How to use the NORMDIST function in Excel - Function that returns the distribution in Excel

The NORMDIST function returns a distribution with a specified mean and standard deviation. The NORMDIST function has applications in statistics, including hypothesis testing.

When working with Excel data tables and statistics, knowing and using Excel functions will help you complete your work. And in today's article, Network Administrator will introduce you to the NORMDIST function in Excel and how to use the function.

The NORMDIST function returns the normal distribution in Excel with a specified mean and standard deviation. The function will be applied in statistical tables and hypothesis testing. The following article uses the NORMDIST function for Excel versions 2003 to Excel 2013.

Using the NORMDIST function in Excel

We have the syntax to use the NORMDIST function:

```
NORMDIST(x, mean, standard_dev, cumalative)
```

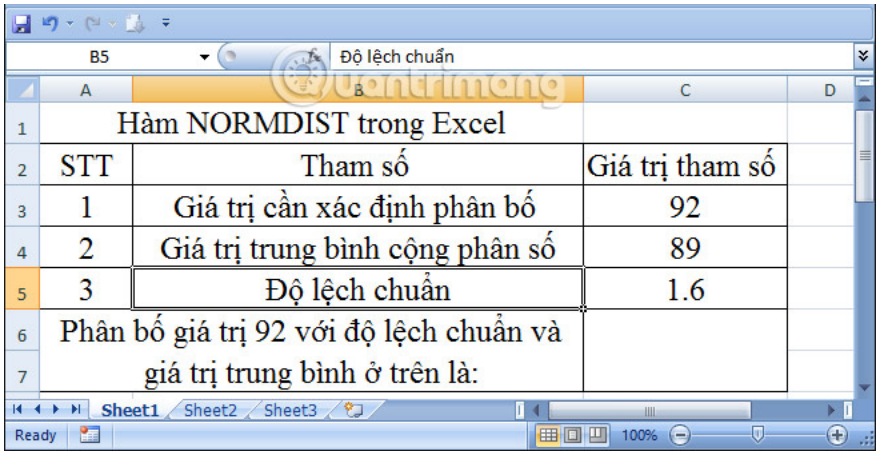
In there :

1. x: is the value for which you want to calculate the distribution. Required parameter
2. mean: The arithmetic mean of the distribution. Required parameter.
3. standard_dev: Standard deviation of the distribution. Required parameter.
4. cumalative: A logical value that specifies the form of the function. Required parameter.
5. cumalative=true: Returns the result of the cumulative distribution function
6. cumalative=false: Returns the result of the probability density function.

Note:

1. If the mean or standard deviation is not a number => the function returns the #VALUE! error.
2. If mean = 0 and standard deviation = 1, cumulative = True => the function returns the normal distribution NORMSDIST.
3. If the standard deviation is less than 0 => The function returns the value #NUM!.
4. When cumulative value = TRUE => distribution applies from negative infinity to x value.

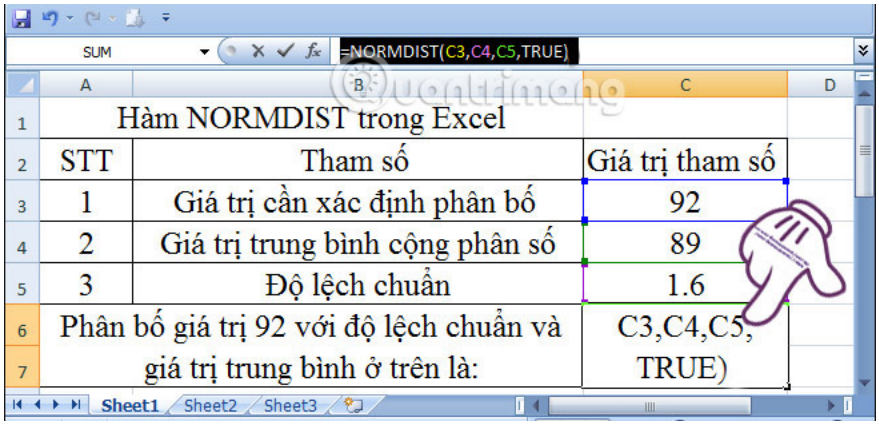
We have an example of calculating the distribution of the value 92 according to the table below.



