How can I use the LOGNORMDIST function in Excel to calculate the cumulative probability of a lognormal distribution?

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The LOGNORMDIST function in Excel is a useful tool for calculating the cumulative probability of a lognormal distribution. This function takes in three arguments: the value, the mean, and the standard deviation. By inputting these values, the function can provide the probability of a random variable being less than or equal to the specified value in a lognormal distribution. This information is often used in statistical analysis to make predictions and decisions. By understanding how to use the LOGNORMDIST function, one can effectively analyze and interpret data in a lognormal distribution in Microsoft Excel.

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

Description

Returns the cumulative lognormal distribution of x, where ln(x) is normally distributed with parameters mean and standard_dev. Use this function to analyze data that has been logarithmically transformed.

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 LOGNORM.DIST function.

Syntax

LOGNORMDIST(x,mean,standard_dev)

The LOGNORMDIST function syntax has the following arguments:

X Required. The value at which to evaluate the function.

Mean Required. The mean of ln(x).

Standard_dev Required. The standard deviation of ln(x).

Remarks

If any argument is non-numeric, LOGNORMDIST returns the #VALUE! error value.

If x ≤ 0 or if Standard_dev ≤ 0, LOGNORMDIST returns the #NUM! error value.

The equation for the lognormal cumulative distribution function is: