How can I use the DEVSQ function in Excel?

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The DEVSQ function in Excel is a statistical tool that allows users to calculate the sum of squares of deviations from the mean of a set of numbers. This function can be used to measure the variability or dispersion of data points in a given dataset. To use the DEVSQ function, simply input the range of cells containing the data values as the argument, and the function will return the sum of squares of deviations. This can provide valuable insights into the distribution and patterns of data, making it a useful tool for data analysis and decision making.

Use DEVSQ in Excel (With Example)

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

This function uses the following basic syntax:

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

Here's the formula that DEVSQ actually uses:

Sum of squares of deviations = Σ(xi - x)2

where:

xi: The ith data valuex: The sample mean

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

Example: How to Use DEVSQ in Excel

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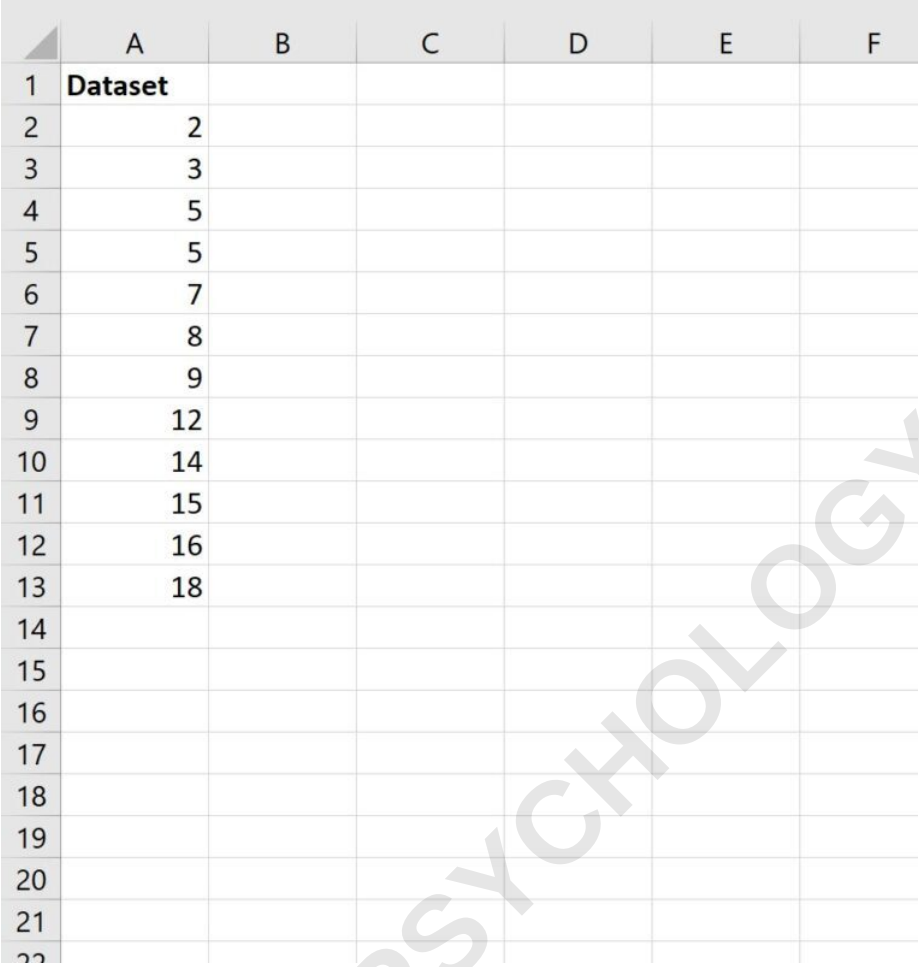
Suppose we have the following dataset in Excel:



