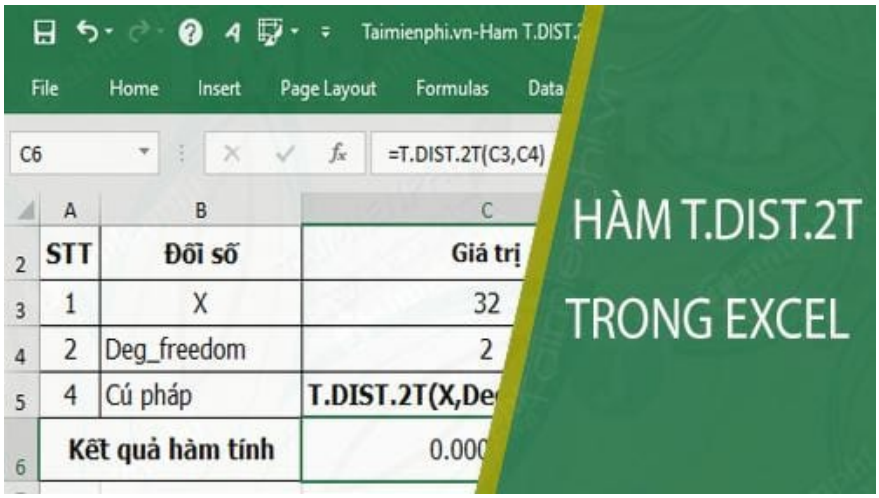
The T.DIST.2T function in Excel

In Excel, the T.DIST.2T function is the Student's t-distribution function used in hypothesis testing of small sample datasets. You can use this T.DIST.2T function to replace the t-distribution endpoint table.

The T.DIST.2T function is used when you want to calculate and return a two-sided Student's t-distribution in Excel. This function is also one of the statistical functions that is very popular among users today.



The T.DIST.2T function in Excel

How to use the T.DIST.2T function in Excel

1. Description and usage syntax

This is a function that calculates and returns the bipartite Student's t-distribution. You can use this function to test hypotheses in small datasets.

Syntax:

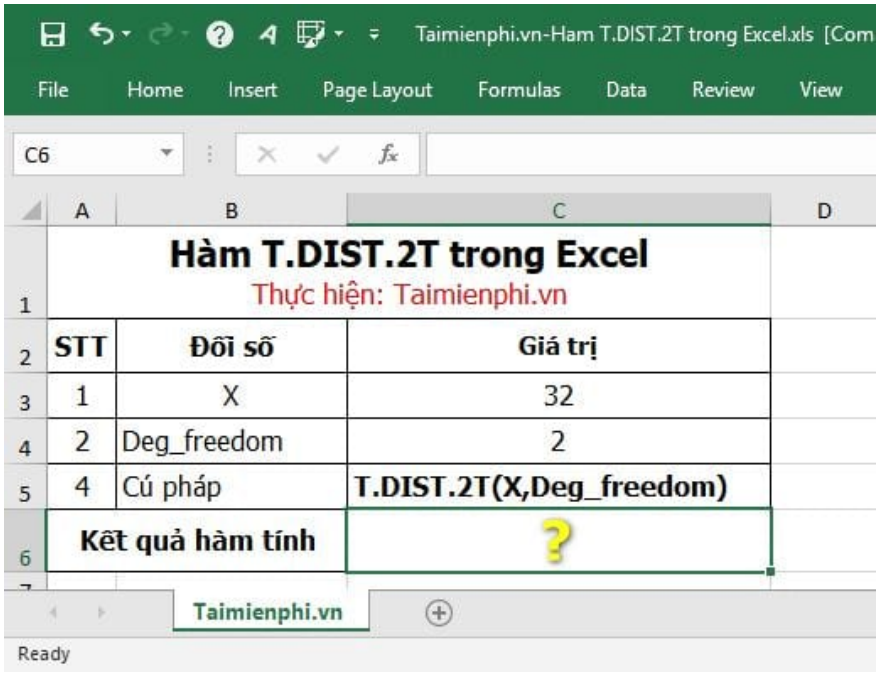
Where:
- **X** : The value used to evaluate the distribution, a required parameter.
- **Deg_freedom** : The number of degrees of freedom of the distribution, a required parameter.

