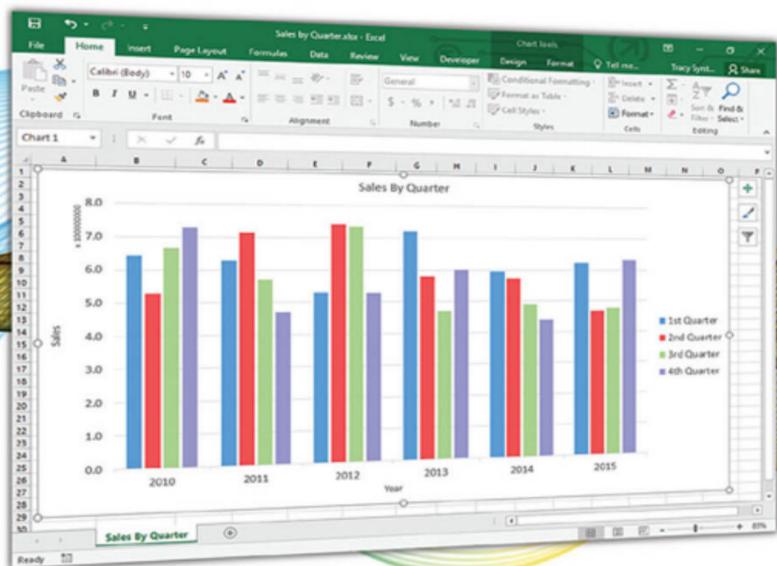


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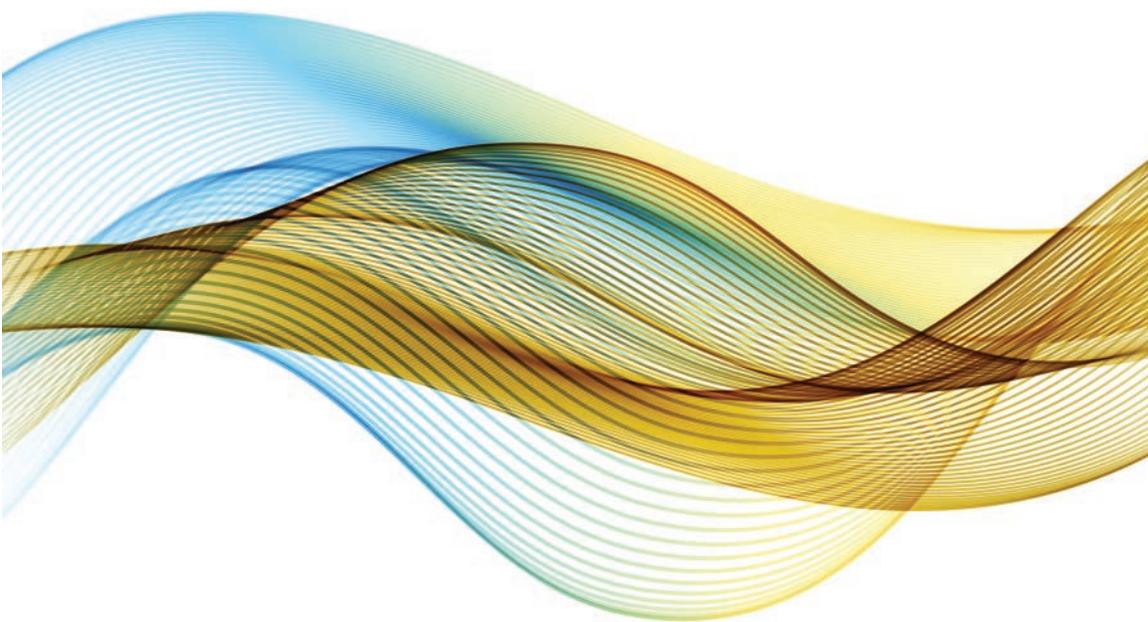
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About the Author

Tracy Syrstad is a Microsoft Excel developer and author of eight Excel books. She has been helping people with Microsoft Office issues since 1997 when she discovered free online forums where anyone could ask and answer questions. Tracy discovered she enjoyed teaching others new skills, and when she began working as a developer, she was able to integrate the fun of teaching with one-on-one online desktop sharing sessions. Tracy lives on an acreage in eastern South Dakota with her husband, one dog, two cats, one horse (two soon), and a variety of wild foxes, squirrels, and rabbits.

