How can I use the DEVSQ function in Google Sheets? Can you provide an example?

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The DEVSQ function is a statistical function in Google Sheets that calculates the sum of squared deviations from the mean of a given data set. This function can be useful in analyzing and understanding the variability of a data set. To use the DEVSQ function, simply enter the data range or array as the argument. For example, "=DEVSQ(A1:A10)" would return the sum of squared deviations for the values in cells A1 to A10. This function can also be combined with other functions to perform more complex statistical analysis.

Use DEVSQ in Google Sheets (With Example)

You can use the DEVSQ function in Google Sheets 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 Google Sheets

Suppose we have the following dataset in Google Sheets:

	A	B	C	D
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				

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:

C2 fx =DEVSQ(A2:A13)

	A	B	C	D
1	Dataset		Sum of Squares of Deviations	
2	2		319	
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				

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.