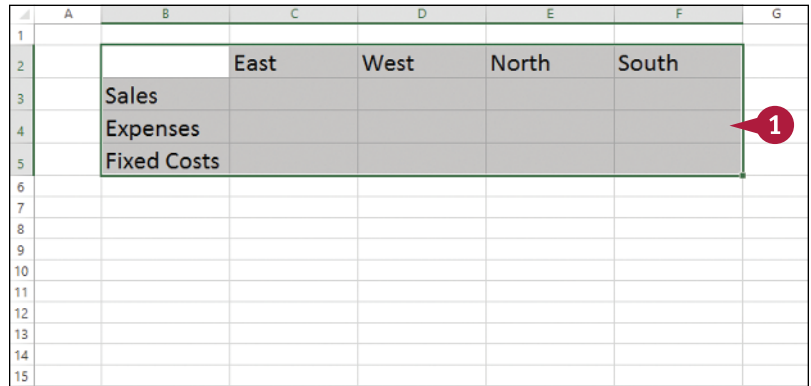
Transpose Rows and Columns

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.

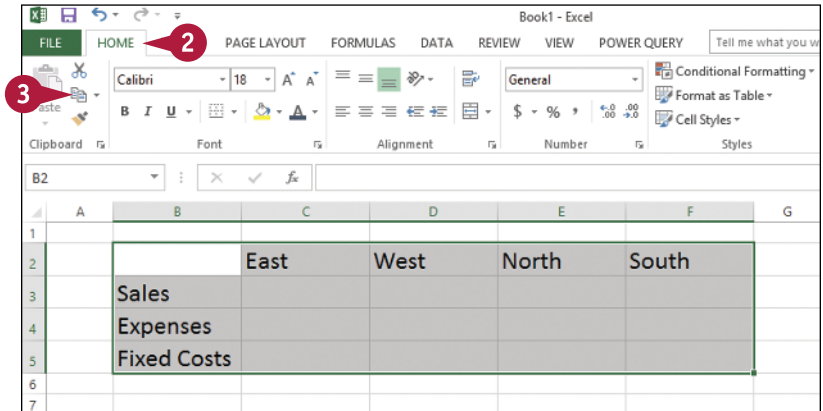
Transpose Rows and Columns

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

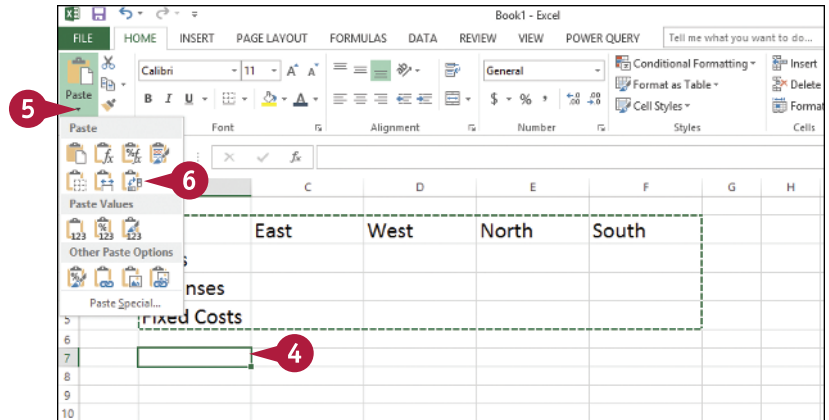


2 Click the **Home** tab.

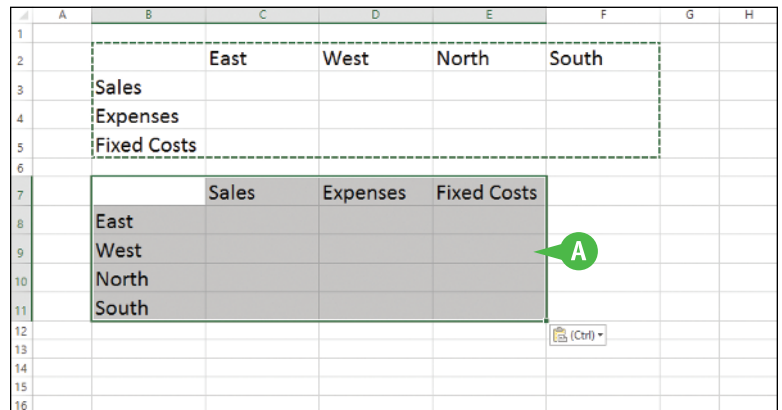
3 Click **Copy** (Ctrl+C).



- 4 Click where you want the transposed range to appear.
- 5 Click the **Paste** ▾.
- 6 Click **Transpose** (🔄).



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



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.

	A	B	C	D	E	F	G	H
6	Division	Description	Number	Quantity	Cost	Total Cost	Retail	Gross Margin
7	3	Gangley Pliers	A-201	57	\$ 10.47	\$ 596.79	\$ 17.95	71.4%
8	3	HCAB Washer	C-098	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								

Enter and Edit Data

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

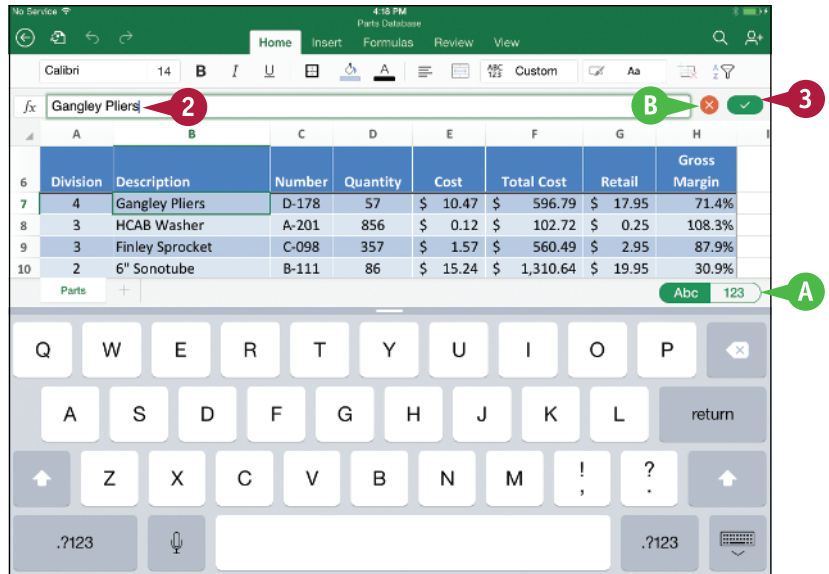
	A	B	C	D	E	F	G	H
6	Division	Description	Number	Quantity	Cost	Total Cost	Retail	Gross Margin
7	3	Gangley Pliers	D-178	57	\$ 10.47	\$ 596.79	\$ 17.95	71.4%
8	3	HCAB Washer	A-201	856	\$ 0.12	\$ 102.72	\$ 0.25	108.3%
9	3	Finley Sprocket	C-098	357	\$ 1.57	\$ 560.49	\$ 2.95	87.9%
10	2	6" Sonotube	B-111	86	\$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

- 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.
- To confirm the cell entry or edit, tap **OK** (✓).
- If you do not want to accept the changes to the cell, tap **Cancel** (✕).



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.