Case 1: Cumalative has TRUE value (Cumalative=true)

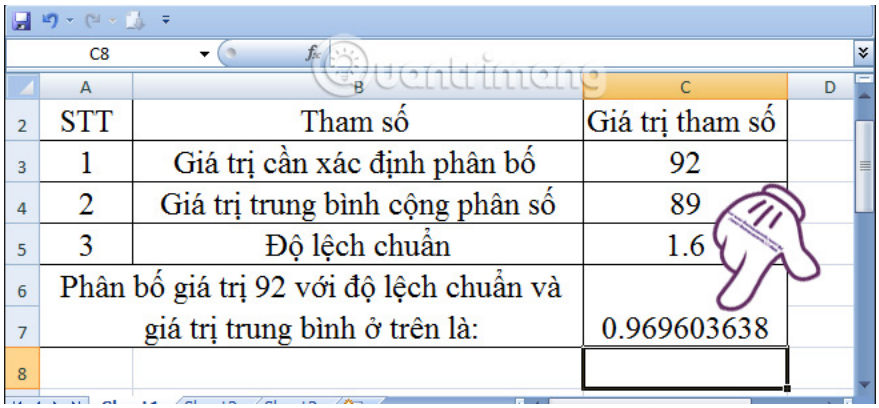
Step 1:

In the cell to be calculated, we enter the formula: **=NORMDIST(C3,C4,C5,TRUE)** .



Step 2:

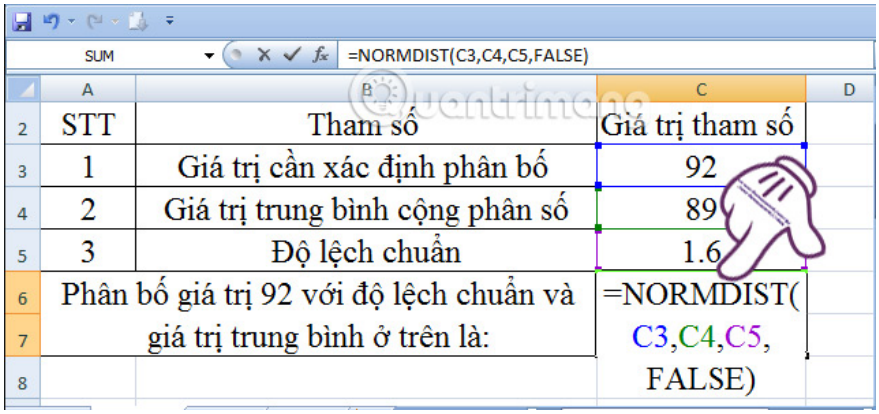
After entering the formula, press **Enter** and get the result as shown below.



Case 2: Cumalative value = FALSE (Cumalative=false)

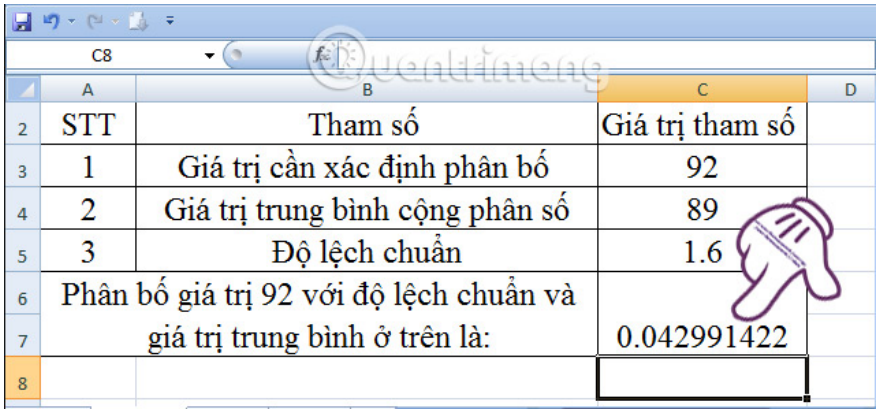
Step 1:

We enter the formula as follows: **=NORMDIST(C3,C4,C5,FALSE)** .



Step 2:

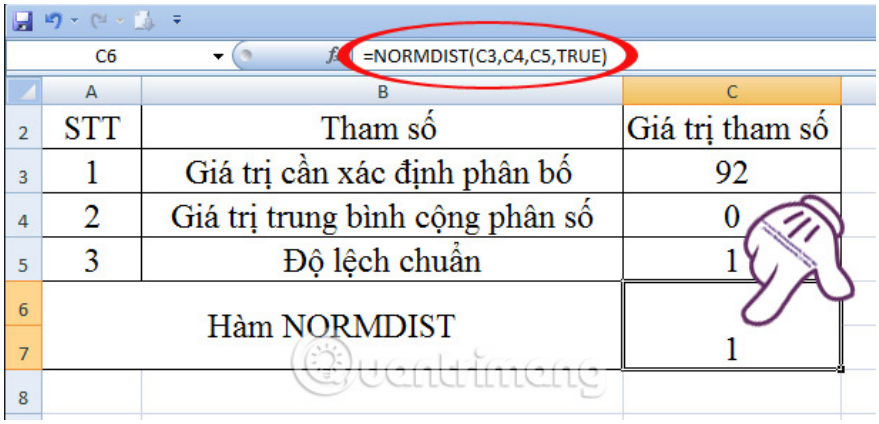
You also press **Enter** and get the result as shown below:



Case 3: If standard deviation = 1 and mean = 0, cumulative = True > NORMDIST(92)= NORMSDIST(92)

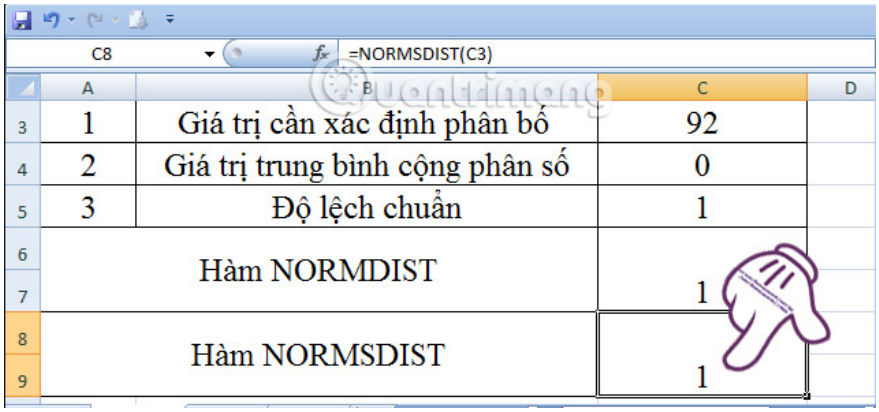
NORMDIST function value (92):

Readers enter the formula: **=NORMDIST(C3,C4,C5,TRUE)** . And the result will be as below.



NORMSDIST(92) function value:

We enter the formula: **=NORMSDIST(C3)** and the result is as below.



So, if standard deviation = 1 mean = 0 and cumulative = true => NORMSDIST function equals NORMDIST function value.

Above is a tutorial on using the NORMDIST function in Excel to calculate the normal distribution with standard deviation and special cases between the NORMSDIST function and the NORMDIST function.

See also the following articles:

You finished reading the article "**How to use the NORMDIST function in Excel - Function that returns the 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.

© 2019 TipsMake.com