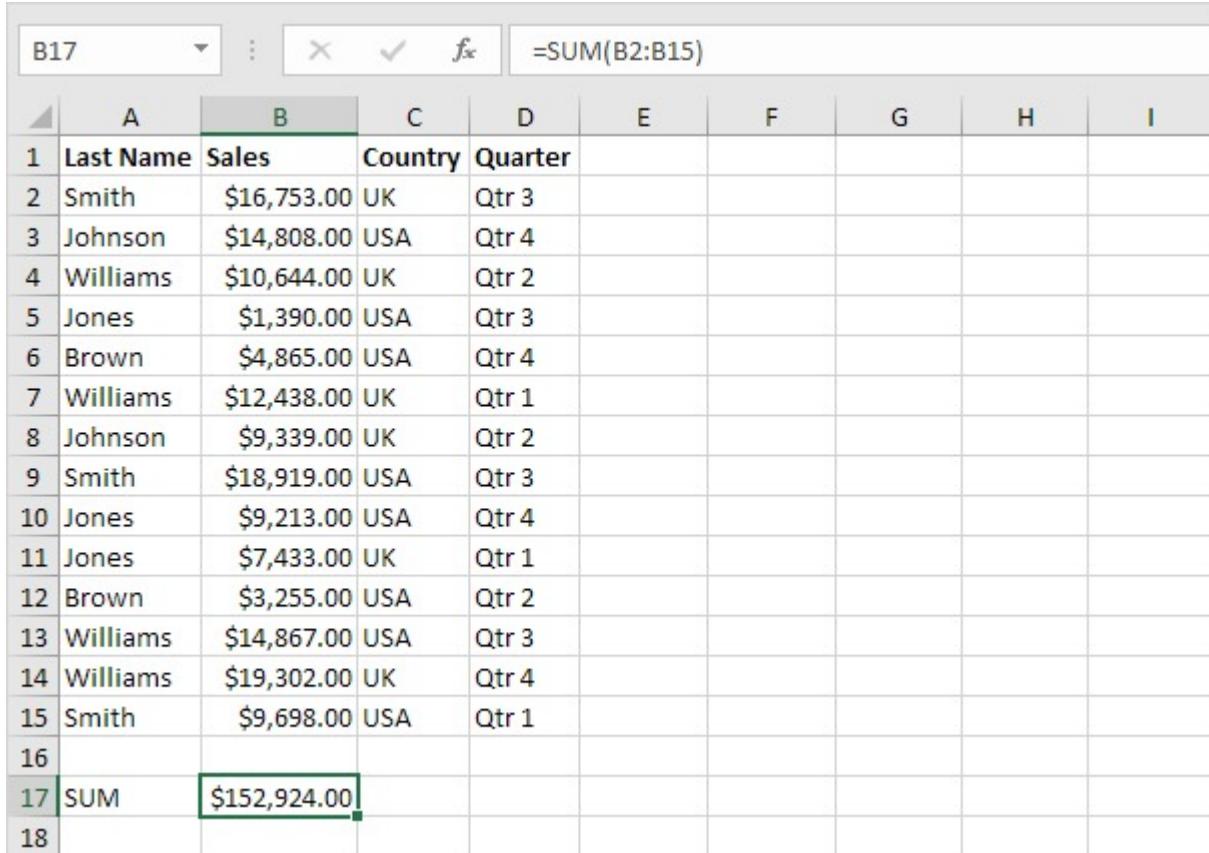# SUBTOTAL function in Excel

Use the SUBTOTAL function in Excel (instead of SUM, COUNT, MAX, etc.) to ignore rows hidden by a filter or to ignore manually hidden rows.

✦ Rows Hidden by a Filter

The SUBTOTAL function ignores rows hidden by a filter, unlike the SUM function, which includes them.

