INTERCEPT function - The function returns the point at which the line will intersect the y-axis by using the existing x and y values ??in Excel

INTERCEPT function: The function returns the point at which the line will intersect the y-axis by using existing x and y values. Use the function when you want to determine the value of a dependent variable when the independent variable is 0. Syntax: INTERCEPT (known_ys, known_xs)

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

Description: The function returns the point at which the line will intersect the y-axis by using existing x and y values. Use the function when you want to determine the value of a dependent variable when the independent variable is 0.

Syntax: INTERCEPT (known_y's, known_x's)

Inside:

- **known_y's :** A set of dependent data.

- **known_x's :** A set of independent data.

Attention:

- The value of the argument must be a number, name, array or reference containing numbers.

- If the argument is a reference array containing text values ??or logic -> these values ??are ignored, but the value 0 is still counted.

- If **known_y's** , **known_x's** have a different number of data points or contain no data points -> the function returns the **# N / A** error value **.**

- The intersection equation of the regression line is:

[a = overline y - boverline x]

Inside:

[b = frac {{sum {left ({x - overline x} right) left ({y - overline y} right)}}} {{sum {{{left ({x - overline x} right)} ^ 2 }}}}]

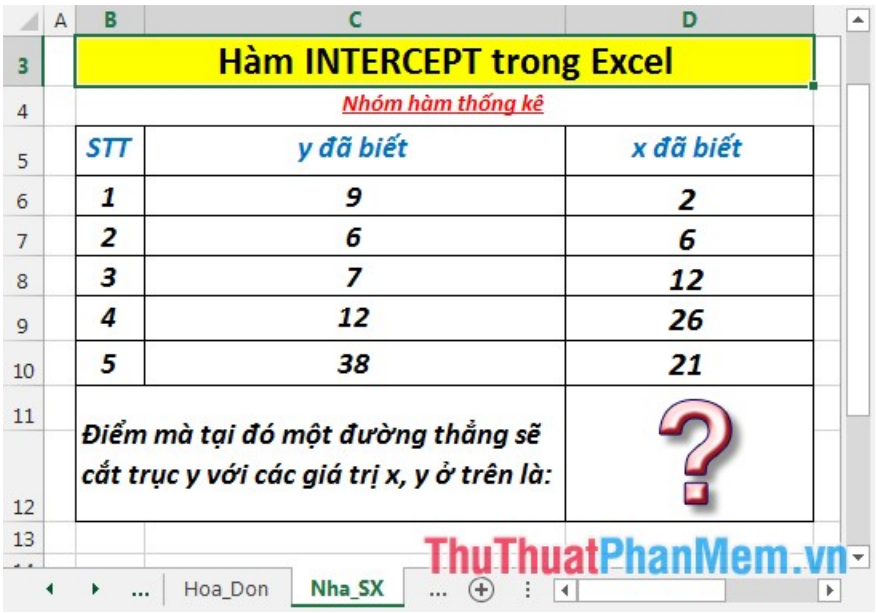
And **x** and **y** are the models **AVERAGE (known_x's)** and **AVERAGE (known_y's).**

- The underlying algorithm used in **INTERCEPT** and **SLOPE is** different from the underlying algorithm used in the **LINEST** function **.**

