

Conditional Formatting

Conditional formatting in **Excel** enables you to highlight cells with a certain color, depending on the cell's value.

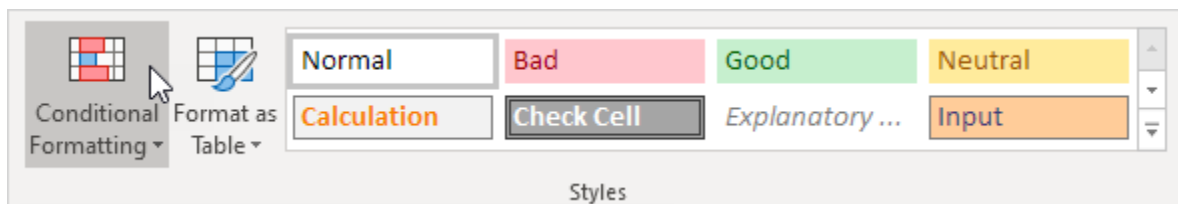
Highlight Cells Rules

To highlight cells that are greater than a value, execute the following steps.

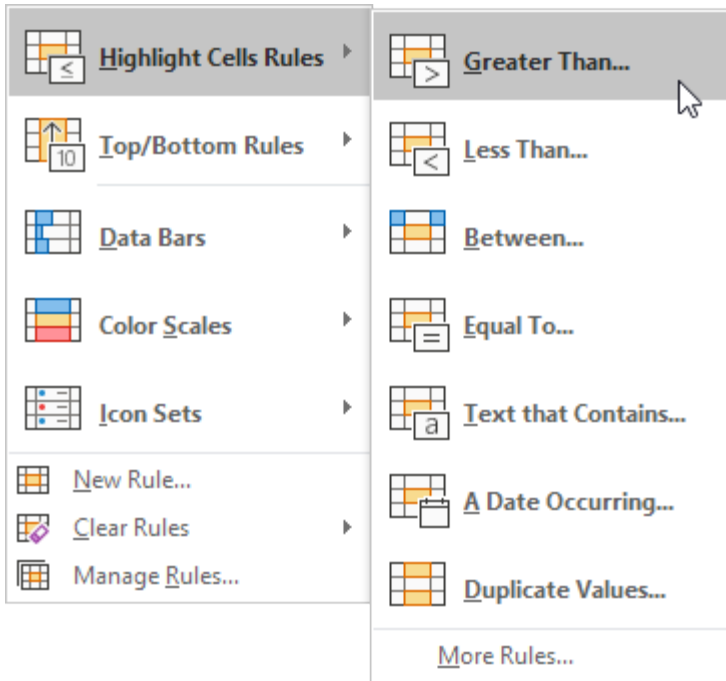
1. Select the range A1:A10.

	A	B
1	14	
2	6	
3	39	
4	43	
5	2	
6	95	
7	5	
8	11	
9	86	
10	57	
11		

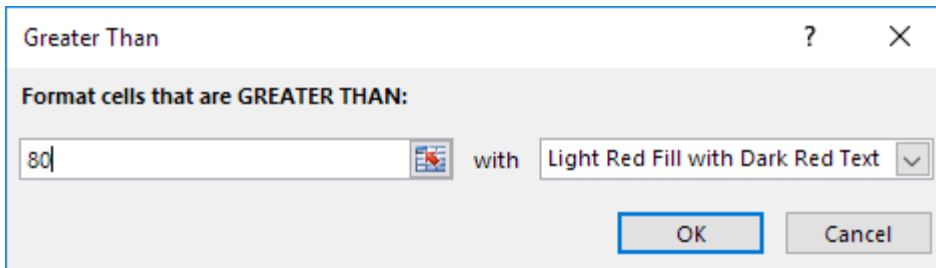
2. On the Home tab, in the Styles group, click Conditional Formatting.



3. Click Highlight Cells Rules, Greater Than.



4. Enter the value 80 and select a formatting style.



5. Click OK.

Result. Excel highlights the cells that are greater than 80.

	A	B
1	14	
2	6	
3	39	
4	43	
5	2	
6	95	
7	5	
8	11	
9	86	
10	57	
11		

6. Change the value of cell A1 to 81.

Result. Excel changes the format of cell A1 automatically.

	A	B
1	81	
2	6	
3	39	
4	43	
5	2	
6	95	
7	5	
8	11	
9	86	
10	57	
11		

Note: you can also use this category (see step 3) to highlight cells that are less than a value, between two values, equal to a value, cells that contain specific text, dates (today, last week, next month, etc.), duplicates or unique values.

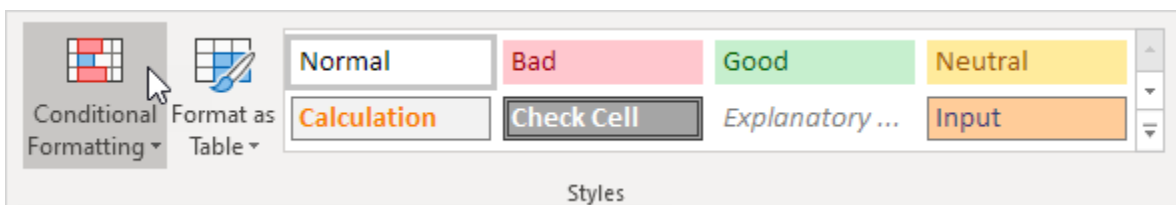
Clear Rules

To clear a **conditional formatting rule**, execute the following steps.

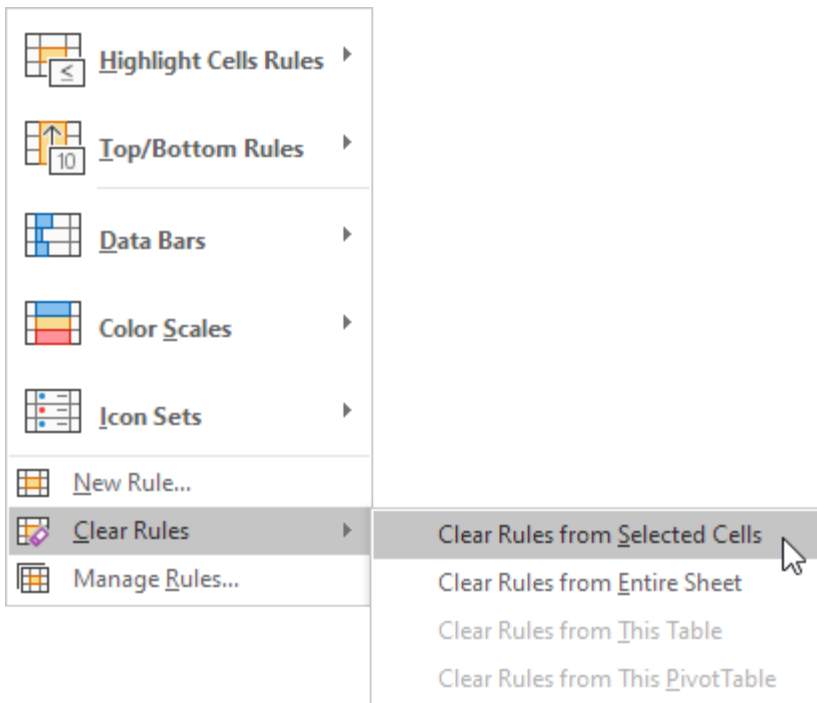
1. Select the range A1:A10.

	A	B
1	81	
2	6	
3	39	
4	43	
5	2	
6	95	
7	5	
8	11	
9	86	
10	57	
11		

2. On the Home tab, in the Styles group, click Conditional Formatting.



3. Click Clear Rules, Clear Rules from Selected Cells.



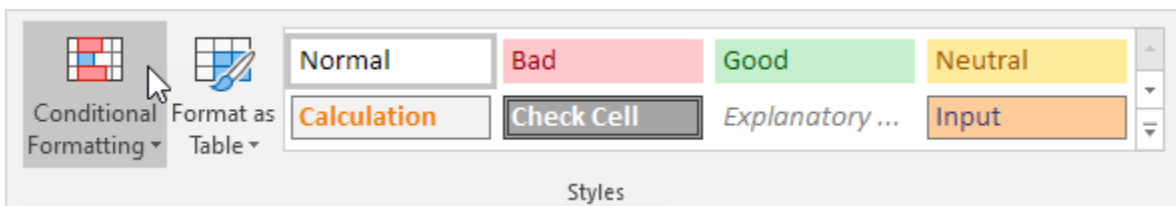
Top/Bottom Rules

To highlight cells that are above average, execute the following steps.

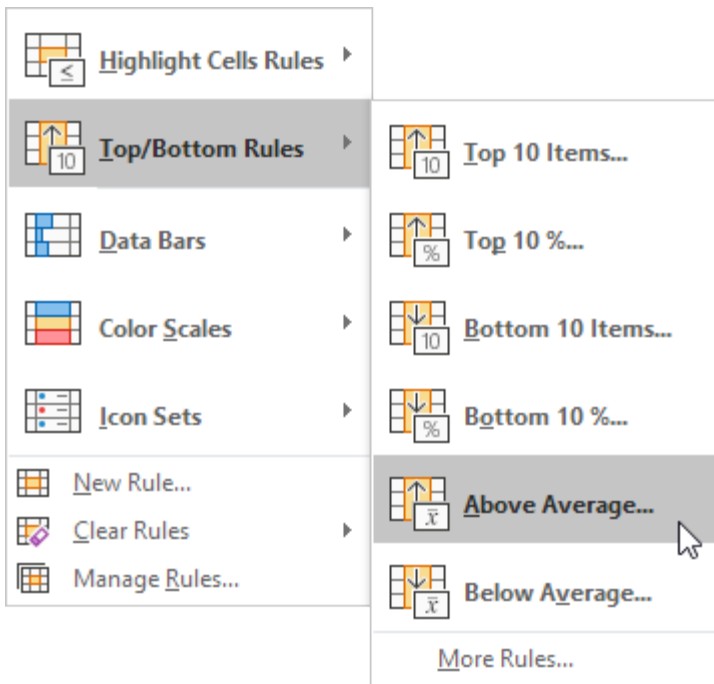
1. Select the range A1:A10.

	A	B
1	81	
2	6	
3	39	
4	43	
5	2	
6	95	
7	5	
8	11	
9	86	
10	57	
11		

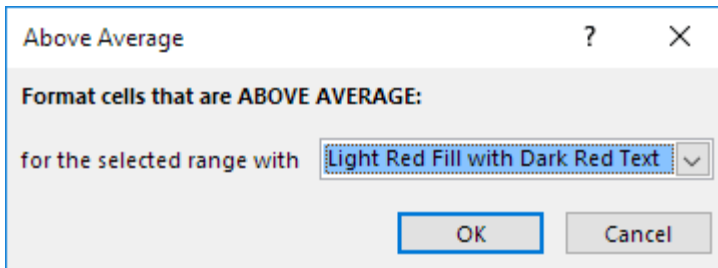
2. On the Home tab, in the Styles group, click Conditional Formatting.



3. Click Top/Bottom Rules, Above Average.



4. Select a formatting style.



5. Click OK.

Result. Excel calculates the average (42.5) and formats the cells that are above this average.

	A	B
1	81	
2	6	
3	39	
4	43	
5	2	
6	95	
7	5	
8	11	
9	86	
10	57	
11		

Note: you can also use this category (see step 3) to highlight the top n items, the top n percent, the bottom n items, the bottom n percent or cells that are below average.

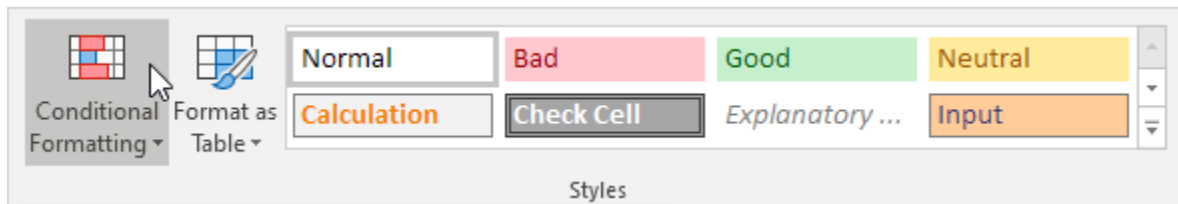
Conditional Formatting with Formulas

Take your Excel skills to the next level and use a formula to determine which cells to format. Formulas that apply conditional formatting must evaluate to TRUE or FALSE.

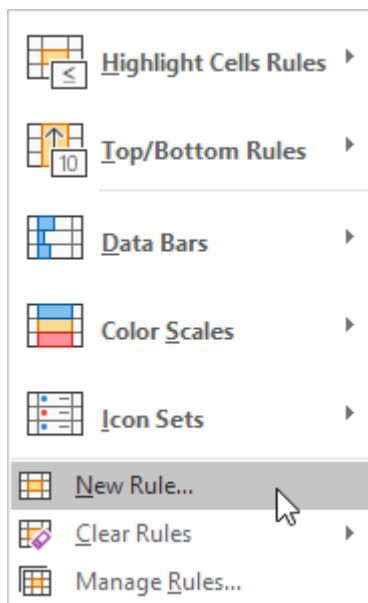
1. Select the range A1:E5.

	A	B	C	D	E	F
1	90	77	33	20	96	
2	59	66	20	61	44	
3	94	99	97	41	52	
4	36	43	70	13	54	
5	15	6	28	28	15	
6						

2. On the Home tab, in the Styles group, click Conditional Formatting.



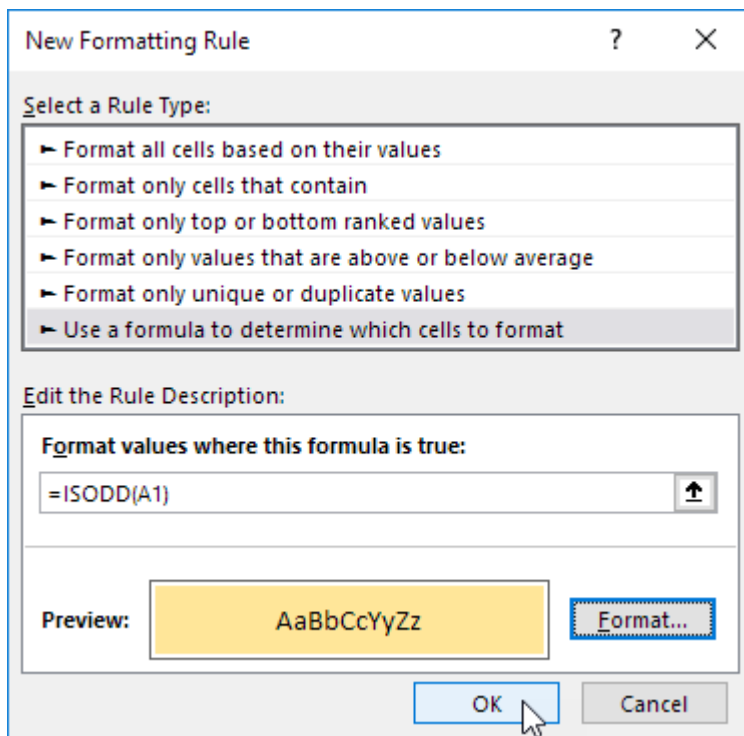
3. Click New Rule.



4. Select 'Use a formula to determine which cells to format'.

5. Enter the formula =ISODD(A1)

6. Select a formatting style and click OK.



Result. Excel highlights all odd numbers.

	A	B	C	D	E	F
1	90	77	33	20	96	
2	59	66	20	61	44	
3	94	99	97	41	52	
4	36	43	70	13	54	
5	15	6	28	28	15	
6						

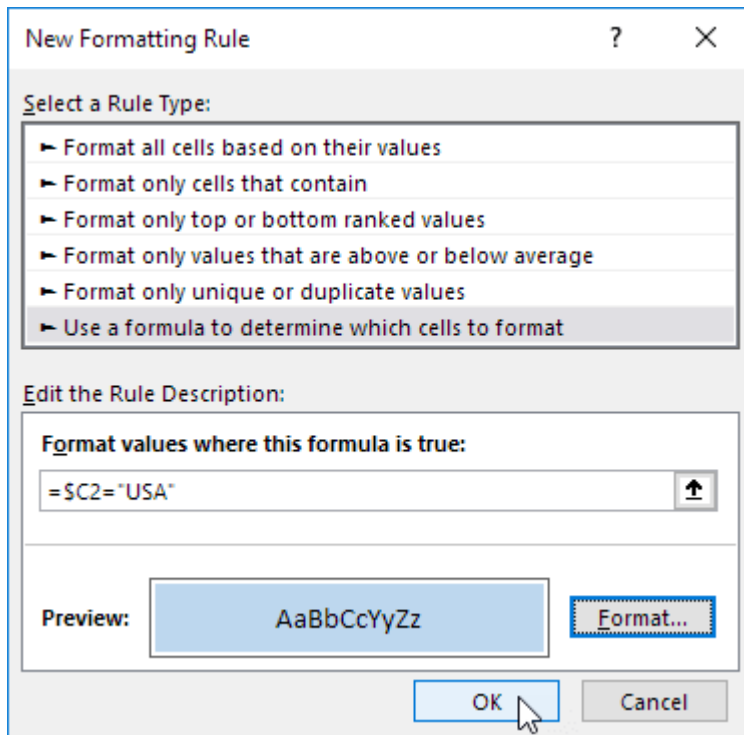
Explanation: always write the formula for the upper-left cell in the selected range. Excel automatically copies the formula to the other cells. Thus, cell A2 contains the formula =ISODD(A2), cell A3 contains the formula =ISODD(A3), etc.

Here's another example.

7. Select the range A2:D7.

	A	B	C	D	E
1	Last Name	Sales	Country	Quarter	
2	Smith	\$16,753.00	UK	Qtr 3	
3	Johnson	\$14,808.00	USA	Qtr 4	
4	Williams	\$10,644.00	UK	Qtr 2	
5	Jones	\$1,390.00	USA	Qtr 3	
6	Brown	\$4,865.00	USA	Qtr 4	
7	Williams	\$12,438.00	UK	Qtr 1	
8					

8. Repeat steps 2-4 above.
9. Enter the formula = $\$C2$ ="USA"
10. Select a formatting style and click OK.



Result. Excel highlights all USA orders.

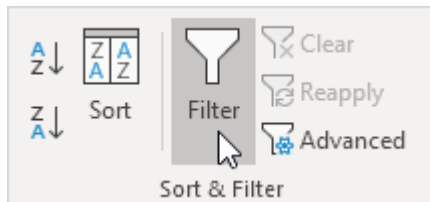
	A	B	C	D	E
1	Last Name	Sales	Country	Quarter	
2	Smith	\$16,753.00	UK	Qtr 3	
3	Johnson	\$14,808.00	USA	Qtr 4	
4	Williams	\$10,644.00	UK	Qtr 2	
5	Jones	\$1,390.00	USA	Qtr 3	
6	Brown	\$4,865.00	USA	Qtr 4	
7	Williams	\$12,438.00	UK	Qtr 1	
8					

Explanation: we fixed the reference to column C by placing a \$ symbol in front of the column letter ($\$C2$). As a result, cell B2, C2 and cell D2 also contain the formula = $\$C2$ ="USA", cell A3, B3, C3 and D3 contain the formula = $\$C3$ ="USA", etc.

Filter

Filter your Excel data if you only want to display records that meet certain criteria.

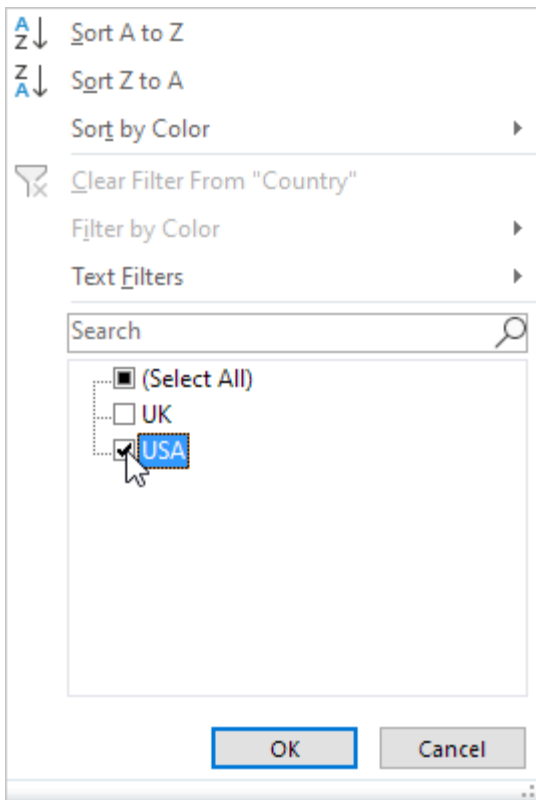
1. Click any single cell inside a data set.
2. On the Data tab, in the Sort & Filter group, click Filter.



Arrows in the column headers appear.