1. For example, the SUM function below calculates the total sales.

B17			×	✓	fx	=SUM(B2:B15)			
	A	B	C	D	E	F	G	H	I
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									
17	SUM	$152,924.00							
18									

2. Apply a filter.

3. The SUM function includes rows hidden by a filter.

| B17 | ▾ | ⋮ | ✕ | ✓ | *fx* | =SUM(B2:B15) |

	A	B	C	D	E	F	G	H	I
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									
17	SUM	$152,924.00							
18									

4. The SUBTOTAL function ignores rows hidden by a filter and calculates the correct result.

| B17 | ▾ | ⋮ | ✕ | ✓ | *fx* | =SUBTOTAL(109,B2:B15) |

	A	B	C	D	E	F	G	H	I
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									
17	SUBTOTAL	$28,886.00							
18									

Note: 109 is the argument for Sum if you use the SUBTOTAL function.

5. It's not easy to remember which argument belongs to which function. Fortunately, the AutoComplete feature in Excel helps you with this.

| COUNTIF | ▾ | ⋮ | ✕ | ✓ | *fx* | =SUBTOTAL(109 |

	A	B	C	D	E		H	I
1	Last Nan ▾	Sales ▾	Count ⏷	Quart ⏷		▦ 1 - AVERAGE		
3	Johnson	$14,808.00	USA	Qtr 4		▦ 2 - COUNT		
6	Brown	$4,865.00	USA	Qtr 4		▦ 3 - COUNTA		
10	Jones	$9,213.00	USA	Qtr 4		▦ 4 - MAX		
16						▦ 5 - MIN		
17	SUBTOTAL	=SUBTOTAL(109				▦ 6 - PRODUCT		
18			SUBTOTAL(**function_num**, ref1, ...)			▦ 7 - STDEV.S		
19						▦ 8 - STDEV.P		
20						▦ 9 - SUM		
21						▦ 10 - VAR.S		
22						▦ 11 - VAR.P		
23						▦ 101 - AVERAGE		
24						▦ 102 - COUNT		
25						▦ 103 - COUNTA		
						▦ 104 - MAX		
						▦ 105 - MIN		
						▦ 106 - PRODUCT		

					107 - STDEV.S
26					108 - STDEV.P
27					109 - SUM
28					110 - VAR.S
29					111 - VAR.P
30					

Note: instead of using 101 (AVERAGE) for the first argument, you could also use 1 (AVERAGE), instead of using 102 (COUNT), you could also use 2 (COUNT), etc. When filtering data, there's no difference between the numbers 101-111 and the numbers 1-11.

✦ Manually Hidden Rows

The SUBTOTAL function can ignore manually hidden rows. This is helpful when you manually hide rows but still want an accurate total based on what's visible.

1. For example, the SUM function below sums a range of cells.

B5			fx	=SUM(A1:A3)					
	A	B	C	D	E	F	G	H	I
1	1								
2	10								
3	5								
4									
5	SUM	16							
6									

2. Hide row 2.

3. The SUM function includes manually hidden rows.

B5			fx	=SUM(A1:A3)					
	A	B	C	D	E	F	G	H	I
1	1								
3	5								
4									
5	SUM	16							
6									

4. The SUBTOTAL function ignores manually hidden rows and calculates the correct result.

B5			fx	=SUBTOTAL(109,A1:A3)					
	A	B	C	D	E	F	G	H	I
1	1								
3	5								
4									
5	SUBTOTAL	6							
6									

Caution: the numbers 101-111 ignore manually hidden rows. However, the numbers 1-11

