How do I use the SUMSQ function in Excel?

Authored by

stats writer

June 27, 2024

The SUMSQ function in Excel is a mathematical function that allows users to calculate the sum of squares for a given set of numbers. This function is useful for performing statistical analysis and can be used to calculate the variance and standard deviation of a data set. To use the SUMSQ function, you must select a cell where you want the result to appear and then enter "=SUMSQ(" followed by the range of numbers or cells you want to calculate the sum of squares for. Pressing enter will display the result. The SUMSQ function is a valuable tool for efficiently calculating sums of squares in Excel.

Use SUMSQ in Excel (With Example)

You can use the SUMSQ function in Excel to calculate the sum of squares for a given sample.

This function uses the following basic syntax:

=SUMSQ(value1, value2, value3, ...)

Here's the formula that SUMSQ actually uses:

Sum of squares = Σxi2

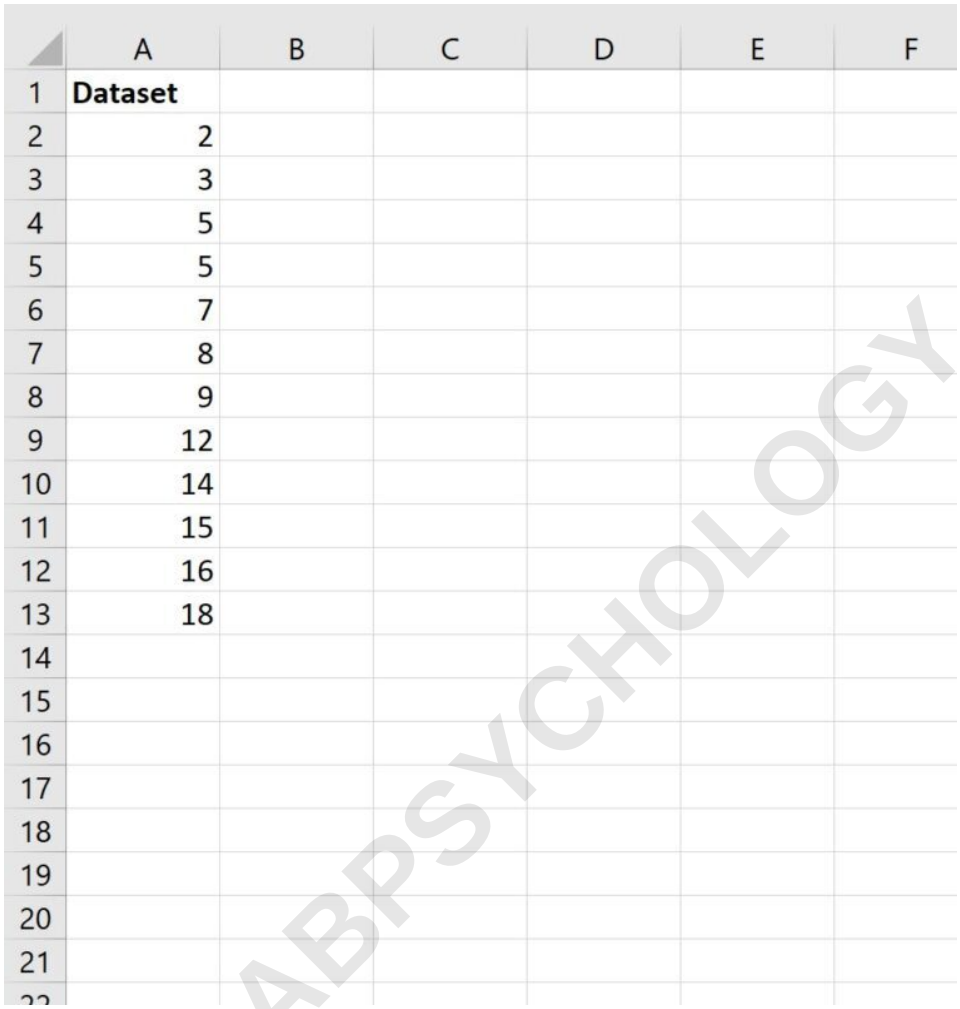
where:

Σ: A fancy symbol that means "sum"xi: The ith data value

The following example shows how to use this function in practice.

