How can I use the LOGINV function in Excel?

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The LOGINV function is a built-in feature in Microsoft Excel that is used to calculate the inverse of the logarithmic normal cumulative distribution. This function is primarily used in statistical analysis and is helpful in determining the probability of a given value occurring in a dataset. To use the LOGINV function, the user must provide the probability of the value occurring and the mean and standard deviation of the dataset. This function will then return the inverse value, which can be used for further analysis and decision making. Overall, the LOGINV function is a useful tool in Excel for performing advanced statistical calculations and analyzing data.

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

Description

Returns the inverse of the lognormal cumulative distribution function of x, where ln(x) is normally distributed with parameters mean and standard_dev. If p = LOGNORMDIST(x,...) then LOGINV(p,...) = x.

Use the lognormal distribution to analyze logarithmically transformed data.

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.INV function.

Syntax

LOGINV(probability, mean, standard_dev)

The LOGINV function syntax has the following arguments:

Probability Required. A probability associated with the lognormal distribution.

Mean Required. The mean of ln(x).

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

Remarks

If any argument is nonnumeric, LOGINV returns the #VALUE! error value.

If probability <= 0 or probability >= 1, LOGINV returns the #NUM! error value.

If standard_dev <= 0, LOGINV returns the #NUM! error value.

The inverse of the lognormal distribution function is:

$$\mathrm{LOGINV}(p,\mu,\sigma) = e^{[\mu+\sigma\times[\mathrm{NORMSINV}(p)]]}$$