Dedication

To Eric and Galen, who taught me I'm stronger than I thought.

Acknowledgments

I've always wanted to do a full-color, step-by-step help book, and thanks to Michelle Newcomb, I finally got my chance. Zack Barresse has written *the* book on Excel Tables, and if I had a print copy, it would be rather dog-eared. Last but not least, thank you to my husband, John, who reminded me to eat and get outside when I was obsessing over deadlines.

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Introduction

Familiarity with Microsoft Excel is a requirement for most jobs today. Workers in every office use Excel to track and report information. Sales reps track leads, prospects, commissions, and travel expenses in Excel. Workers on the factory floor log schedules and quality data in Excel.

Excel is an amazingly flexible program. A new Excel worksheet offers a seemingly endless blank canvas of rows and columns where you can enter, summarize, and report data of any type. Charts and other data visualization tools can convert a page full of numbers to a visual snapshot. Pivot tables can summarize thousands of detailed records into a one-page summary with just a few mouse clicks.

If you've never opened Excel, or if you've used Excel only to neatly arrange lists in columns, this book will get you up to speed with the real-life skills needed to survive in a job that requires familiarity with Excel.

What's in This Book

Chapter 1, “Understanding the Microsoft Excel Interface,” starts off by exploring the user interface. If you're new to Excel or last used a legacy version (Excel 2003 and earlier), you should review this chapter so that you understand the instructions given later in the book. Afterward, you'll learn the basics of managing workbooks and sheets.

Because this book is meant to be a quick reference, you don't have to go through and read the chapters in order. But if you do plan on reading them in order, you'll notice that each chapter builds on skills learned in previous chapters. These skills range from various methods of entering information on a sheet and formatting it to make it more readable, to entering formulas and functions that can calculate data or retrieve information.

But what's Excel without charts and pivot tables? You learn how to insert and format charts, including Sparklines, which are charts that fit in a single cell. You'll be introduced to PivotTables, a powerful tool for quickly summarizing numbers.

Excel also has tools to make it easier to sort data, filter data, consolidate multiple sources, and remove duplicates. It can also quickly subtotal and group your data. What's more, you can add a splash of distinctiveness to a sheet using SmartArt or your own pictures.

Excel even has an online version of itself, the Excel Web App, allowing you to work on a workbook wherever you have Internet access. It's a limited version of Excel, but more functionality is being added all the time. Although this book doesn't cover the app in detail, it will show you how to set up an account and upload a workbook. The functionality it has is similar to the desktop version, so once you know how to perform a certain task on the desktop, you should know how to do it online.

Guidance for Beginners

Most steps in this book require the use of the mouse. All mouse instructions are based on a right-handed mouse. *Click* refers to a single click using the left mouse button. *Double-click* refers to two quick, successive clicks using the left mouse button. *Click and drag* refers to holding down the mouse button while you move the mouse, then releasing the mouse button at the end of the movement. *Right-click* refers to a single click using the right mouse button.

If a keyboard shortcut is provided, you have to press two or more keys on the keyboard at the same time. The keys two are shown with the key names joined with a plus (+) sign. For example, Ctrl+V would require you to hold down the Ctrl key, press the V key once, and then let go of both keys.