	A	B	C	D	E
1	Last Nam	Sales	Count	Quart	
2	Smith	\$16,753.00	UK	Qtr 3	
3	Johnson	\$14,808.00	USA	Qtr 4	
4	Williams	\$10,644.00	UK	Qtr 2	
5	Jones	\$1,390.00	USA	Qtr 3	
6	Brown	\$4,865.00	USA	Qtr 4	
7	Williams	\$12,438.00	UK	Qtr 1	
8	Johnson	\$9,339.00	UK	Qtr 2	
9	Smith	\$18,919.00	USA	Qtr 3	
10	Jones	\$9,213.00	USA	Qtr 4	
11	Jones	\$7,433.00	UK	Qtr 1	
12	Brown	\$3,255.00	USA	Qtr 2	
13	Williams	\$14,867.00	USA	Qtr 3	
14	Williams	\$19,302.00	UK	Qtr 4	
15	Smith	\$9,698.00	USA	Qtr 1	
16					

3. Click the arrow next to Country.
4. Click on Select All to clear all the check boxes, and click the check box next to USA.



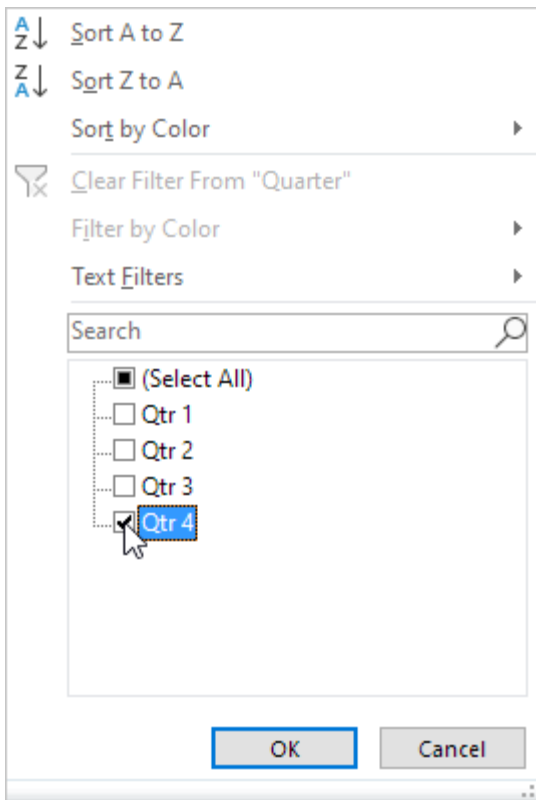
5. Click OK.

Result. Excel only displays the sales in the USA.

	A	B	C	D	E
1	Last Nam	Sales	Count	Quart	
3	Johnson	\$14,808.00	USA	Qtr 4	
5	Jones	\$1,390.00	USA	Qtr 3	
6	Brown	\$4,865.00	USA	Qtr 4	
9	Smith	\$18,919.00	USA	Qtr 3	
10	Jones	\$9,213.00	USA	Qtr 4	
12	Brown	\$3,255.00	USA	Qtr 2	
13	Williams	\$14,867.00	USA	Qtr 3	
15	Smith	\$9,698.00	USA	Qtr 1	
16					

6. Click the arrow next to Quarter.

7. Click on Select All to clear all the check boxes, and click the check box next to Qtr 4.

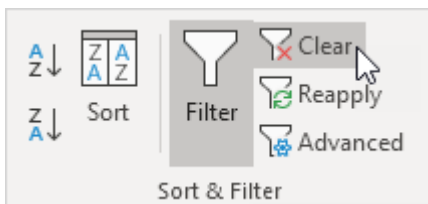


8. Click OK.

Result. Excel only displays the sales in the USA in Qtr 4.

	A	B	C	D	E
1	Last Nan	Sales	Count	Quart	
3	Johnson	\$14,808.00	USA	Qtr 4	
6	Brown	\$4,865.00	USA	Qtr 4	
10	Jones	\$9,213.00	USA	Qtr 4	
16					

9. To remove the filter, on the Data tab, in the Sort & Filter group, click Clear. To remove the filter and the arrows, click Filter.



Sort

You can **sort** your Excel data on one column or multiple columns. You can sort in ascending or descending order.

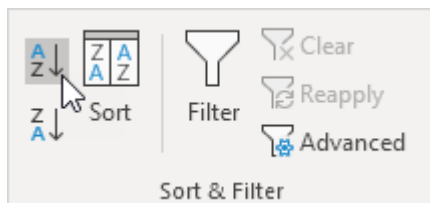
One Column

To sort on one column, execute the following steps.

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

	A	B	C	D	E
1	Last Name	Sales	Country	Quarter	
2	Smith	\$16,753.00	UK	Qtr 3	
3	Johnson	\$14,808.00	USA	Qtr 4	
4	Williams	\$10,644.00	UK	Qtr 2	
5	Jones	\$1,390.00	USA	Qtr 3	
6	Brown	\$4,865.00	USA	Qtr 4	
7	Williams	\$12,438.00	UK	Qtr 1	
8	Johnson	\$9,339.00	UK	Qtr 2	
9	Smith	\$18,919.00	USA	Qtr 3	
10	Jones	\$9,213.00	USA	Qtr 4	
11	Jones	\$7,433.00	UK	Qtr 1	
12	Brown	\$3,255.00	USA	Qtr 2	
13	Williams	\$14,867.00	USA	Qtr 3	
14	Williams	\$19,302.00	UK	Qtr 4	
15	Smith	\$9,698.00	USA	Qtr 1	
16					

2. To sort in **ascending order**, on the Data tab, in the Sort & Filter group, click AZ.



Result:

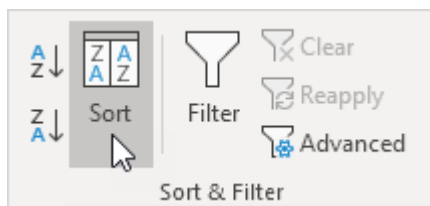
	A	B	C	D	E
1	Last Name	Sales	Country	Quarter	
2	Brown	\$4,865.00	USA	Qtr 4	
3	Brown	\$3,255.00	USA	Qtr 2	
4	Johnson	\$14,808.00	USA	Qtr 4	
5	Johnson	\$9,339.00	UK	Qtr 2	
6	Jones	\$1,390.00	USA	Qtr 3	
7	Jones	\$9,213.00	USA	Qtr 4	
8	Jones	\$7,433.00	UK	Qtr 1	
9	Smith	\$16,753.00	UK	Qtr 3	
10	Smith	\$18,919.00	USA	Qtr 3	
11	Smith	\$9,698.00	USA	Qtr 1	
12	Williams	\$10,644.00	UK	Qtr 2	
13	Williams	\$12,438.00	UK	Qtr 1	
14	Williams	\$14,867.00	USA	Qtr 3	
15	Williams	\$19,302.00	UK	Qtr 4	
16					

Note: to sort in descending order, click ZA.