include manually hidden rows!
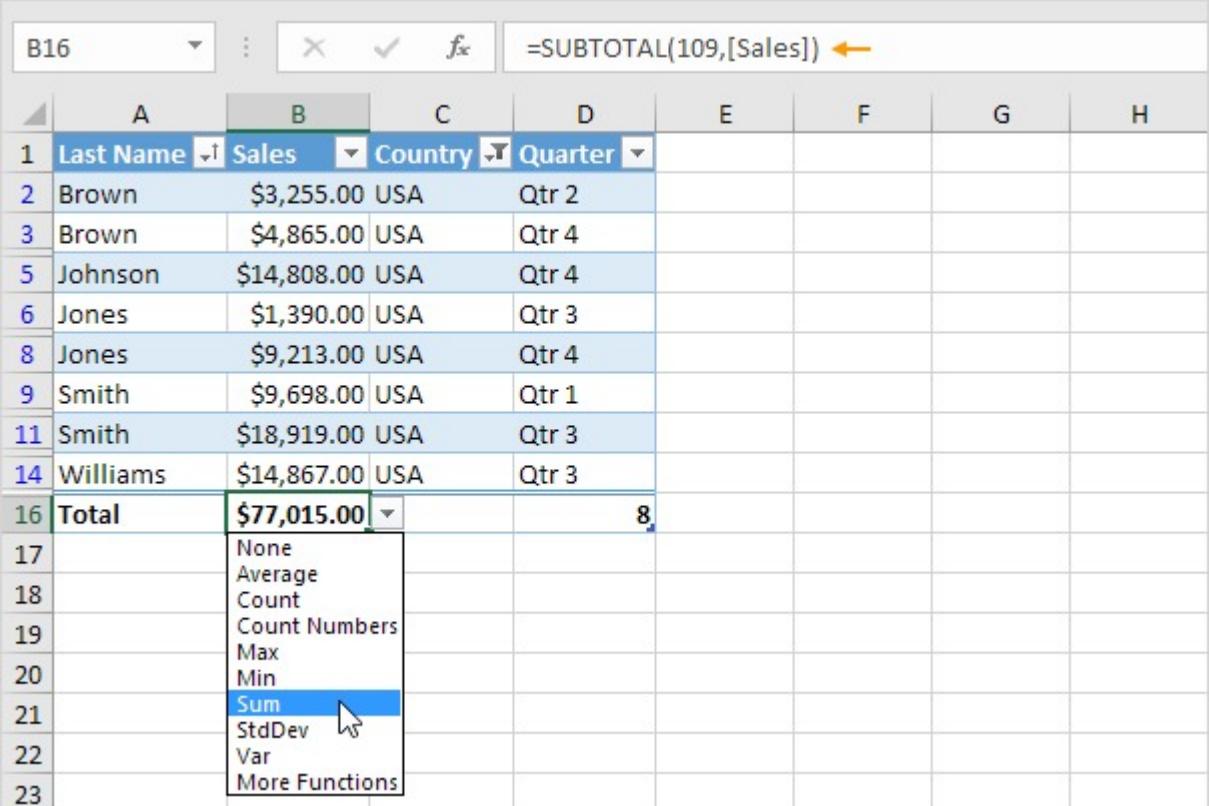
✦ Automatic Subtotals

We saved the best for last. Excel can automatically add SUBTOTAL functions for you.

1. The first option. Create a table and add a total row to the bottom of the table. Next, click any cell in the last row to automatically add a SUBTOTAL function.

Explanation: in this example, we also filtered by Country. Excel uses the SUBTOTAL function to correctly calculate the total sales in the USA.

2. The second option. On the Data tab, in the Outline group, click Subtotal to outline your data.

	Last Name	Sales	Product Type	Company
1	Last Name	Sales	Product Type	Company
2	Jones	$1,390.00	DF-3	Kung Food
3	Williams	$1,243.00	FD-2	Kung Food
4	Johnson	$9,339.00	DC-1	Kung Food
5	Jones	$7,433.00	DF-7	Kung Food
6		$19,405.00		Kung Food Total
7	Brown	$3,255.00	FD-2	Pancakes on the Rocks
8	Williams	$1,930.00	A-34	Pancakes on the Rocks
9		$5,185.00		Pancakes on the Rocks Total
10	Williams	$1,064.00	EE-2	Peace A Pizza
11	Brown	$4,865.00	EEE-45	Peace A Pizza
12	Smith	$9,698.00	F-3334	Peace A Pizza
13		$15,627.00		Peace A Pizza Total
14	Smith	$1,675.00	EEE-312	Wok N Roll
15	Johnson	$1,480.00	DC-1	Wok N Roll
16	Smith	$1,891.00	EEE-312	Wok N Roll
17	Jones	$9,213.00	FG-5	Wok N Roll
18	Williams	$1,486.00	A-34	Wok N Roll
19		$15,745.00		Wok N Roll Total
20		$55,962.00		Grand Total
21				

Explanation: in this example, Excel automatically added 5 SUBTOTAL functions (B6, B9, B13, B19 and B20). Follow the link for more information.

Chapter

- Filter

Learn more, it's easy

⤓ Download Excel File

- subtotal.xlsx

Next Chapter

- Conditional Formatting

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