Quick Sort buttons

Open Sort dialog box

Region	Product	Date	Customer	Quantity	Revenue	COGS	Profit
Central	Laser	1/2/2015	Alluring Shoe Company	500	11240	5110	6130
Central	Laser	1/3/2015	Alluring Shoe Company	400	9204	4088	5116
Central	Multi-Function	1/26/2015	Alluring Shoe Company	500	10445	4235	6210
Central	Basic ColorJet	2/5/2015	Alluring Shoe Company	200	4280	1968	2312
Central	Basic ColorJet	2/19/2015	Alluring Shoe Company	800	18504	7872	10632
Central	Basic ColorJet	3/24/2015	Alluring Shoe Company	200	4472	1968	2504
Central	Multi-Function	4/6/2015	Alluring Shoe Company	300	5886	2541	3345
Central	Laser	5/17/2015	Alluring Shoe Company	500	10385	5110	5275
Central	Laser	5/30/2015	Alluring Shoe Company	900	18918	9198	9720
Central	Multi-Function	6/13/2015	Alluring Shoe Company	700	12838	5929	6909
Central	Laser	7/1/2015	Alluring Shoe Company	900	21960	9198	12762
Central	Laser	8/6/2015	Alluring Shoe Company	100	2320	1022	1298
Central	Multi-Function	8/21/2015	Alluring Shoe Company	800	15544	6776	8768

Sort alphabetically

Sort numerically

Sort by color

In this chapter, you'll learn the various ways of sorting data, allowing you to view data from least to greatest, greatest to least, and even by color. You'll also learn how to do the following:

- Sorting data with one click
- Sorting using a custom, non-alphabetical order
- Sorting by color or icon
- Rearranging columns with a few clicks of the mouse and keyboard

10

Sorting Data

You'll often need to sort your data, whether it be numerically, alphabetically, by color, or by icon. You aren't limited to sorting the rows—columns can also be sorted.

Sorting data allows you to change how you view it. For example, if your dataset has a date column, you can view the oldest data at the top, or you can view the newest data at the top. You can also sort the data so like values, such as product names, are grouped together. You can even combine sorts so that you not only view the products grouped together, but in date order from oldest to newest.

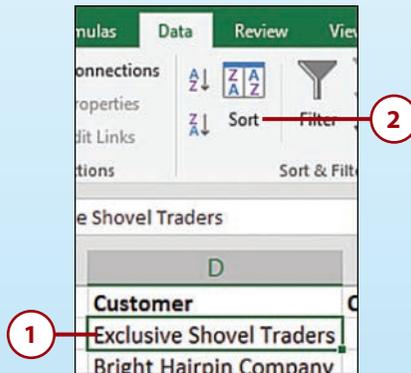
Using the Sort Dialog Box

The Sort dialog box provides the most versatile way of sorting your data because it allows you to specify how you want the data sorted. When you use the dialog box, Excel applies each sort in the order it appears in the list.

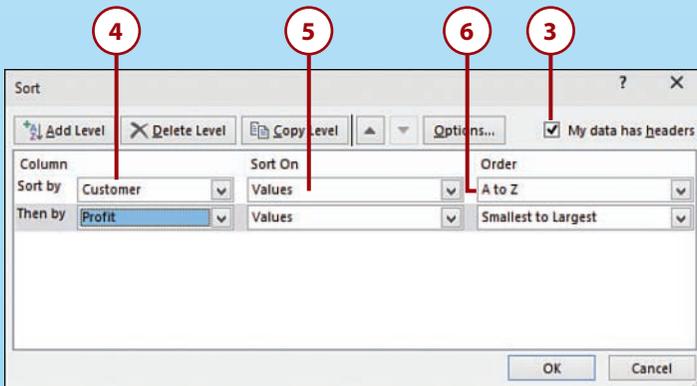
Sort by Values

The Sort dialog box makes it easy to sort by multiple columns. A different sort method can be applied for each level. The sorts are done in the order they appear in the list.