Note:
- Any argument that is not a number -> the function returns the error value **#VALUE!**
- If **Deg_freedom** > **1** -> the function returns the error value **#NUM!**

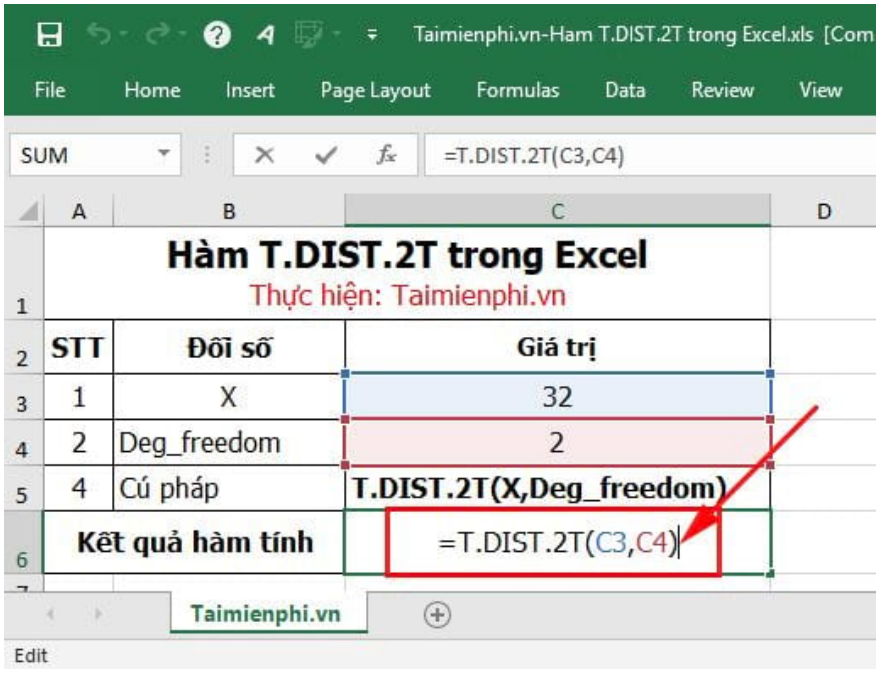
- The minimum value of **Deg_freedom** must be 1.
- If **X** is less than 0, the function returns the error value **#NUM!**

2. Specific example situations

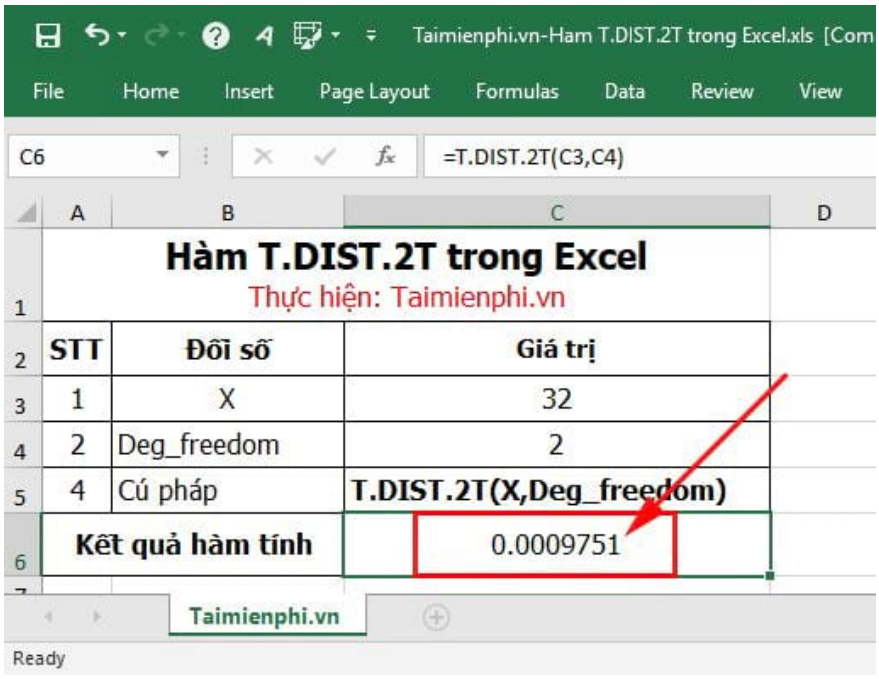
Suppose you need to calculate the bipartite Student's t-distribution as described in the data table below:



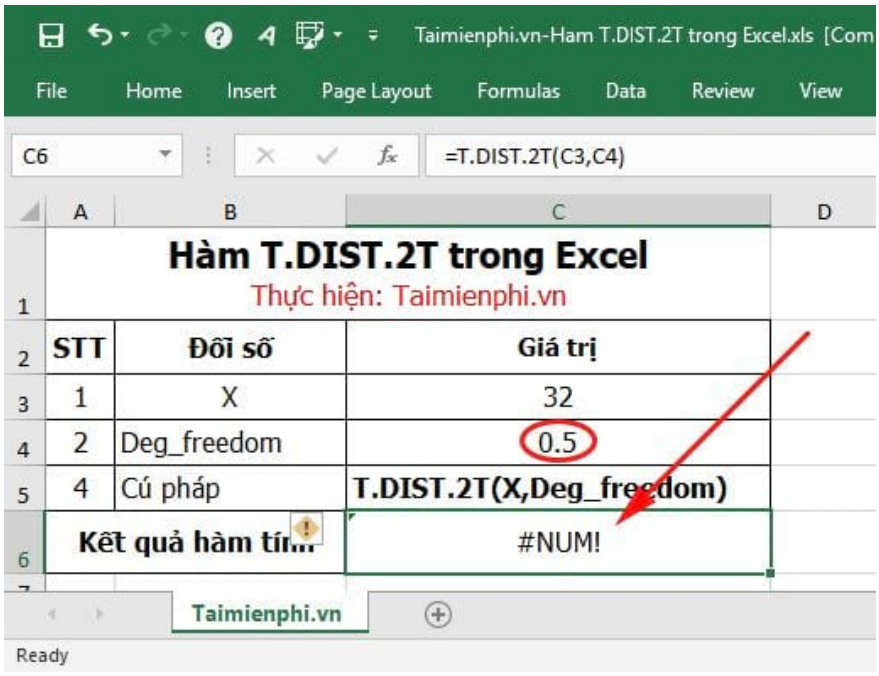
Step 1: In the cell where you want to calculate, enter the formula: **=T.DIST.2T(C3,C4)**



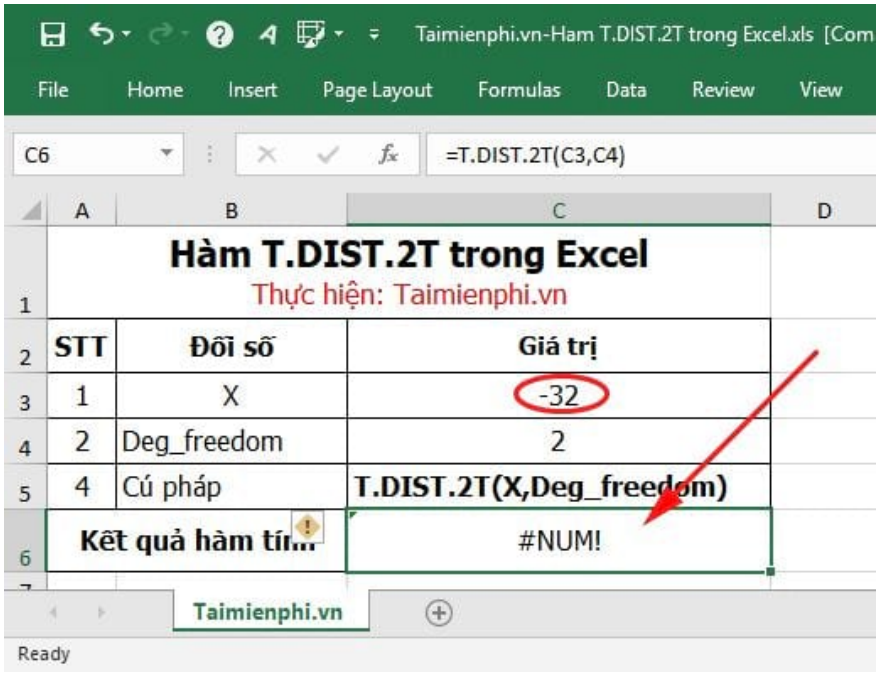
Step 2: Press **Enter** -> the result of the two-sided Student t distribution is:



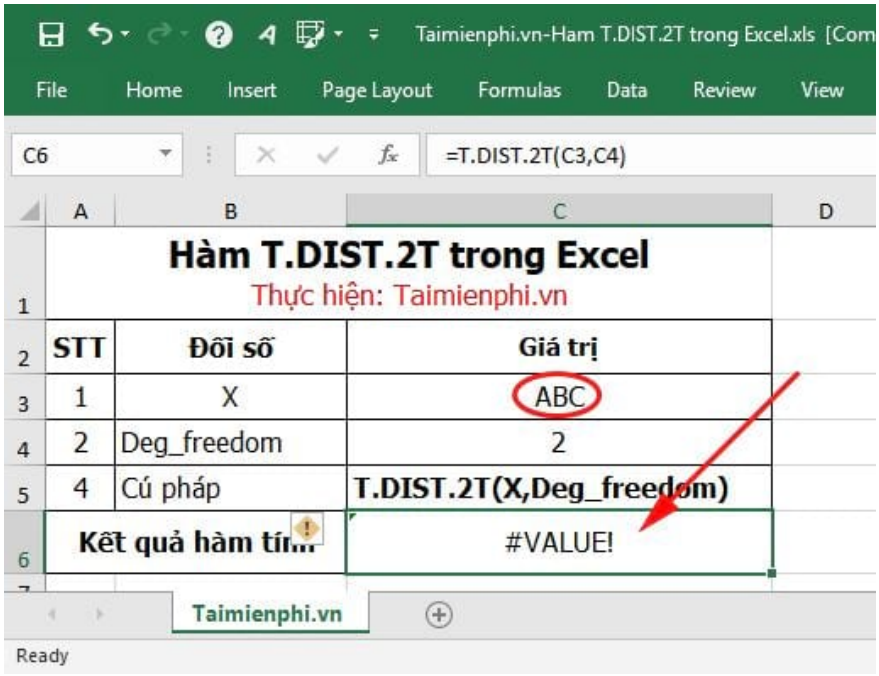
- If the number of degrees of freedom is less than 1, the function returns the error value **#NUM!**



- If the value used to evaluate the distribution is less than 0, the function returns the error value **#NUM!**



If any argument is not a number, the function returns the error value **#VALUE!**



Above is a guide with some specific examples of how to use **the T.DIST.2T function in Excel** . Using this function helps you calculate and return the bipartite Student's t-distribution in Excel.

Additionally, if you need to perform calculations to return the left- or right-sided Student's t-distribution, please refer to the **T.DIST** and **T.DIST.RT** functions for their syntax and usage. Good luck!

The SUM function is one of the most basic and commonly used summation functions in Excel. Mastering the syntax and usage of the SUM function will greatly benefit you in your work with Excel.

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