Multiple Columns

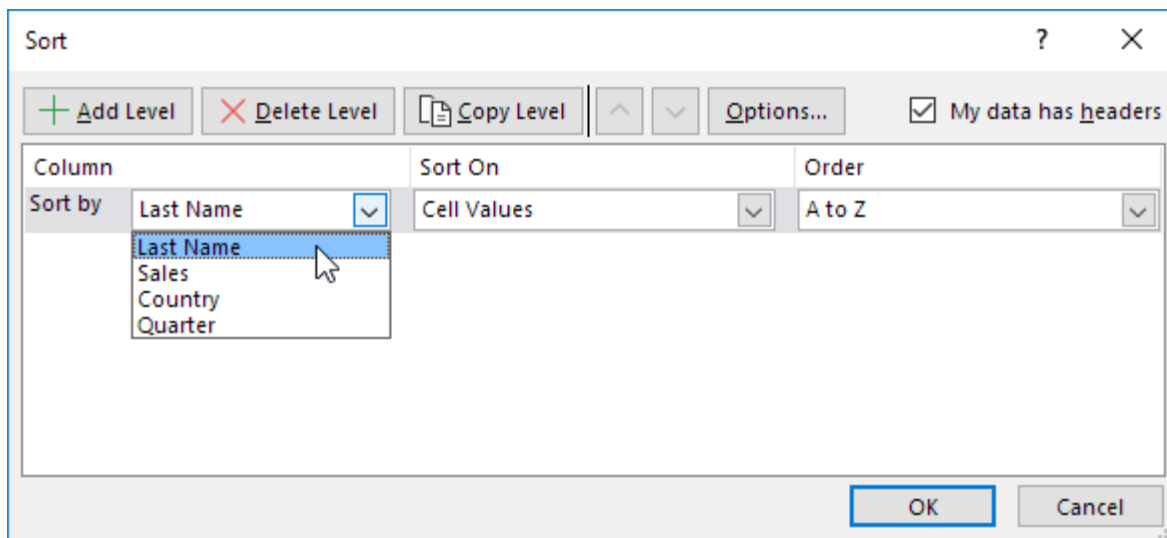
To sort on multiple columns, execute the following steps.

1. On the Data tab, in the Sort & Filter group, click Sort.



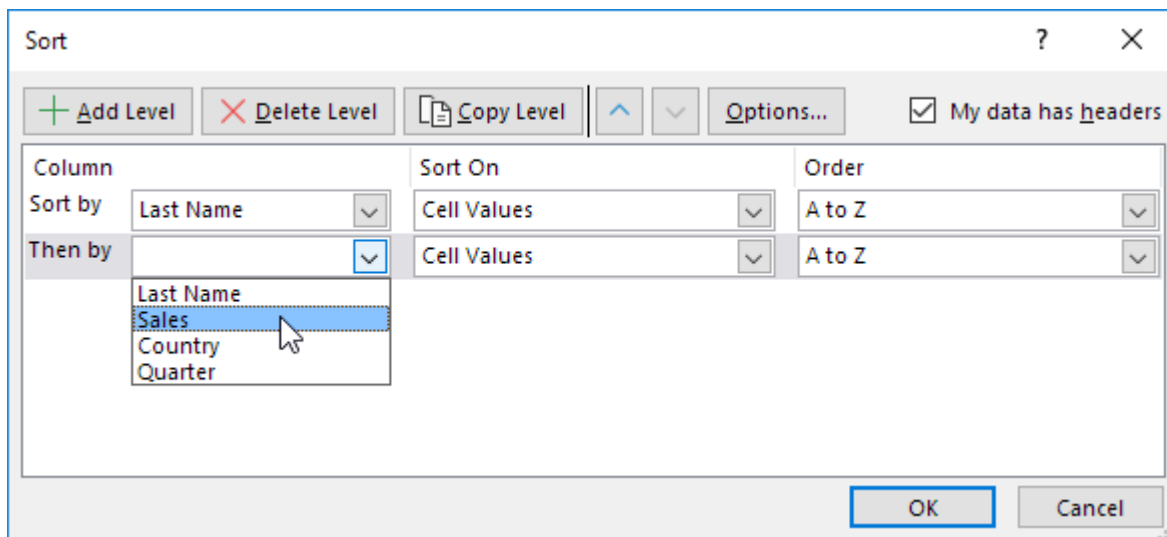
The Sort dialog box appears.

2. Select Last Name from the 'Sort by' drop-down list.



3. Click on Add Level.

4. Select Sales from the 'Then by' drop-down list.



5. Click OK.

Result. Records are sorted by Last Name first and Sales second.

	A	B	C	D	E
1	Last Name	Sales	Country	Quarter	
2	Brown	\$3,255.00	USA	Qtr 2	
3	Brown	\$4,865.00	USA	Qtr 4	
4	Johnson	\$9,339.00	UK	Qtr 2	
5	Johnson	\$14,808.00	USA	Qtr 4	
6	Jones	\$1,390.00	USA	Qtr 3	
7	Jones	\$7,433.00	UK	Qtr 1	
8	Jones	\$9,213.00	USA	Qtr 4	
9	Smith	\$9,698.00	USA	Qtr 1	
10	Smith	\$16,753.00	UK	Qtr 3	
11	Smith	\$18,919.00	USA	Qtr 3	
12	Williams	\$10,644.00	UK	Qtr 2	
13	Williams	\$12,438.00	UK	Qtr 1	
14	Williams	\$14,867.00	USA	Qtr 3	
15	Williams	\$19,302.00	UK	Qtr 4	
16					

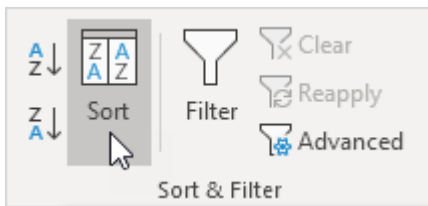
Custom List

In the example below, we would like to sort by Priority (High, Normal, Low). To sort by a custom list in Excel, execute the following steps.

1. Click any cell inside the data set.

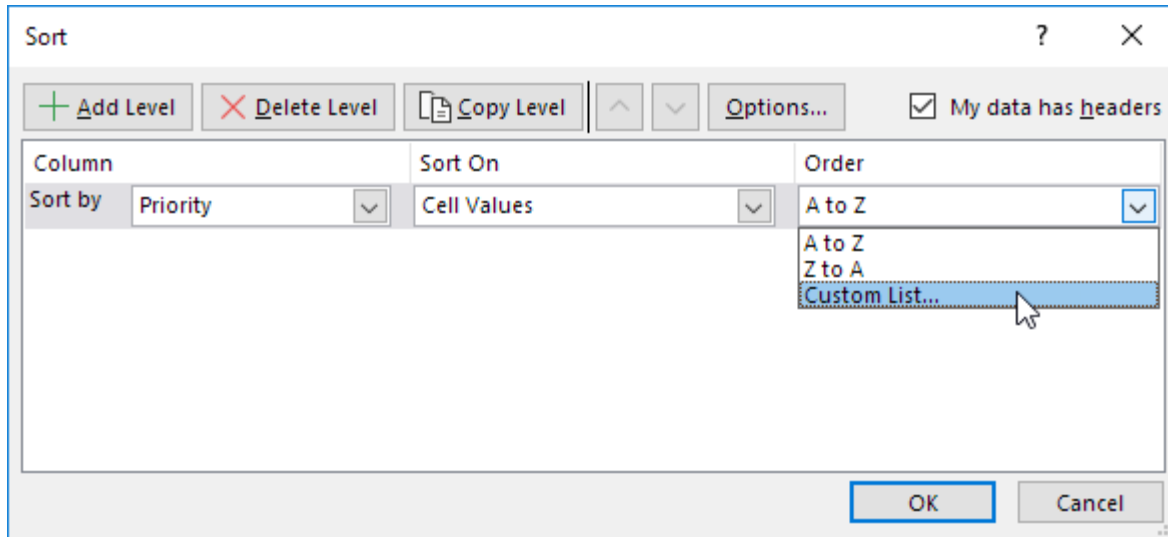
	A	B	C	D	E	F
1	Last Name	Sales	Country	Quarter	Priority	
2	Smith	\$16,753.00	UK	Qtr 3	Low	
3	Johnson	\$14,808.00	USA	Qtr 4	High	
4	Williams	\$10,644.00	UK	Qtr 2	Low	
5	Jones	\$1,390.00	USA	Qtr 3	Normal	
6	Brown	\$4,865.00	USA	Qtr 4	High	
7	Williams	\$12,438.00	UK	Qtr 1	Normal	
8	Johnson	\$9,339.00	UK	Qtr 2	High	
9	Smith	\$18,919.00	USA	Qtr 3	High	
10	Jones	\$9,213.00	USA	Qtr 4	Low	
11	Jones	\$7,433.00	UK	Qtr 1	Normal	
12	Brown	\$3,255.00	USA	Qtr 2	Normal	
13	Williams	\$14,867.00	USA	Qtr 3	Low	
14	Williams	\$19,302.00	UK	Qtr 4	High	
15	Smith	\$9,698.00	USA	Qtr 1	Normal	
16						