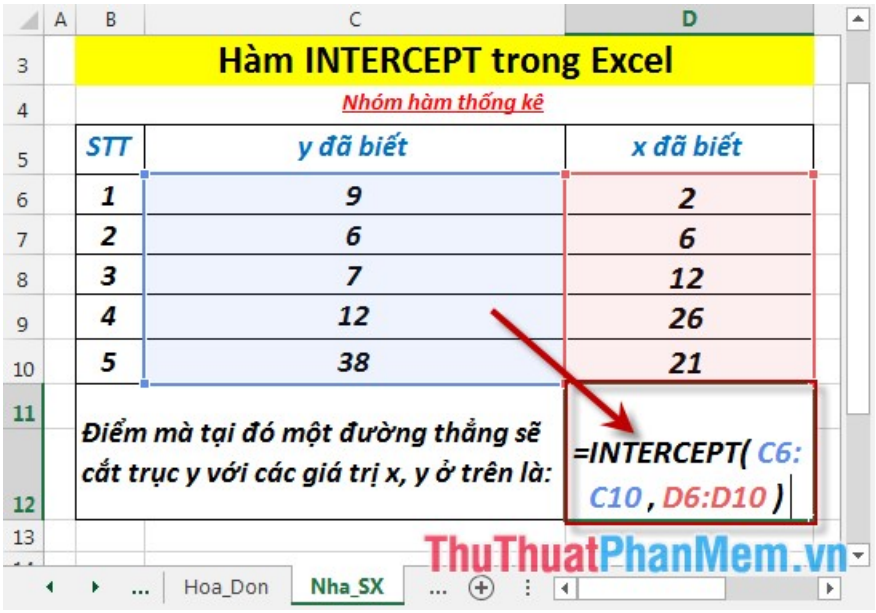
- In case the function returns multiple values ??-> **# DIV / 0** error message

For example:

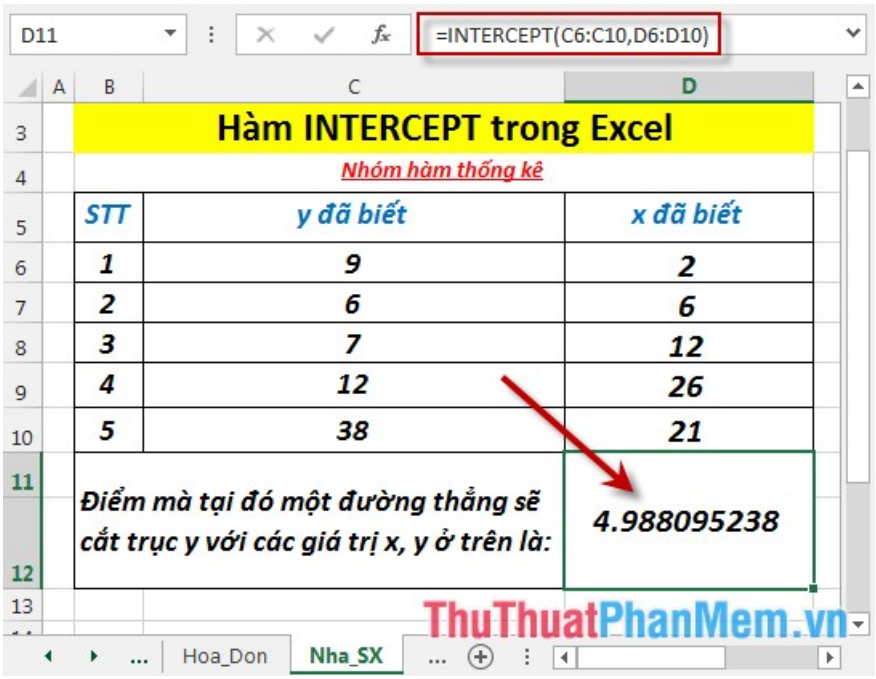
Find the point where a line will intersect the y-axis with the data in the data table below:



