

How do I use the BETA.DIST function in Google Sheets?

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The BETA.DIST function in Google Sheets is used to calculate the probability density function or cumulative distribution function for a given beta distribution. To use this function, you will need to provide the value of the random variable, the alpha and beta parameters, and optionally the lower and upper bound of the distribution. This function can be useful in analyzing data with a beta distribution, such as proportions or rates. By understanding how to use the BETA.DIST function, you can effectively analyze and interpret data in Google Sheets.

BETA.DIST function

The BETA.DIST function returns the probability of a given value as defined by the beta distribution function.

Parts of a BETA.DIST function

BETA.DIST(value, alpha, beta, lower_bound, upper_bound)

Part	Description	Notes
value	The value at which to evaluate the probability function.	The given value must be a number from the given lower boundary to the given upper boundary.
alpha	The first shape parameter of the distribution.	The given alpha must be a positive number.
beta	The second shape parameter of the distribution.	The given beta must be a positive number.
lower_bound	The lower boundary of the function.	The default lower boundary is 0.
upper_bound	The upper boundary of the function.	The default upper boundary is 1.

Sample formulas

BETA.DIST(0.65, 1.234, 7, 0.5, 3)

BETA.DIST(0.42, 3, 8)

BETA.DIST(0.92, 0.5, 0.7)

BETA.DIST(A5, 0.5, 0.7, -1, 1)

Note

You can use BETADIST or BETA.DIST to perform this function.

Example

In this example, the cumulative probability of beta distribution at 0.3 is parameterized by an alpha of 5 and a beta of 1, defined over :

	A	B	C	D	E	F
1	Value	Alpha	Beta	Lower bound	Upper bound	Solution
2	0.3	5	1	-1	1	0.1160290625
3	0.3	5	1	-1	1	=BETA.DIST(0.3, 5, 1, -1, 1)
4	0.3	5	1	-1	1	=BETA.DIST(A4, B4, C4, D4, E4)

Related function

BETA.INV: The BETA.INV function returns the value of the inverse beta distribution function for a given probability.