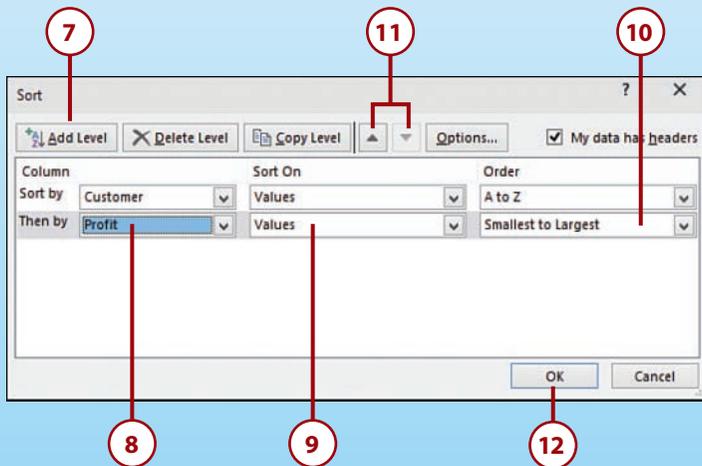
1. Select a cell in the dataset. Excel will use this cell to determine the location and size of the dataset.
2. On the Data tab, select Sort.



3. If the data has a header row, but Excel doesn't recognize it, select the My Data Has Headers check box.
4. From the Sort By drop-down, select the first column header by which to sort.
5. From the Sort On drop-down, select Values.
6. From the Order drop-down, select the order by which the column's data should be sorted. Choose A to Z to sort in alphabetical order; choose Z to A to sort in the opposite order. If the data is numerical, the drop-down options will change to Smallest to Largest and Largest to Smallest.



7. Select Add Level to add another sort rule.
8. From the Then By drop-down, select the second column header by which to sort.
9. From the Sort On drop-down, select Values.
10. From the Order drop-down, select the order by which the column's data should be sorted.
11. If you realize a field is in the wrong position, use the up or down arrow at the top of the dialog box to move the field to the correct location.
12. Click OK to sort the data.



It's Not All Good

Excel Didn't Select the Dataset Correctly

When you sort, Excel will try to help by selecting your dataset for you. You can help Excel do this correctly by not having any blank rows or columns in your dataset. Also, ensure that your header, if you have one, consists of only one row. Only a single header row is allowed—any rows after it are treated as data.

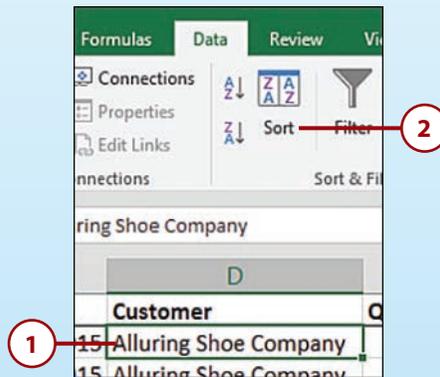
If Excel incorrectly selects your data, exit from the Sort dialog box, delete the blank columns and rows, and start the dialog box over.

If for some reason you can't delete the blank columns or rows, you can pre-select the entire table before starting the Sort dialog box.

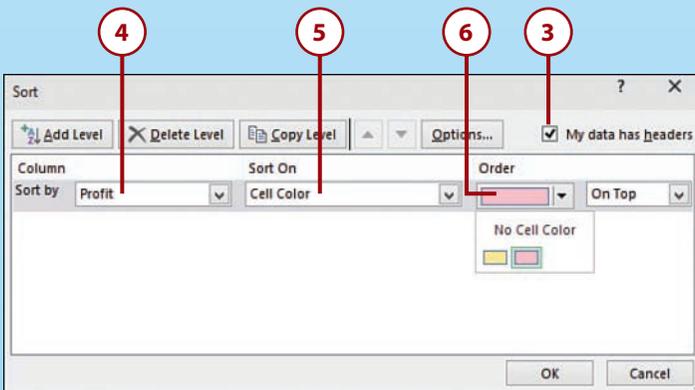
Sort by Color or Icon

Excel can also sort data by fill color, font color, or an icon set from conditional formatting.

