

How can I use the STDEV.S function in Excel to calculate the standard deviation of a set of values?

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The STDEV.S function in Excel is a built-in statistical tool that allows users to calculate the standard deviation of a set of values. This function is particularly useful for analyzing the spread of data points in a dataset and determining the variability of the data. To use the STDEV.S function, simply input the range of values for which you want to calculate the standard deviation. The function will then return the standard deviation value, which can be used to make informed decisions and draw conclusions about the dataset. This function is a quick and efficient way to analyze data and gain valuable insights.

Estimates standard deviation based on a sample (ignores logical values and text in the sample).

The standard deviation is a measure of how widely values are dispersed from the average value (the mean).

Syntax

STDEV.S(number1,,...)

The STDEV.S function syntax has the following arguments:

Number1 Required. The first number argument corresponding to a sample of a population. You can also use a single array or a reference to an array instead of arguments separated by commas.

Number2, ... Optional. Number arguments 2 to 254 corresponding to a sample of a population. You can also use a single array or a reference to an array instead of arguments separated by commas.

Remarks

STDEV.S assumes that its arguments are a sample of the population. If your data represents the entire population, then compute the standard deviation using STDEV.P.

The standard deviation is calculated using the "n-1" method.

Arguments can either be numbers or names, arrays, or references that contain numbers.

Logical values and text representations of numbers that you type directly into the list of arguments are counted.

If an argument is an array or reference, only numbers in that array or reference are counted. Empty cells, logical values, text, or error values in the array or reference are ignored.

Arguments that are error values or text that cannot be translated into numbers cause errors.

If you want to include logical values and text representations of numbers in a reference as part of the calculation, use the STDEVA function.

STDEV.S uses the following formula:

$$\sqrt{\frac{\sum (x - \bar{x})^2}{(n-1)}}$$

where \bar{x} is the sample mean AVERAGE(number1,number2,...) and n is the sample size.

Example

Copy the example data in the following table, and paste it in cell A1 of a new Excel worksheet. For formulas to show results, select them, press F2, and then press Enter. If you need to, you can adjust the column widths to see all the data.

Data		
Strength		
1345		
1301		
1368		
1322		
1310		
1370		
1318		
1350		
1303		
1299		
Formula	Description	Result
=STDEV.S(A2:A11)	Standard deviation of breaking strength.	27.46391572