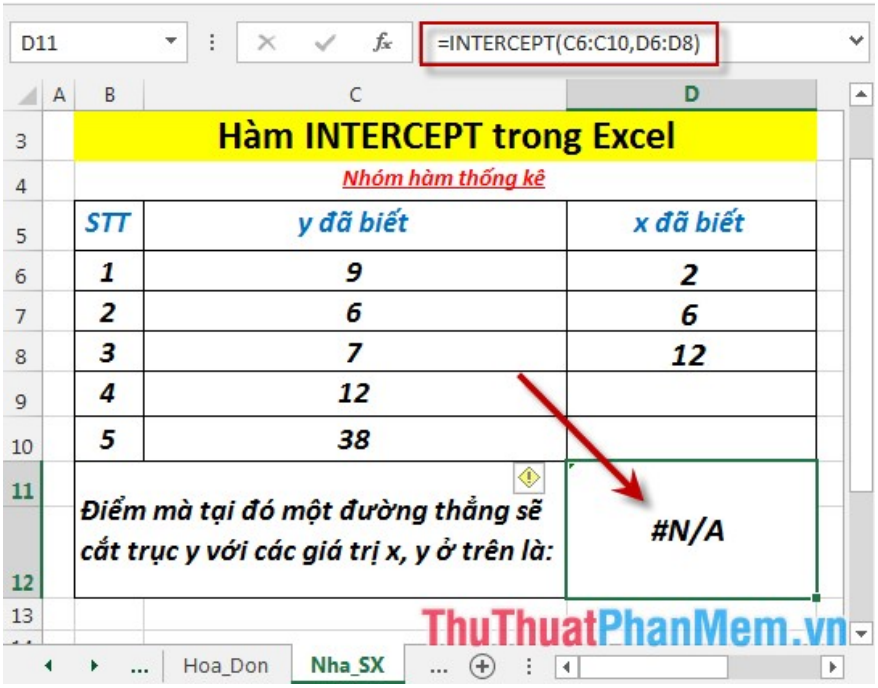
- In the cell to calculate enter the formula **: = INTERCEPT (C6: C10, D6: D10)**



- Press **Enter** -> toss the degree of the data point that a line intersects the y-axis:

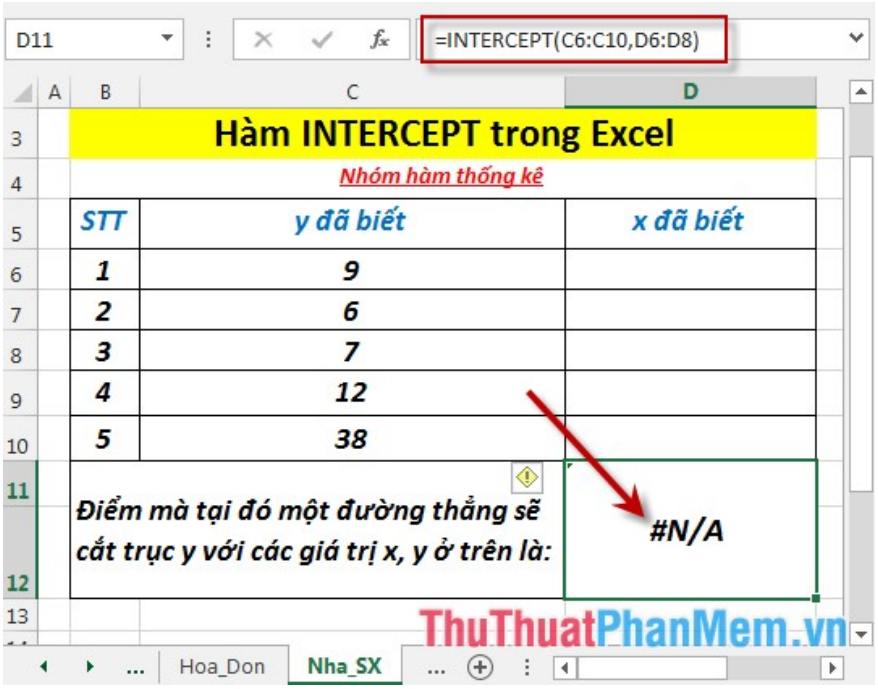


- Where the number of data points of the two arrays x, y is different -> the function returns the **# N / A** error value



Here, the array y consists of 5 elements, but the array x has only 3 elements -> the number of elements is different.

- Case 1 of 2 empty array -> function returns error value **# N / A**



Above are instructions and some specific examples when using **INTERCEPT** function in Excel.

Good luck!

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