Example: How to Use DEVSQ in Excel

Suppose we have the following dataset in Excel



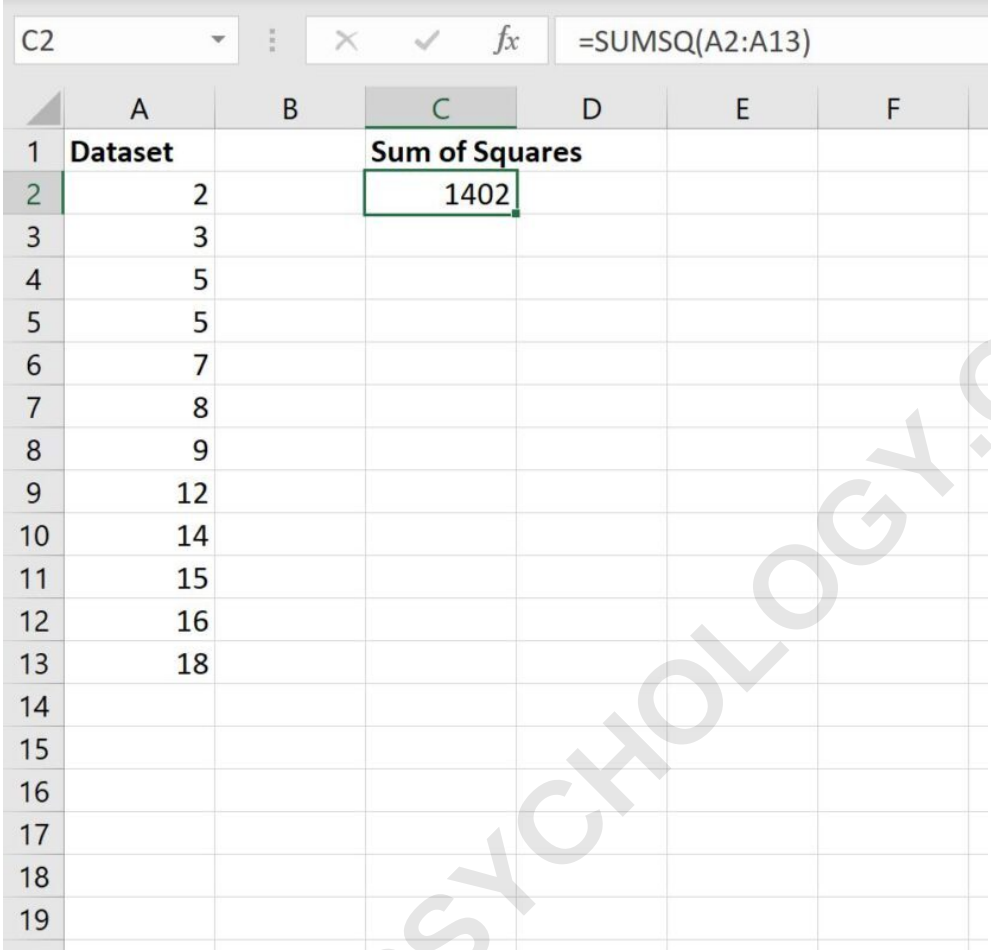
	A	B	C	D	E	F
1	Dataset					
2	2					
3	3					
4	5					
5	5					
6	7					
7	8					
8	9					
9	12					
10	14					
11	15					
12	16					
13	18					
14						
15						
16						
17						
18						
19						
20						
21						

We can use the following formula to calculated the sum of squares for this dataset:

=SUMSQ(A2:A13)

The following screenshot shows how to use this

formula in practice:



The sum of squares turns out to be 1,402.

We can confirm this is correct by manually calculating the sum of squares for this dataset:

Sum of squares = Σxi2Sum of squares = 22 + 32 + 52 + 52 + 72 + 82 + 92 + 122 + 142 + 152 + 162 + 182Sum of squares = 4 + 9 + 25 + 25 + 49 + 64 + 81 + 144 + 196 + 225 + 256 + 324Sum of squares = 1,402

The sum of squares turns out to be 1,402.

This matches the value that we calculated using the SUMSQ function.

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