How can I use the FTEST function in Excel to compare the variances of two data sets?

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The FTEST function in Excel is a useful tool for comparing the variances of two data sets. It calculates the F statistic, which is the ratio of the variances of the two data sets. This function can be used to determine if there is a significant difference in the variances of the two data sets. To use the FTEST function, simply input the two data sets as arguments and the function will return the F statistic. This can then be compared to a critical value to determine if there is a significant difference in the variances. This function is particularly helpful in statistical analysis and decision making, as it provides a quick and efficient method for comparing variances.

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

Returns the result of an F-test. An F-test returns the two-tailed probability that the variances in array1 and array2 are not significantly different. Use this function to determine whether two samples have different variances. For example, given test scores from public and private schools, you can test whether these schools have different levels of test score diversity.

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 F.TEST function.

Syntax

FTEST(array1,array2)

The FTEST function syntax has the following arguments:

Array1 Required. The first array or range of data.

Array2 Required. The second array or range of data.

Remarks

The arguments must be either numbers or names, arrays, or references that contain numbers.

If an array or reference argument contains text, logical values, or empty cells, those values are ignored; however, cells with the value zero are included.

If the number of data points in array1 or array2 is less than 2, or if the variance of array1 or array2 is zero, FTEST returns the #DIV/0! error value.

The F-test value that is returned by the LINEST function differs from the F-test value that is returned by the FTEST function. LINEST returns the F statistic, whereas FTEST returns the probability.

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.

Data1	**Data2**	
6	20	
7	28	
9	31	
15	38	
21	40	
Formula	**Description**	**Result**
=FTEST(A2:A6,B2:B6)	F-test for the data sets above	0.64831785