? How do I use the F.INV function in Google Sheets?

Authored by

stats writer

June 30, 2024

The F.INV function in Google Sheets is a statistical function that calculates the inverse of the cumulative distribution function for a given probability and degrees of freedom. It is commonly used to determine the critical value for a one-tailed F-test in statistical analysis. To use this function, simply enter the required parameters in the designated cells, including the probability and degrees of freedom, and the function will return the critical value. This can help users make informed decisions and draw accurate conclusions in their data analysis.

F.INV

Calculates the inverse of the left-tailed F probability distribution. Also called the Fisher-Snedecor distribution or Snedecor's F distribution.

Sample Usage

```
F.INV(0.42, 2, 3)
```

```
F.INV(A2, B2, C2)
```

Syntax

```
F.INV(probability, degrees_freedom1, degrees_freedom2)
```

`probability` - The probability associated with the left-tailed F-distribution.

Must be greater than `0` and less than `1`.

`degrees_freedom1` - The number of degrees of freedom of the numerator of the test statistic.

`degrees_freedom2` - The number of degrees of freedom of the denominator of the test statistic.

Notes

Both `degrees_freedom1` and `degrees_freedom2` are truncated to an integer in the calculation if a non-integer is provided as an argument.

Both `degrees_freedom1` and `degrees_freedom2` must be at least `1`.

All arguments must be numeric.

See Also

`CHIINV`: Calculates the inverse of the right-tailed chi-squared distribution.

`FDIST`: Calculates the right-tailed F probability distribution (degree of diversity) for two data sets with given input x. Alternately called Fisher-Snedecor distribution or Snedecor's F distribution.

`FINV`: Calculates the inverse of the right-tailed F probability distribution. Also called the Fisher-Snedecor distribution or Snedecor's F distribution.

`FTEST`: Returns the probability associated with an F-test for equality of variances. Determines whether two samples are likely to have come from populations with the same variance.

`T.INV`: Calculates the negative inverse of the one-tailed TDIST function.

Example

Suppose you want to find the cutoff for the F statistic associated with a left-tailed cumulative probability of `0.95`.

	A	B	C	D
1	**Probability**	**Degrees freedom numerator**	**Degrees freedom denominator**	**Solution**
2	0.95	4	5	5.192167773
3	0.95	4	5	=F.INV(0.95, 4, 5)
4	0.95	4	5	=F.INV(A2, B2, C2)