How can I calculate a trimmed mean in Excel?”

Authored by

stats writer

June 26, 2024

A trimmed mean is a statistical measure that calculates the average of a set of data after removing a certain percentage of outliers from both ends of the data set. In Excel, this can be done by using the TRIMMEAN function. This function takes two arguments: the data set and the percentage of outliers to be removed. The result is a more accurate measure of central tendency, as it is less affected by extreme values. To calculate a trimmed mean in Excel, simply enter the function and input the appropriate values. This method can be useful for analyzing data that may contain outliers or extreme values.

Calculate a Trimmed Mean in Excel

A trimmed mean is the mean of a dataset that has been calculated after removing a specific percentage of the smallest and largest values from the dataset.

For example, a 10% trimmed mean would represent the mean of a dataset after the 10% of values from the extremities of the dataset have been removed.

To calculate a trimmed mean in Excel you can use the TRIMMEAN function, which uses the following basic syntax:

TRIMMEAN(array, percent)

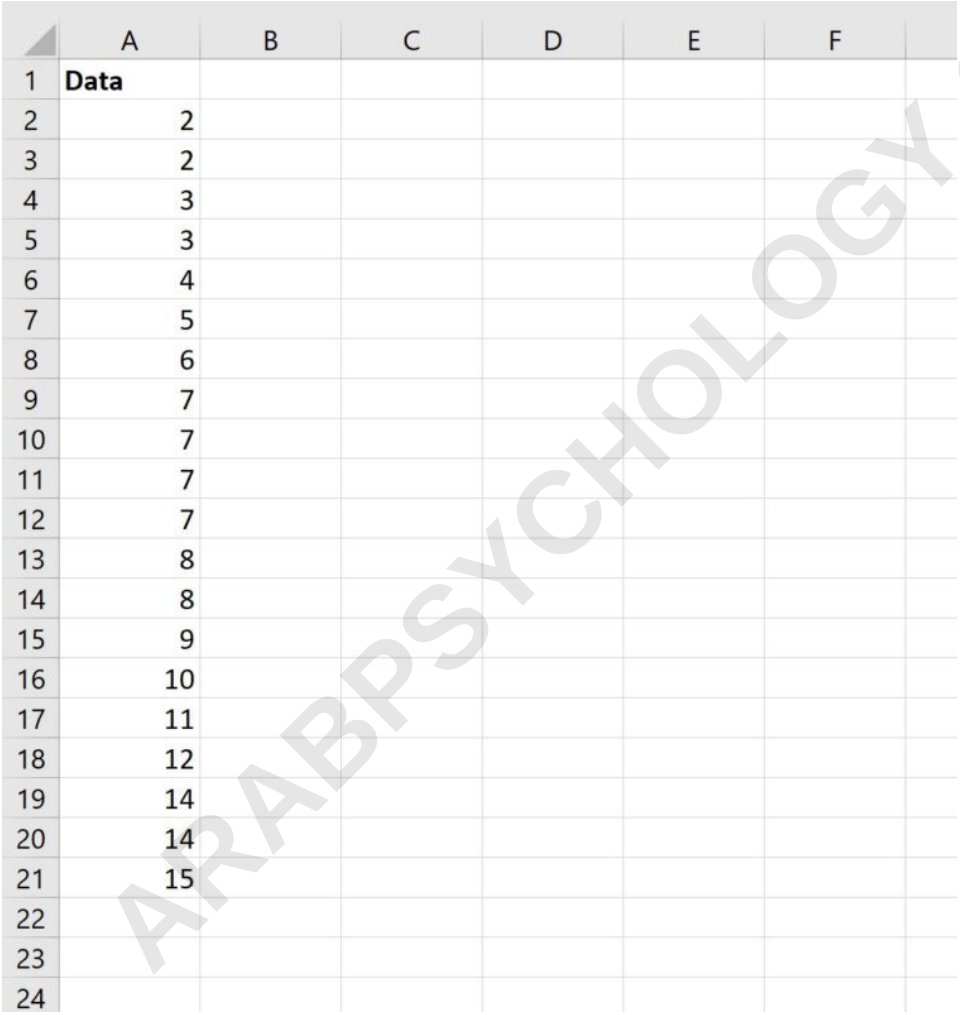
where:

array: Range containing the datasetpercent: Percent of data to exclude (between 0 and 1)

The following example shows how to use this function to calculate a trimmed mean in practice.

Example: Calculate Trimmed Mean in Excel

Suppose we have the following dataset in Excel:

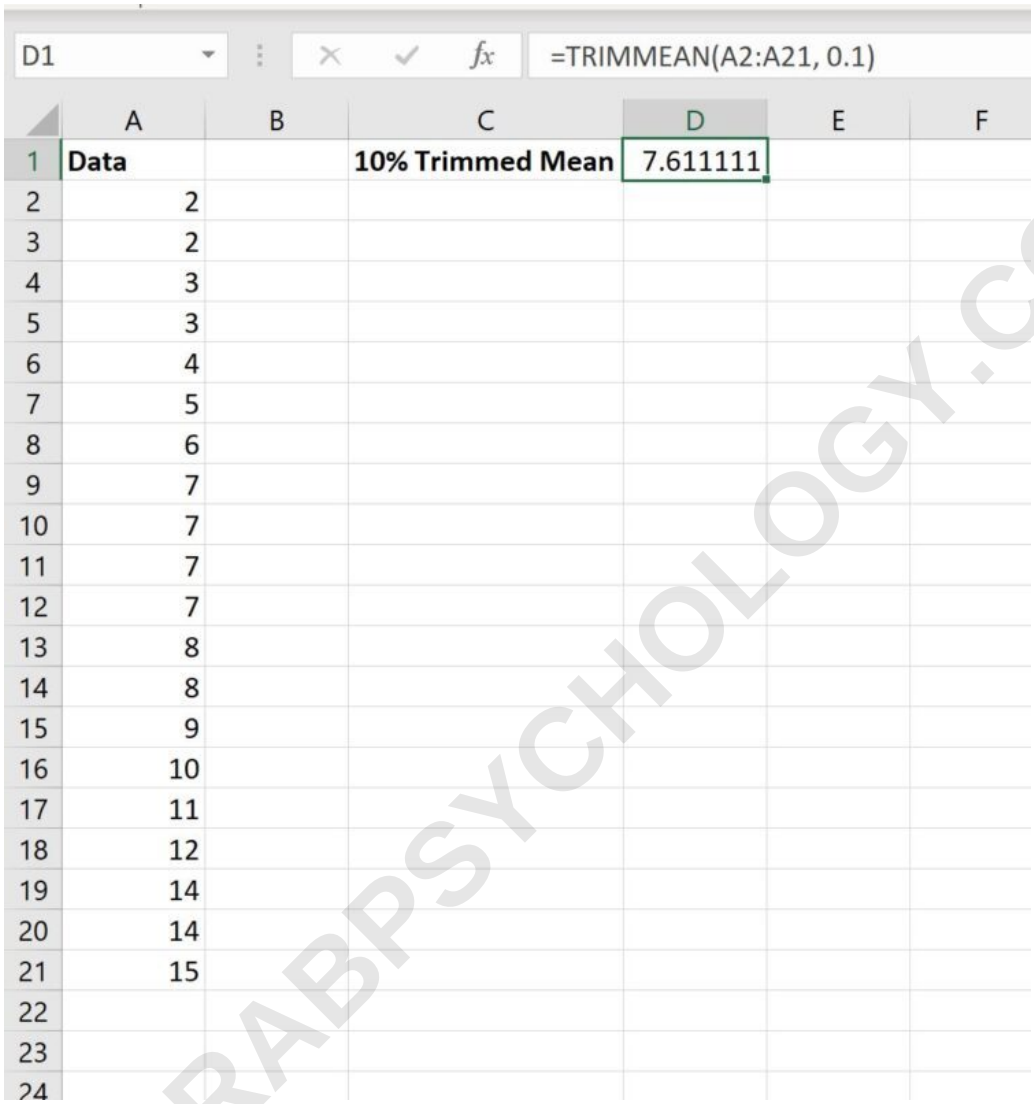


	A	B	C	D	E	F
1	Data					
2	2					
3	2					
4	3					
5	3					
6	4					
7	5					
8	6					
9	7					
10	7					
11	7					
12	7					
13	8					
14	8					
15	9					
16	10					
17	11					
18	12					
19	14					
20	14					
21	15					
22						
23						
24						

We can use the following formula to calculate a 10% trimmed mean for this dataset:

TRIMMEAN(A2:A21, 0.1)

The following screenshot shows how to use this formula in practice:



The 10% trimmed mean of the dataset is 7.61.

In this particular dataset there are 20 total values. Thus, 10% of 20 is 2.

So, to calculate a 10% trimmed mean in this example

Excel must remove two values from the extremities of the dataset.

We can confirm the formula is correct by manually calculating this trimmed mean ourselves:

10% Trimmed Mean: (2+3+3+4+5+6+7+7+7+7+8+8+9+10+11+12+14+14) / 18 = 7.61.

Note that in this particular example, the values that were removed from the extremities were clearly not outliers.

However, a trimmed mean is most useful in practice when there are extreme outliers in the dataset and you'd like to calculate the mean value without allowing these outliers to .

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