How do I use the STDEVPA function in Excel?

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July 1, 2024

The STDEVPA function in Excel is a statistical function used to calculate the standard deviation for a population. This function takes into account all values in a data set, including text and logical values. To use the STDEVPA function, simply select the cell where you want the result to appear, type "=STDEVPA(" and then select the range of cells containing the data. Press Enter and the function will return the standard deviation for the population. This function is useful for analyzing large data sets and identifying the spread of values within a population.

This article describes the formula syntax and usage of the **STDEVPA** function in Microsoft Excel.

Description

Calculates standard deviation based on the entire population given as arguments, including text and logical values. The standard deviation is a measure of how widely values are dispersed from the average value (the mean).

Syntax

STDEVPA(value1, , ...)

The STDEVPA function syntax has the following arguments:

Value1, value2, ... Value1 is required, subsequent values are optional. 1 to 255 values corresponding to a population. You can also use a single array or a reference to an array instead of arguments separated by commas.

Remarks

STDEVPA assumes that its arguments are the entire population. If your data represents a sample of the population, you must compute the standard deviation by using STDEVA.

For large sample sizes, STDEVA and STDEVPA return approximately equal values.

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

Arguments can be the following: numbers; names, arrays, or references that contain numbers; text representations of numbers; or logical values, such as TRUE and FALSE, in a reference.

Text representations of numbers that you type directly into the list of arguments are counted.

Arguments that contain TRUE evaluate as 1; arguments that contain text or FALSE evaluate as 0 (zero).

If an argument is an array or reference, only values in that array or reference are used. Empty cells and text 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 do not want to include logical values and text representations of numbers in a reference as part of the calculation, use the STDEVP function.

STDEVPA uses the following formula:

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

where x is the sample mean AVERAGE(value1,value2,...) and n is the sample size.