How can I calculate a 3-month moving average in Excel?

Authored by

stats writer

June 22, 2024

To calculate a 3-month moving average in Excel, you can use the AVERAGE function combined with the OFFSET function. The AVERAGE function will calculate the average of a range of cells, while the OFFSET function allows you to select a specific number of cells within a range. By using these two functions together, you can create a formula that calculates the average of the previous three months' data. This will give you a rolling average that takes into account the most recent three months of data. This can be useful for analyzing trends and smoothing out fluctuations in data over time.

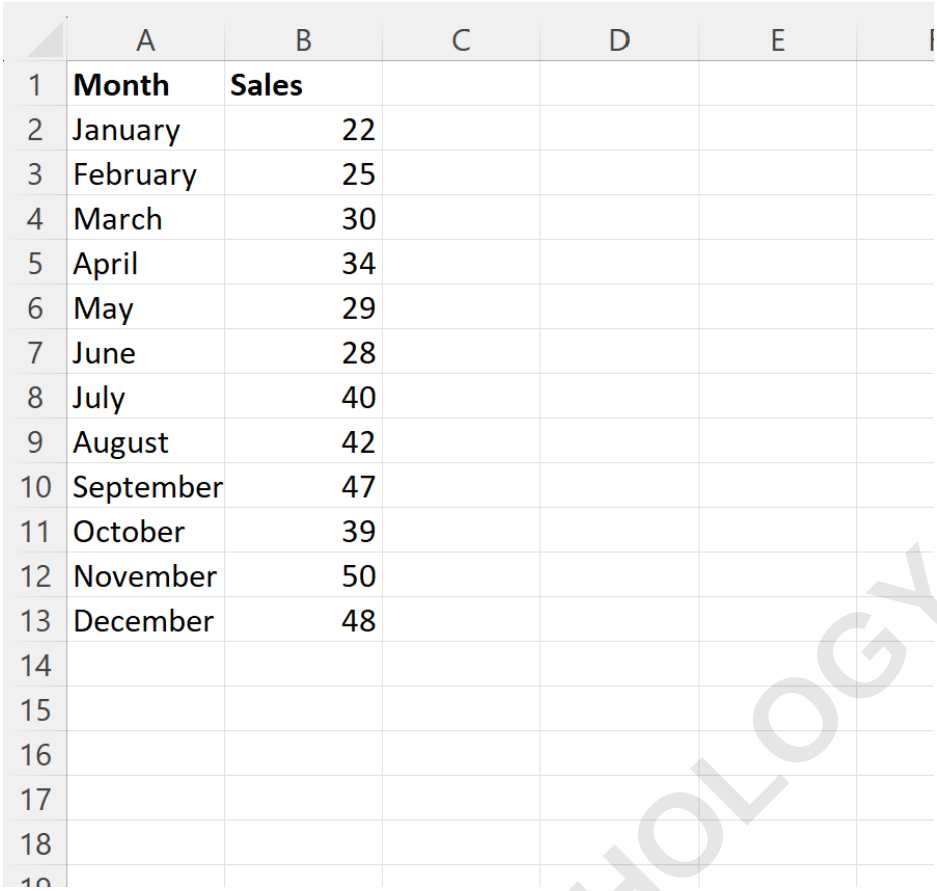
Excel: Calculate 3-Month Moving Average

In time series analysis, a 3-month moving average is simply the average value of the 3 months leading up to and including a certain month.

The following example shows how to calculate a 3-month moving average for a dataset in Excel.

Example: Calculate 3-Month Moving Average in Excel

Suppose we have the following dataset that shows the total sales made during 12 consecutive months by some company:

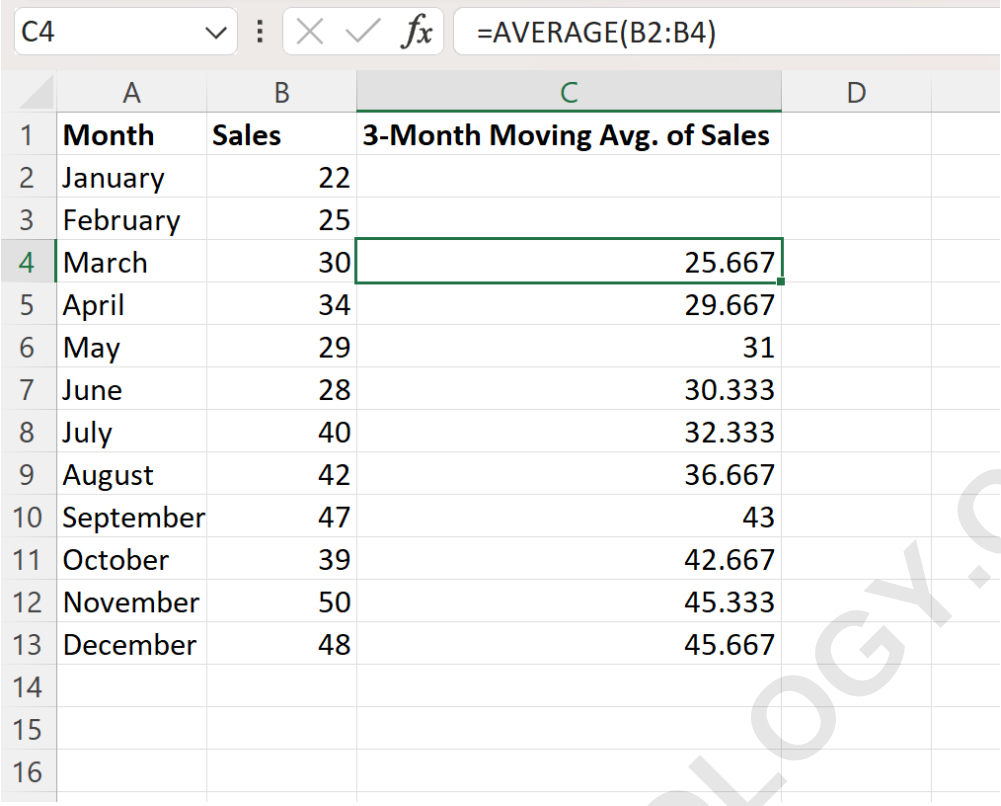


	A	B	C	D	E
1	**Month**	**Sales**			
2	January	22			
3	February	25			
4	March	30			
5	April	34			
6	May	29			
7	June	28			
8	July	40			
9	August	42			
10	September	47			
11	October	39			
12	November	50			
13	December	48			
14					
15					
16					
17					
18					

To calculate the 3-month moving average of the sales values, we can type the following formula into cell C4:

=AVERAGE(B2:B4)

We can then click and drag this formula down to each remaining cell in column C:



C4 =AVERAGE(B2:B4)

	A	B	C	D
1	**Month**	**Sales**	**3-Month Moving Avg. of Sales**	
2	January	22		
3	February	25		
4	March	30	25.667	
5	April	34	29.667	
6	May	29	31	
7	June	28	30.333	
8	July	40	32.333	
9	August	42	36.667	
10	September	47	43	
11	October	39	42.667	
12	November	50	45.333	
13	December	48	45.667	
14				
15				
16				

The values in column C represent the 3-month moving average of the values in the sales column.

For example, the 3-month moving average of sales in March is 25.667.

