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

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The GAMMA.DIST function in Google Sheets is a mathematical tool that allows users to calculate the gamma distribution of a given set of data. This function can be used to determine the probability of a certain value occurring within a given range, based on the shape and scale parameters of the gamma distribution. To use this function, users must input the required arguments, such as the value, shape, and scale, into the designated cells of the function. The result will then be displayed in the cell where the function is entered. This function is helpful for analyzing and predicting outcomes in various fields such as finance, engineering, and economics.

GAMMA.DIST

The GAMMA.DIST function calculates the gamma distribution, a 2-parameter continuous probability distribution.

Sample Usage

```
GAMMA.DIST(4.79, 1.234, 7, TRUE)
```

```
GAMMA.DIST(A1, B1, C1, FALSE)
```

Syntax

```
GAMMA.DIST(x, alpha, beta, cumulative)
```

`x` - The input to the gamma probability distribution function. The value at which to evaluate the function.

`alpha` - The shape of gamma distribution.

`beta` - The scale of the distribution.

`cumulative` - Logical value that determines the form of the function.

If `TRUE: GAMMA.DIST` returns the left-tailed cumulative distribution function.

If `FALSE: GAMMA.DIST` returns the probability density function.

Notes

`x`, `alpha`, and `beta` must be numeric.

`alpha` and `beta` must be greater than zero.

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If `alpha` is less than or equal to `1` and `cumulative` is `FALSE`, then `x` must be greater than zero; otherwise, `x` must be greater than or equal to zero.

`GAMMA.DIST` is synonymous with `GAMMADIST`.

The chi-squared distribution is a special case of the gamma distribution. For an integer `n > 0`, `GAMMA.DIST(x, n/2, 2, cumulative)` is equivalent to `CHISQ.DIST(x, n, cumulative)`.

See Also

`CHISQ.DIST`: Calculates the left-tailed chi-squared distribution, often used in hypothesis testing.

`GAMMADIST`: Calculates the gamma distribution, a two-parameter continuous probability distribution.

Example

Evaluate the probability density function of the gamma distribution at `x = 5` with `alpha = 3.14` and `beta = 2`.

	A	B	C	D
1	**x**	**alpha**	**beta**	**solution**
2	5	3.14	2	0.1276550316
4	5	3.14	2	=GAMMA.DIST(5, 3.14, 2, FALSE)
5	5	3.14	2	=GAMMA.DIST(A2, B2, C2, FALSE)

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