	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						

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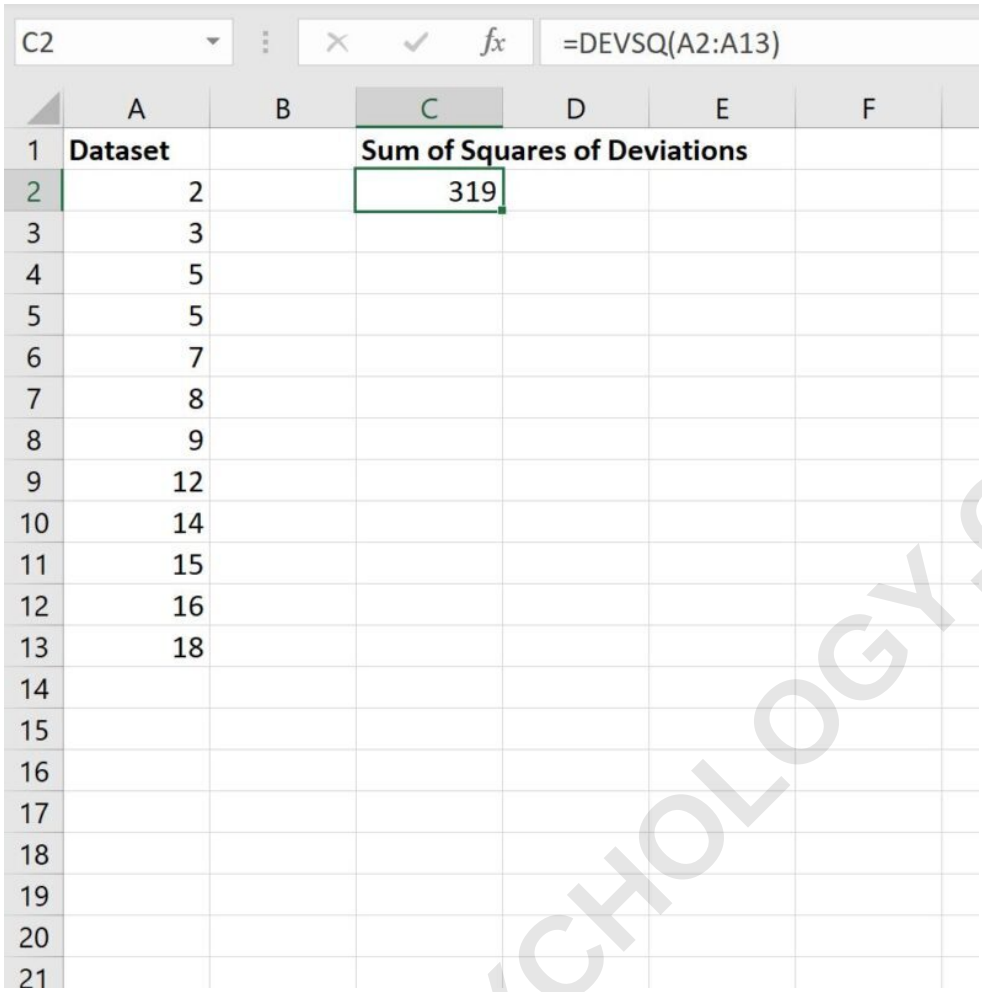
We can use the following formula to calculated the sum of squares of deviations for this dataset:

=DEVSQ(A2:A13)

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



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The sum of squares of deviations turns out to be 319.

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

Knowing this, we can simply plug in the values from the dataset into the formula for sum of squares of deviations:

Sum of squares of deviations = Σ(xi - x)2Sum of squares

of deviations = (2-9.5)2 + (3-9.5)2 + (5-9.5)2 + (5-9.5)2 + (7-9.5)2 + (8-9.5)2 + (9-9.5)2 + (12-9.5)2 + (14-9.5)2 + (15-9.5)2 + (16-9.5)2 + (18-9.5)2Sum of squares of deviations = 56.25 + 42.25 + 20.25 + 20.25 + 6.25 + 2.25 + 0.25 + 6.25 + 20.25 + 30.25 + 42.25 + 72.25Sum of squares of deviations = 319

The sum of squares of deviations turns out to be 319.

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

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

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