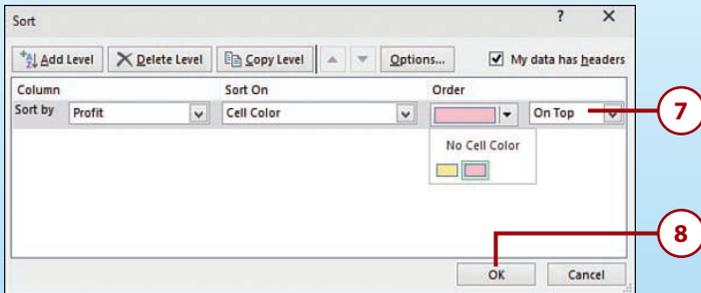
1. Select a cell in the dataset. Excel will use this cell to determine the location and size of the dataset.
2. On the Data tab, select Sort.



3. If the data has a header row, but Excel doesn't recognize it, select the My Data Has Headers check box.
4. From the Sort By drop-down, select the column header by which to sort.
5. From the Sort On drop-down, select Cell Color to sort by the cell's fill color. You can also choose Font Color to sort by the value's color or Cell Icon to sort by conditional formatting icons.
6. From the first Order drop-down, select the color by which the column's data should be sorted. If sorting by icon, you'll have a choice of icons.



- From the second Order drop-down, select whether the color should be sorted to the top or bottom of the data. If you select multiple colors to sort at the top of the data, the colors will still appear in the order chosen.
- Click OK to sort the data.



Color Sorting a Table

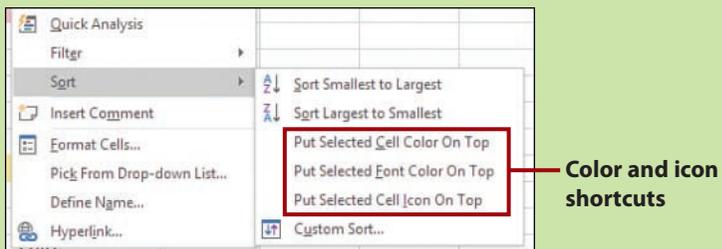
If your data is in a table, you don't have to go through the Sort dialog box. Instead, click the arrow in the header, select Sort by Color, and select the color you want sorted to the top of the table.

>>> Go Further

SORTING SHORTCUT

In addition to sorting colors and icons through the Sort dialog box, the following options are also available when you right-click a cell and select Sort from the context menu.

If you use one of the preceding options to sort more than one color or icon, the latest selection will be placed above the previous selection. So, if yellow rows should be placed before the red rows, sort the red rows first, and then the yellow rows.



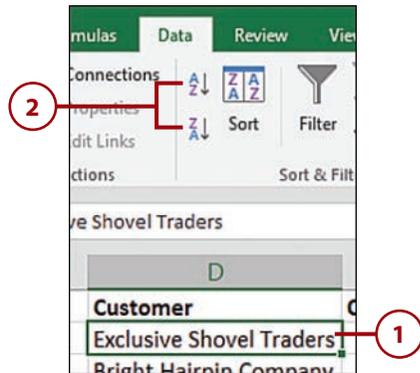
Doing Quick Sorts

The Quick Sort buttons offer one-click access to sorting cell values.

Quick Sort a Single Column

There are several quick methods you can choose from to apply simple sorts to your data.

1. Select one cell in the column to sort by. If you select multiple cells, Excel will sort only the data in the selected range.
2. On the Data tab, select AZ to sort lowest to highest or ZA to sort highest to lowest.

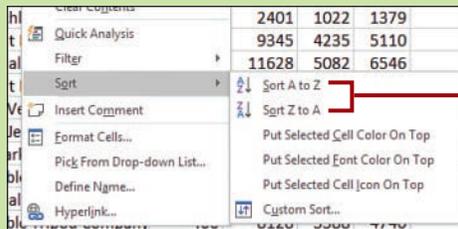


>>> Go Further

OTHER QUICK SORT OPTIONS

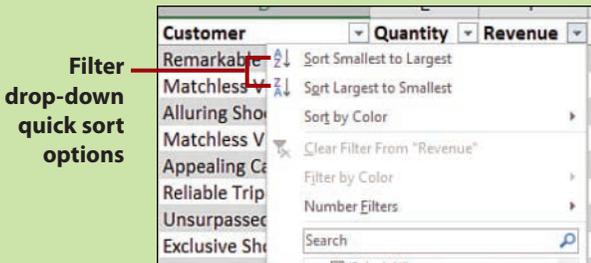
There are other ways you can access the quick sort options:

Right-click the cell and select Sort, Sort A to Z or Sort Z to A if your data is text; select Sort Smallest to Largest or Sort Largest to Smallest if the data is numerical.



Right-click menu quick sort options

From a filter drop-down, select Sort A to Z or Sort Z to A if your data is text; select Sort Smallest to Largest or Sort Largest to Smallest if the data is numerical.



Settings Carry Between Sorts

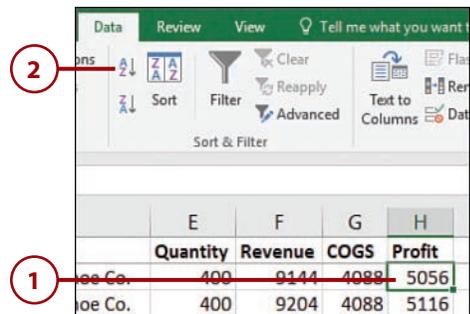
Sort options are retained for the sheet during an Excel session. So if you set up a custom sort with Case Sensitive turned on, then later do a quick sort, the quick sort will be case sensitive.

Quick Sort Multiple Columns

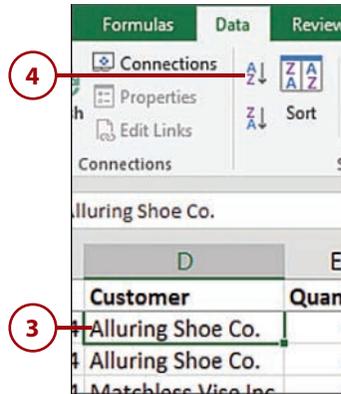
If you keep in mind that Excel keeps previously sorted columns sorted as new columns are sorted, you can use the Quick Sort feature to sort multiple columns. For example, if the Profit column is organized, Excel doesn't randomize the data in that column when the Customer column is sorted. Instead, Profit retains its order to the degree it falls within the Customer sort. The trick is to apply the sorts in reverse to how they would be set up in the Sort dialog box.

In the following example, we want to sort by Customer and Profit, both least to greatest.

1. Select a cell in the column that should be sorted last in the Sort dialog box (in this case, the Profit column).
2. On the Data tab, click the A to Z button.



3. Select a cell in the next column to be sorted (in this case, the Customer column).
4. On the Data tab, click the A to Z button.
5. The table is now sorted by Customer and then Profit within each customer's records.



Profit is sorted smallest to largest within each customer's record

Customer	Quantity	Revenue	COGS	Profit
Alluring Shoe Co.	400	9144	4088	5056
Alluring Shoe Co.	400	9204	4088	5116
Alluring Shoe Co.	500	11240	5110	6130
Alluring Shoe Co.	500	10445	4235	6210
Alluring Shoe Co.	900	21465	9198	12267
Appealing Calculatc	900	17505	7623	9882
Appealing Calculatc	1000	19250	8470	10780

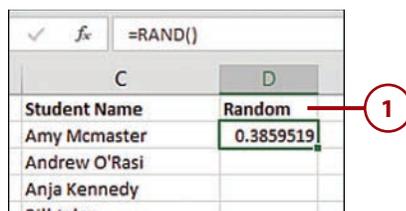
Performing Custom Sorts

You aren't limited to sorting data alphabetically and numerically. With a little extra setup work, you can randomize the order or sort by a custom sequence.

