

CONFIDENCE.T function - The function returns the confidence interval of the population by using the Student's t-distribution in Excel

CONFIDENCE.T function: The function returns the confidence interval of the population by using the Student's t-distribution. Support functions from Excel 2010 onwards. Syntax: CONFIDENCE.NORM (alpha, standard_dev, size)

The following article introduces you to the **CONFIDENCE.T** function - one of the functions in the statistical group is very popular in Excel.

Hàm Confidence.t

Description: The function returns the confidence interval of the population by using the Student's t-distribution. Support functions from Excel 2010 onwards.

Syntax: CONFIDENCE.NORM (alpha, standard_dev, size)

Inside:

- **alpha:** The critical level to calculate the confidence level, with confidence level = $100 * (1 - \alpha)$, is the required parameter .
- **standard_dev:** The overall standard deviation for the data range, and considered to have been determined, is the required parameter.
- **size:** Sample **size** , is a required parameter.

Attention:

- If any of the parameters' values are not numeric -> the function returns the #VALUE! Error value .
- If **alpha** ? 0 or **alpha** ? 1 -> the function returns the #NUM! Error value
- If **standard_dev** ? 0 -> the function returns the #NUM! Error value
- If **size** is not an integer -> it is truncated to an integer.

- If **size = 1** -> the function returns the # **DIV / 0** error value !

For example:

Calculate the average overall confidence interval based on the **Student's** t-distribution with the data in the table below:

The screenshot shows an Excel spreadsheet with the following content:

STT	Tham số	Giá trị
1	Mức quan trọng	0.0058
2	Độ lệch chuẩn của tổng thể	3.25
3	Kích thước mẫu	65

Below the table, the text reads: "Khoảng tin cậy trung bình của tổng thể dựa trên phân bố t Student là:" followed by a large red question mark.

- In the cell to calculate, enter the formula: = **CONFIDENCE.T** (D6, D7, D8)

The screenshot shows the same Excel spreadsheet as above, but with the formula entered in the result cell. A red arrow points from the formula cell to the data cells D6, D7, and D8.

STT	Tham số	Giá trị
1	Mức quan trọng	0.0058
2	Độ lệch chuẩn của tổng thể	3.25
3	Kích thước mẫu	65

Below the table, the text reads: "Khoảng tin cậy trung bình của tổng thể dựa trên phân bố t Student là:" followed by the formula: **CONFIDENCE.T(D6, D7, D8)**.

- Press **Enter** -> the overall confidence interval for the population is:

D9 : X ✓ fx =CONFIDENCE.T(D6,D7,D8)

STT	Tham số	Giá trị
1	Mức quan trọng	0.0058
2	Độ lệch chuẩn của tổng thể	3.25
3	Kích thước mẫu	65
Khoảng tin cậy trung bình của tổng thể dựa trên phân bố t Student là:		1.15075

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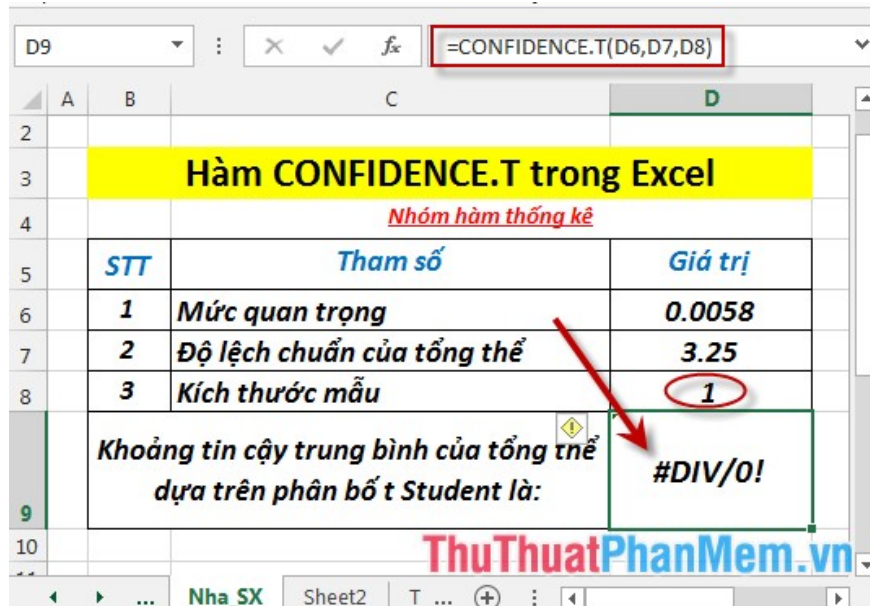
- Where **alpha ? 0** or **alpha ? 1** -> the function returns the #NUM! Error value

D9 : X ✓ fx =CONFIDENCE.T(D6,D7,D8)

STT	Tham số	Giá trị
1	Mức quan trọng	5
2	Độ lệch chuẩn của tổng thể	3.25
3	Kích thước mẫu	65
Khoảng tin cậy trung bình của tổng thể dựa trên phân bố t Student là:		#NUM!

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- Where **size = 1** -> the function returns the error value #NUM!



Above are instructions and some specific examples when using the **CONFIDENCE.T** function in Excel.

Good luck!

You finished reading the article "**CONFIDENCE.T function - The function returns the confidence interval of the population by using the Student's t-distribution in Excel**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.