

How can I use the VARP function in Excel?

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The VARP function in Excel is a statistical function that calculates the variance of a population. It measures the spread of data points around the mean and gives an indication of the variability within the data set. To use the VARP function, simply select the range of data you want to analyze and enter the function into a cell. The function will return the variance value. This allows users to easily analyze and compare the variability of different data sets. It is a useful tool for making informed decisions and identifying patterns within data.

Calculates variance based on the entire population.

Important: This function has been replaced with one or more new functions that may provide improved accuracy and whose names better reflect their usage. Although this function is still available for backward compatibility, you should consider using the new functions from now on, because this function may not be available in future versions of Excel.

For more information about the new function, see [VAR.P function](#).

Syntax

VARP(number1,,...)

The VARP function syntax has the following arguments:

Number1 Required. The first number argument corresponding to a population.

Number2,... Optional. Number arguments 2 to 255 corresponding to a population.

Remarks

VARP assumes that its arguments are the entire population. If your data represents a sample of the population, then compute the variance by using VAR.

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 VARPA function.

The equation for VARP is:

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

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.

Strength		
1345		
1301		
1368		
1322		
1310		
1370		
1318		
1350		
1303		
1299		
Formula	Description	Result
=VARP(A2:A11)	Variance of breaking strengths for all the tools, assuming that only 10 tools are produced (entire population).	678.84
=VAR(A2:A11)	This example uses the VAR function, which assumes only a sample of the population, and returns a different result.	754.27