Perform a Random Sort

Excel doesn't have a built-in tool to do a random sort, but by using the RAND function in a column to the right of the data and then sorting, you can create your own randomizer.

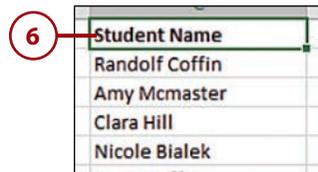
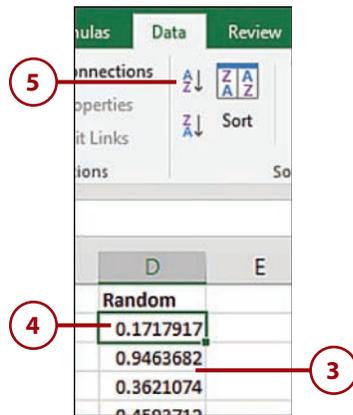
1. Add a new column to the right of the data and give the column a label in the first cell, such as Random.



- In the second cell of the new column, type **=RAND()** and press Ctrl+Enter (this will keep the formula cell as the active cell). The formula will calculate a value between 0 and 1.
- Copy the formula to the rest of the rows in the column.
- Select one cell in the new column.
- On the Data tab, click the AZ button.
- The list will be sorted in a random sequence. Delete the temporary column added in step 1.

The Numbers Keep Changing

Right after Excel performs the sort, it recalculates the formula in the temporary column, so it may appear that the numbers are out of sequence.



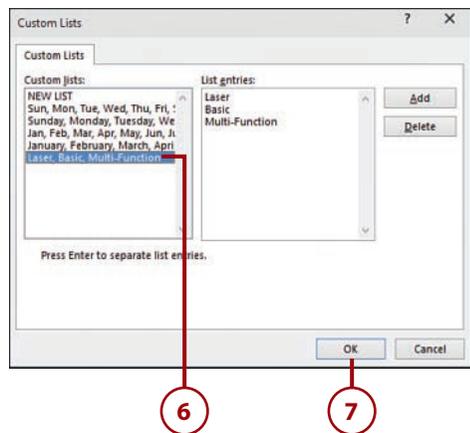
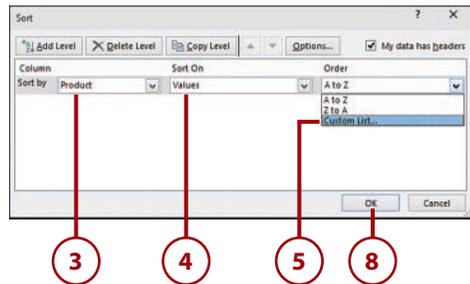
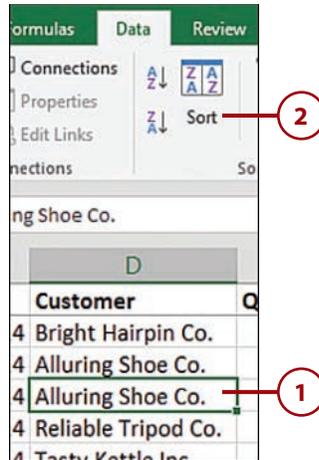
Sort with a Custom Sequence

At times, data may need to be sorted in a custom sequence that is neither alphabetical nor numerical. For example, you might want to sort by month, by weekday, or by some custom sequence of your own. You can do this by sorting by a custom list.

How to Create a Custom List

You'll need to create a custom list before continuing with the following steps. Refer to "Create Your Own List" in Chapter 4, "Getting Data onto a Sheet," for steps on creating one.

1. Select a cell in the dataset.
2. On the Data tab, click Sort.
3. From the Sort By drop-down, select the column header by which to sort.
4. From the Sort On drop-down, select Values.
5. From the Order drop-down, select Custom List.
6. Select the desired list.
7. Click OK.
8. Click OK.
9. The data is sorted by the custom list.



