“How can I use the BETA.DIST function in Excel?”

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The BETA.DIST function in Excel is a statistical tool that allows users to calculate the probability density function or cumulative distribution function for a beta distribution. This function can be used to analyze and interpret data sets that are characterized by a continuous range of values between zero and one, such as proportions or percentages. By inputting the necessary parameters, including the alpha and beta values for the distribution, users can easily obtain the desired probability values. This function is particularly useful for conducting statistical analysis and making informed decisions based on the characteristics of a beta distribution.

Returns the beta distribution.

The beta distribution is commonly used to study variation in the percentage of something across samples, such as the fraction of the day people spend watching television.

Syntax

BETA.DIST(x,alpha,beta,cumulative,,)

The BETA.DIST function syntax has the following arguments:

X Required. The value between A and B at which to evaluate the function

Alpha Required. A parameter of the distribution.

Beta Required. A parameter of the distribution.

Cumulative Required. A logical value that determines the form of the function. If cumulative is TRUE, BETA.DIST returns the cumulative distribution function; if FALSE, it returns the probability density function.

A Optional. A lower bound to the interval of x.

B Optional. An upper bound to the interval of x.

Remarks

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

If alpha ≤ 0 or beta ≤ 0, BETA.DIST returns the #NUM! error value.

If x < A, x > B, or A = B, BETA.DIST returns the #NUM! error value.

If you omit values for A and B, BETA.DIST uses the standard cumulative beta distribution, so that

A = 0 and B = 1

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.

Data	**Description**	
2	Value at which to evaluate the function	
8	Parameter of the distribution	
10	Parameter of the distribution	
1	Lower bound	
3	Upper bound	
Formula	**Description**	**Result**
=BETA.DIST(A2,A3,A4,TRUE,A5,A6)	Cumulative beta probability density function, for the above parameters	0.6854706
=BETA.DIST(A2,A3,A4,FALSE,A5,A6)	Beta probability density function, for the above parameters	1.4837646