2. On the Data tab, in the Sort & Filter group, click Sort.



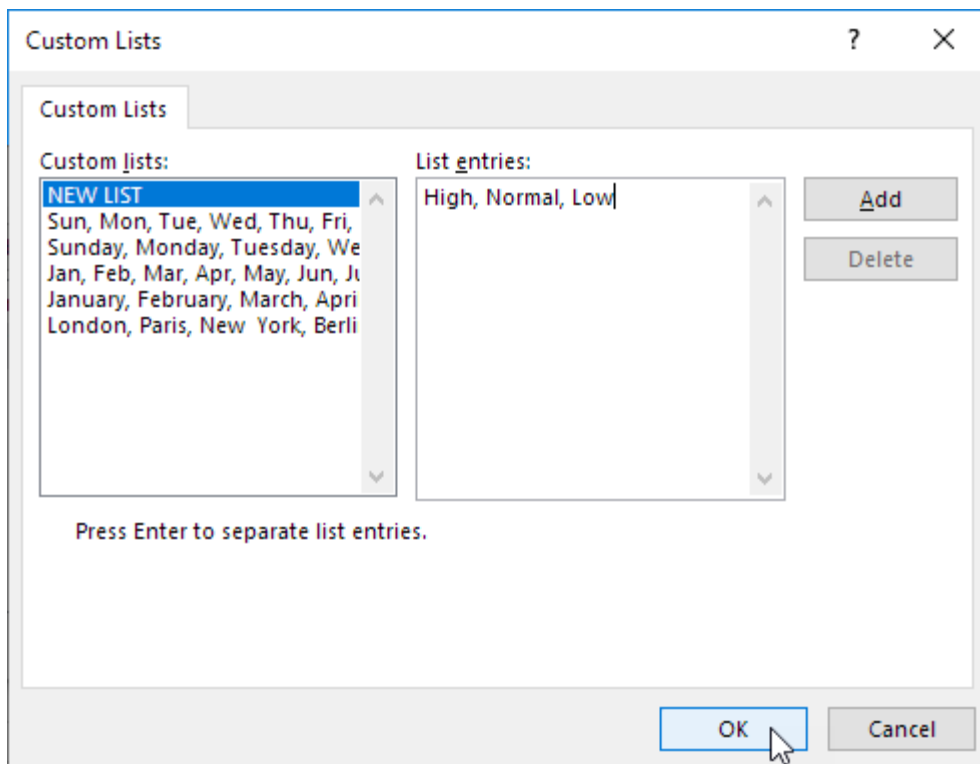
The Sort dialog box appears.

3. Select Priority from the 'Sort by' drop-down list.
4. Select Custom List from the 'Order' drop-down list.

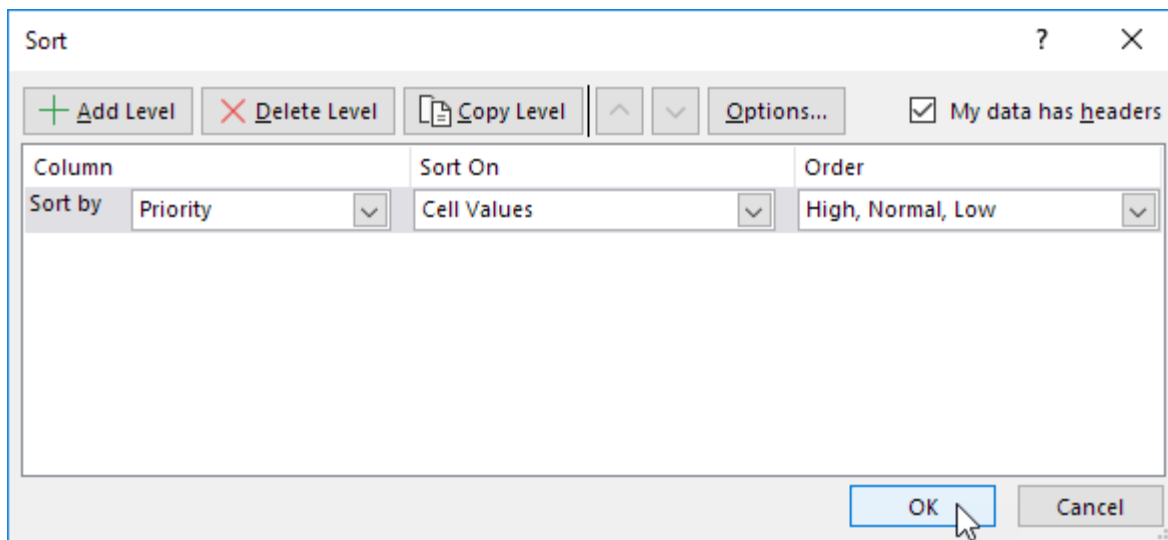


The Custom Lists dialog box appears.

5. Type the list entries.
6. Click OK.



7. Click OK.



Result. Records are sorted by Priority (High, Normal, Low).

	A	B	C	D	E	F
1	Last Name	Sales	Country	Quarter	Priority	
2	Johnson	\$14,808.00	USA	Qtr 4	High	
3	Brown	\$4,865.00	USA	Qtr 4	High	
4	Johnson	\$9,339.00	UK	Qtr 2	High	
5	Smith	\$18,919.00	USA	Qtr 3	High	
6	Williams	\$19,302.00	UK	Qtr 4	High	
7	Jones	\$1,390.00	USA	Qtr 3	Normal	
8	Williams	\$12,438.00	UK	Qtr 1	Normal	
9	Jones	\$7,433.00	UK	Qtr 1	Normal	
10	Brown	\$3,255.00	USA	Qtr 2	Normal	
11	Smith	\$9,698.00	USA	Qtr 1	Normal	
12	Smith	\$16,753.00	UK	Qtr 3	Low	
13	Williams	\$10,644.00	UK	Qtr 2	Low	
14	Jones	\$9,213.00	USA	Qtr 4	Low	
15	Williams	\$14,867.00	USA	Qtr 3	Low	
16						

Pivot Tables

Pivot tables are one of **Excel's** most powerful features. A pivot table allows you to extract the significance from a large, detailed data set.

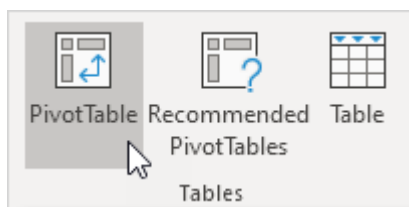
Our data set consists of 213 records and 6 fields. Order ID, Product, Category, Amount, Date and Country.

	A	B	C	D	E	F	G	H
1	Order ID	Product	Category	Amount	Date	Country		
2	1	Carrots	Vegetables	\$4,270	1/6/2016	United States		
3	2	Broccoli	Vegetables	\$8,239	1/7/2016	United Kingdom		
4	3	Banana	Fruit	\$617	1/8/2016	United States		
5	4	Banana	Fruit	\$8,384	1/10/2016	Canada		
6	5	Beans	Vegetables	\$2,626	1/10/2016	Germany		
7	6	Orange	Fruit	\$3,610	1/11/2016	United States		
8	7	Broccoli	Vegetables	\$9,062	1/11/2016	Australia		
9	8	Banana	Fruit	\$6,906	1/16/2016	New Zealand		
10	9	Apple	Fruit	\$2,417	1/16/2016	France		
11	10	Apple	Fruit	\$7,431	1/16/2016	Canada		

Insert a Pivot Table

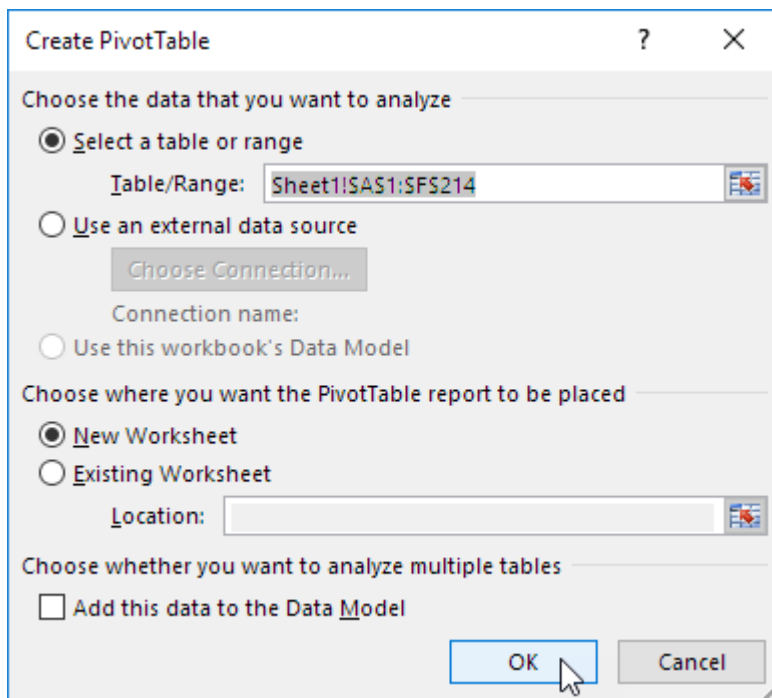
To insert a **pivot table**, execute the following steps.

1. Click any single cell inside the data set.
2. On the Insert tab, in the Tables group, click PivotTable.



The following dialog box appears. Excel automatically selects the data for you. The default location for a new pivot table is New Worksheet.

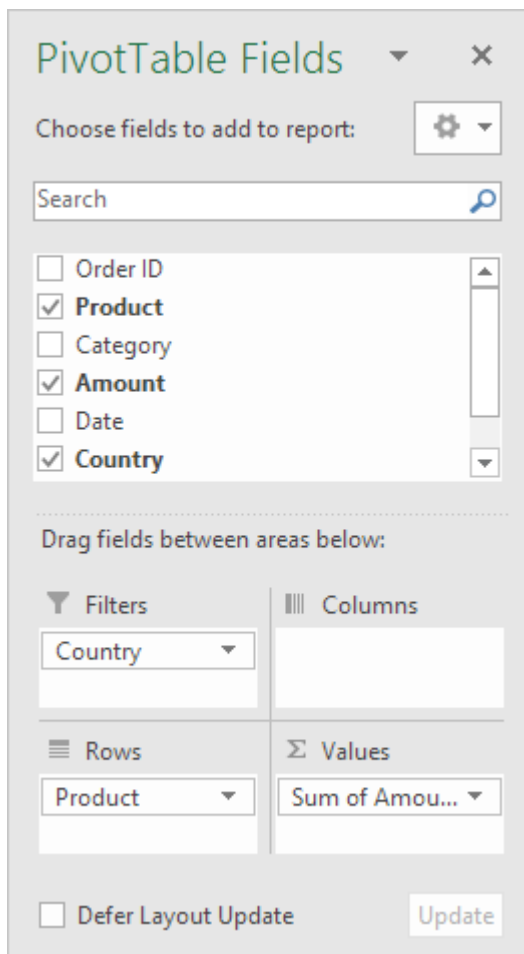
3. Click OK.



Drag fields

The **PivotTable Fields pane** appears. To get the total amount exported of each product, drag the following fields to the different areas.

1. Product field to the Rows area.
2. Amount field to the Values area.
3. Country field to the Filters area.



Below you can find the pivot table. Bananas are our main export product. That's how easy pivot tables can be! :-)

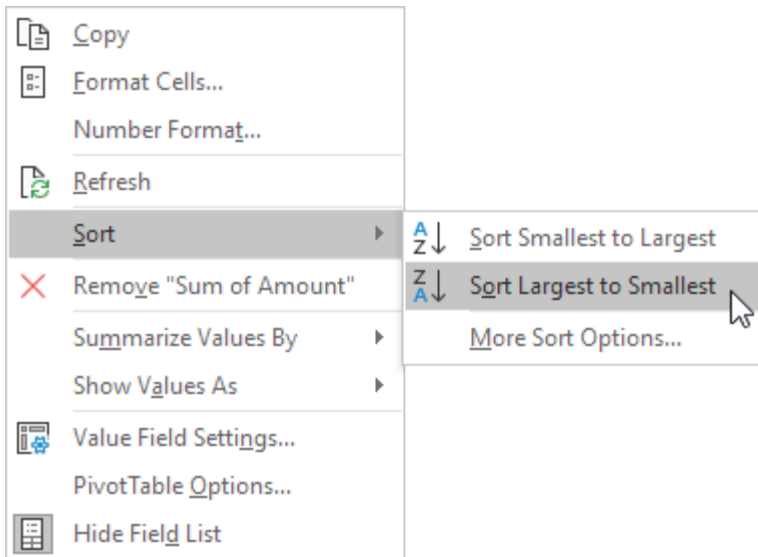
	A	B	C
1	Country	(All)	
2			
3	Row Labels	Sum of Amount	
4	Apple	191257	
5	Banana	340295	
6	Beans	57281	
7	Broccoli	142439	
8	Carrots	136945	
9	Mango	57079	
10	Orange	104438	
11	Grand Total	1029734	
12			

Sort

To get Banana at the top of the list, sort the pivot table.

1. Click any cell inside the Sum of Amount column.

2. Right click and click on Sort, Sort Largest to Smallest.



Result.

	A	B	C
1	Country	(All) ▾	
2			
3	Row Labels ▾	Sum of Amount	
4	Banana	340295	
5	Apple	191257	
6	Broccoli	142439	
7	Carrots	136945	
8	Orange	104438	
9	Beans	57281	
10	Mango	57079	
11	Grand Total	1029734	
12			

Filter

Because we added the Country field to the Filters area, we can filter this pivot table by Country. For example, which products do we export the most to France?

1. Click the filter drop-down and select France.

Result. Apples are our main export product to France.

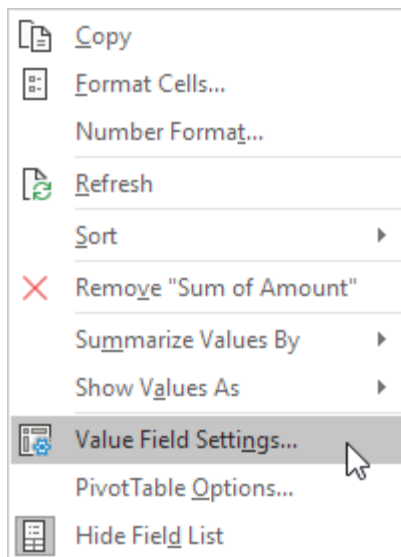
	A	B	C
1	Country	France	
2			
3	Row Labels	Sum of Amount	
4	Apple	80193	
5	Banana	36094	
6	Carrots	9104	
7	Mango	7388	
8	Broccoli	5341	
9	Orange	2256	
10	Beans	680	
11	Grand Total	141056	
12			

Note: you can use the standard filter (triangle next to Row Labels) to only show the amounts of specific products.

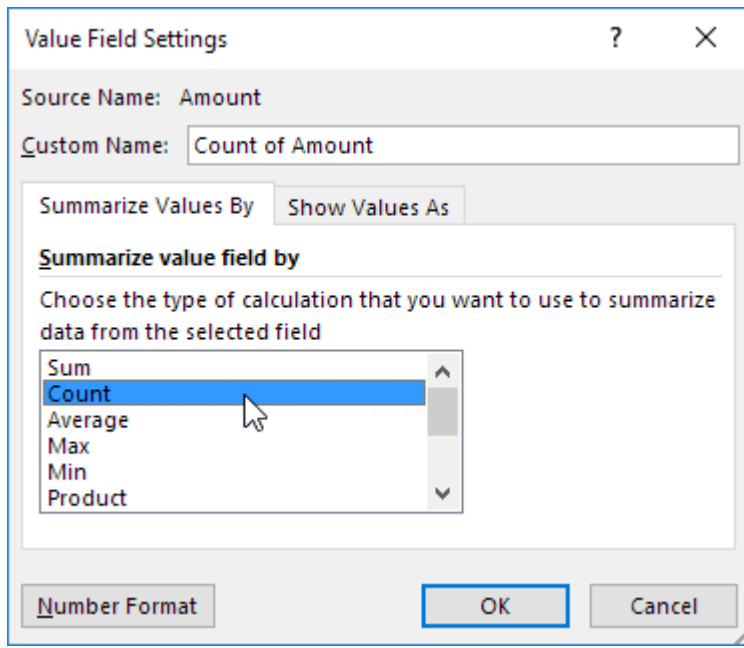
Change Summary Calculation

By default, Excel summarizes your data by either summing or counting the items. To change the type of calculation that you want to use, execute the following steps.

1. Click any cell inside the Sum of Amount column.
2. Right click and click on Value Field Settings.



3. Choose the type of calculation you want to use. For example, click Count.



4. Click OK.

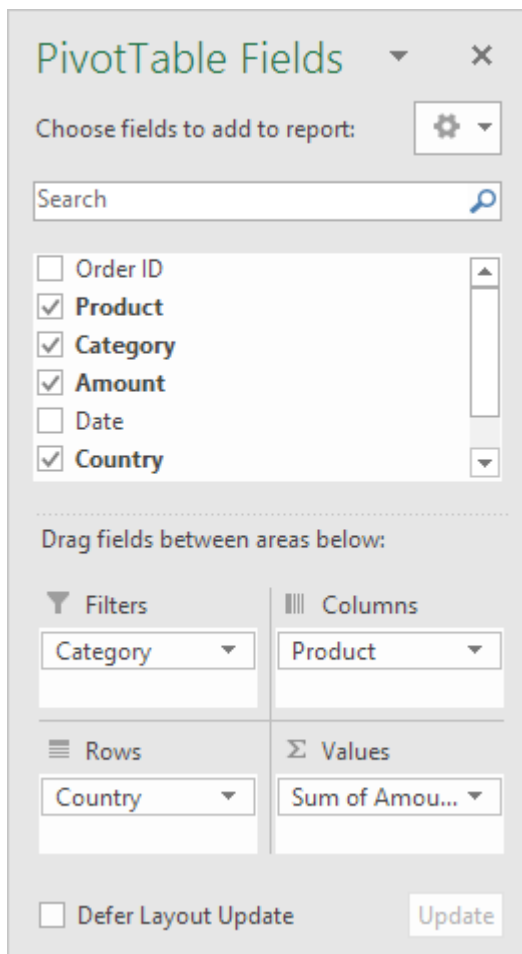
Result. 16 out of the 28 orders to France were 'Apple' orders.

	A	B	C
1	Country	France	
2			
3	Row Labels	Count of Amount	
4	Apple	16	
5	Banana	7	
6	Carrots	1	
7	Mango	1	
8	Orange	1	
9	Beans	1	
10	Broccoli	1	
11	Grand Total	28	
12			

Two-dimensional Pivot Table

If you drag a field to the Rows area and Columns area, you can create a two-dimensional pivot table. First, **insert a pivot table**. Next, to get the total amount exported to each country, of each product, drag the following fields to the different areas.

1. Country field to the Rows area.
2. Product field to the Columns area.
3. Amount field to the Values area.
4. Category field to the Filters area.



Below you can find the two-dimensional pivot table.

	A	B	C	D	E	F	G	H	I	J
1	Category	(All)								
2										
3	Sum of Amount	Column								
4	Row Labels	Apple	Banana	Beans	Broccoli	Carrots	Mango	Orange	Grand Total	
5	Australia	20634	52721	14433	17953	8106	9186	8680	131713	
6	Canada	24867	33775		12407		3767	19929	94745	
7	France	80193	36094	680	5341	9104	7388	2256	141056	
8	Germany	9082	39686	29905	37197	21636	8775	8887	155168	
9	New Zealand	10332	40050		4390			12010	66782	
10	United Kingdom	17534	42908	5100	38436	41815	5600	21744	173137	
11	United States	28615	95061	7163	26715	56284	22363	30932	267133	
12	Grand Total	191257	340295	57281	142439	136945	57079	104438	1029734	
13										

To easily compare these numbers, create a pivot chart and apply a filter. Maybe this is one step too far for you at this stage, but it shows you one of the many other powerful pivot table features Excel has to offer.