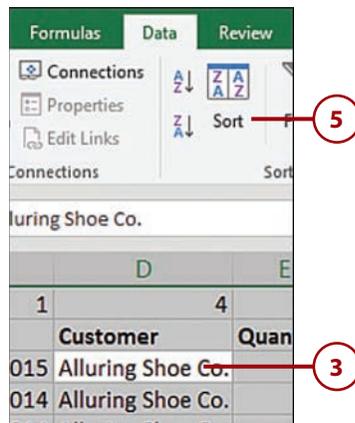
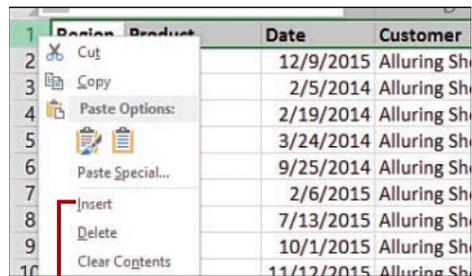
Rearranging Columns

By default, data is sorted by rows, but you can choose to sort columns instead. And with the following trick, you aren't limited to sorting them alphabetically.

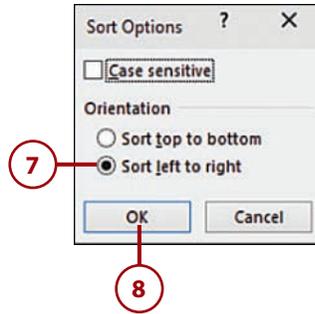
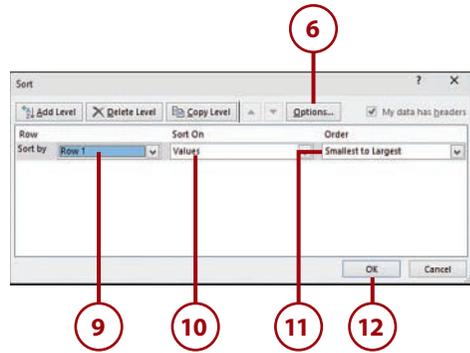
Sort Columns with the Sort Dialog Box

Hidden in the Sort dialog box is an option to sort your data left to right, instead of the default top to bottom.

1. Insert a new blank row above the headers by right-clicking the row 1 heading and then selecting Insert.
2. In the new row, type numbers corresponding to the new sequence of the columns, with 1 being the leftmost column, then 2, 3, and so on, until each column has a number denoting its new location.
3. Select a cell in the dataset.
4. Press Ctrl+A to select the current region, including the two header rows.
5. On the Data tab, select Sort.



6. Click the Options button.
7. Select the Sort Left to Right option.
8. Click OK to return to the Sort dialog box.
9. In the Sort By drop-down, select Row 1.
10. In the Sort On drop-down, select Values.
11. In the Order drop-down, select Smallest to Largest.
12. Click OK.
13. Excel will rearrange the columns.
14. Delete the temporary row added in step 1.



13

A	B	C	D	E	F	G	H
Date	Product	Region	Customer	Quantity	Revenue	COGS	Profit
12/9/2015	Laser	Central	Alluring Shoe Co.	600	12888	5904	6984
2/5/2014	Laser	Central	Alluring Shoe Co.	200	4280	1968	2312
7/18/2014	Laser	Central	Alluring Shoe Co.	800	18604	7873	10633

Fixing Sort Problems

If it looks like the data did not sort properly, refer to the following list of possible solutions:

- Make sure no hidden rows or columns exist.
- Use a single row for headers. If you need a multiline header, either wrap the text in the cell or use Alt+Enter to force line breaks in the cell.
- If the headers were sorted into the data, there was probably at least one column without a header.
- Column data should be of the same type. This may not be obvious in a column of ZIP codes where some (such as 57057) are numbers, but others that start with zero are actually text. To solve this problem, convert the entire column to text.
- If you're sorting by a column containing a formula, Excel will recalculate the column after the sort. If the values change after the recalculation, such as with RAND, it may appear that the sort did not work properly, but it did.

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