We can confirm this is correct by manually calculating the average of sales for the three months leading up to and including this month:

	A	B	C	D
1	**Month**	**Sales**	**3-Month Moving Avg. of Sales**	
2	January	22		
3	February	25		
4	March	30	25.667	
5	April	34	29.667	
6	May	29	31	
7	June	28	30.333	
8	July	40	32.333	
9	August	42	36.667	
10	September	47	43	
11	October	39	42.667	
12	November	50	45.333	
13	December	48	45.667	
14				
15				
16				
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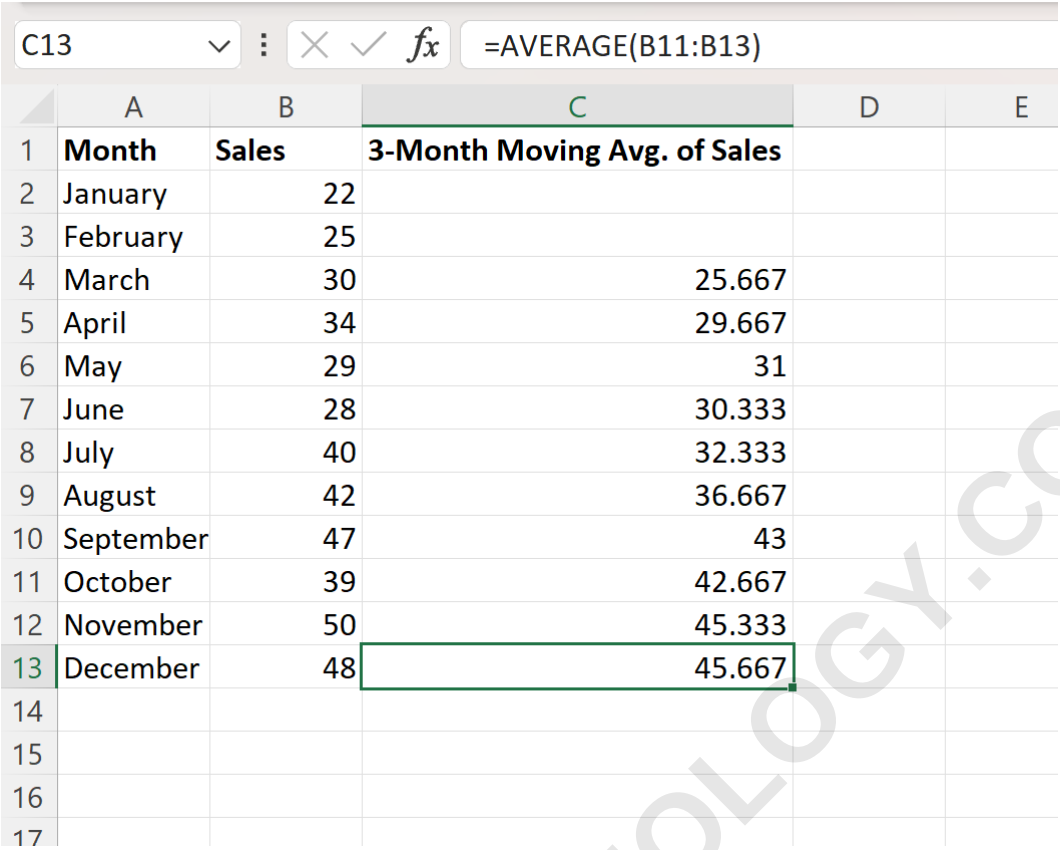
3-Month Moving Avg. of Sales in March: (22+25+30) / 3 = 25.667

This matches the value calculated by our formula.

Since we clicked and dragged this formula down to each cell in column C, the formula automatically updated to use the most recent 3 months to calculate each 3-month moving average.

For example, cell C13 uses the range C11:C13 to calculate its 3-month moving average:



	A	B	C	D	E
1	**Month**	**Sales**	**3-Month Moving Avg. of Sales**		
2	January	22			
3	February	25			
4	March	30	25.667		
5	April	34	29.667		
6	May	29	31		
7	June	28	30.333		
8	July	40	32.333		
9	August	42	36.667		
10	September	47	43		
11	October	39	42.667		
12	November	50	45.333		
13	December	48	45.667		
14					
15					
16					
17					

Note: We had to type our formula starting in cell C4 because this represented the first date that had 3 months to use for calculating the 3-month moving average.

The following tutorials explain how to perform other common tasks in Excel: