

RSQ - The function returns the square of the Pearson torque correlation coefficient in Excel

RSQ: The function returns the square of the Pearson moment correlation coefficient through data points in known_ys and known_xs. Syntax: RSQ (known_ys, known_xs)

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

Hàm RSQ

Description: The function returns the square of the Pearson moment correlation coefficient through data points in known_y's and known_x's.

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

Inside:

- **known_y's** : Array or data range, is a required parameter.
- **known_x's**: Array or range of data points, required.

Attention:

- The value of the argument must be a number, name, array or reference containing numbers.
- Logical values ??and text number representations when typing directly into the argument list -> still count.
- Arguments that are text or error values ??cannot be converted to a numeric type -> cause the function to cause an error .
- 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** and **known_x's** are empty or have a different number of data points -> the function returns the # **N / A** error value .

- If **known_y's** and **known_x's** contain only 1 data point -> the function returns the # **DIV / 0** error value .

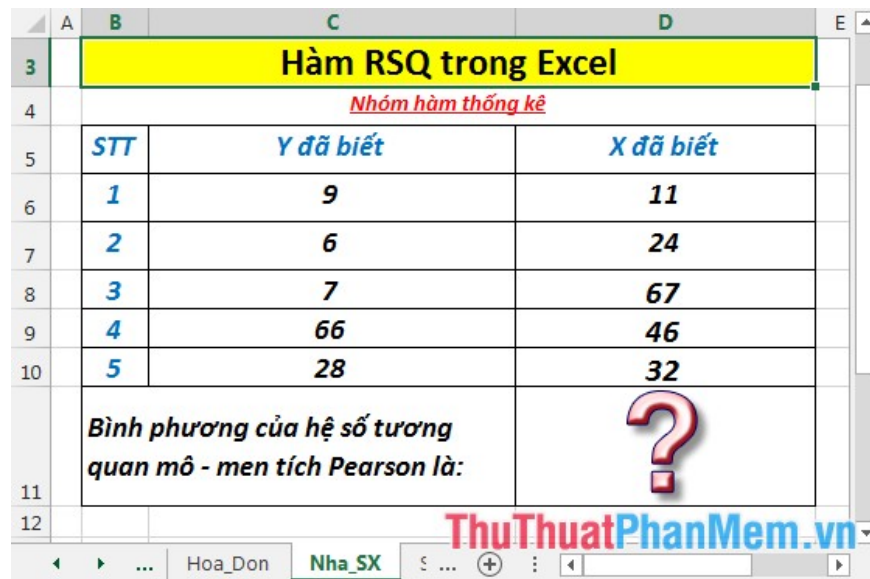
- The equation for the Pearson product moment correlation coefficient, r, is:

$$r = \frac{\sum \left\{ \left(x - \overline{x} \right) \left(y - \overline{y} \right) \right\}}{\sqrt{\sum \left\{ \left(x - \overline{x} \right)^2 \right\} \sum \left\{ \left(y - \overline{y} \right)^2 \right\}}}$$

Where **x** and **y** are the sample mean **AVERAGE (known_x's)** and **AVERAGE (known_y's)**.

For example:

Calculate the square of the **Pearson product moment correlation coefficient** of values ??in the following data table:



The screenshot shows an Excel spreadsheet with the following data:

Hàm RSQ trong Excel			
<i>Nhóm hàm thống kê</i>			
	STT	Y đã biết	X đã biết
6	1	9	11
7	2	6	24
8	3	7	67
9	4	66	46
10	5	28	32
11	Bình phương của hệ số tương quan mô - men tích Pearson là:		?

The spreadsheet also shows a watermark "ThuThuatPhanMem.vn" and a taskbar with "Hoa_Don" and "Nha_SX" tabs.

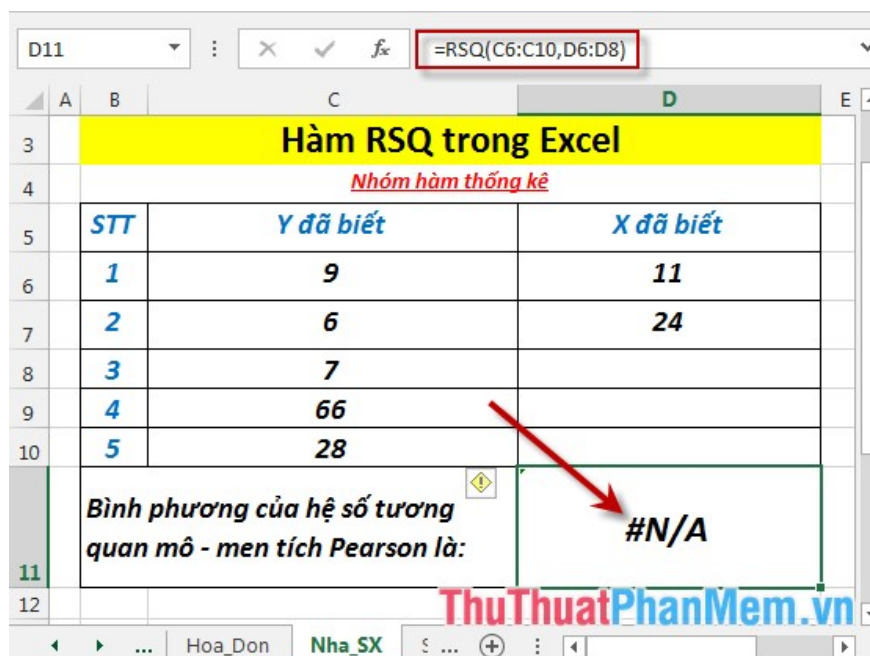
- In the cell to calculate enter the formula : = **RSQ (C6: C10, D6: D10)**

Hàm RSQ trong Excel			
<i>Nhóm hàm thống kê</i>			
STT	Y đã biết	X đã biết	
1	9	11	
2	6	24	
3	7	67	
4	66	46	
5	28	32	
Bình phương của hệ số tương quan mô - men tích Pearson là:		=RSQ(C6:C10, D6:D10)	

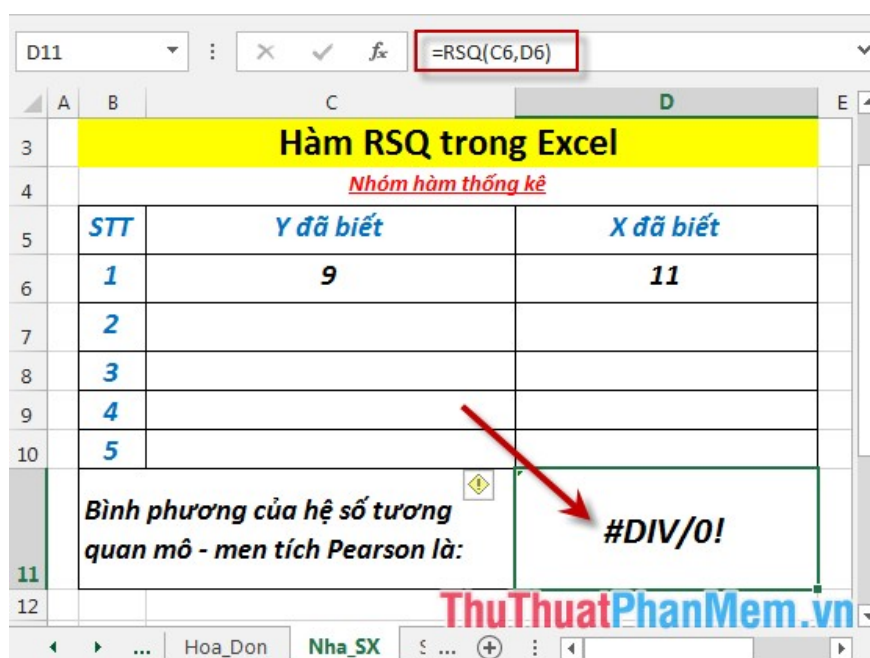
- Press **Enter** -> squared the **Pearson product** moment square **coefficient** is:

Hàm RSQ trong Excel			
<i>Nhóm hàm thống kê</i>			
STT	Y đã biết	X đã biết	
1	9	11	
2	6	24	
3	7	67	
4	66	46	
5	28	32	
Bình phương của hệ số tương quan mô - men tích Pearson là:		0.04538	

- Where the number of elements of the array x and y is not equal -> the function returns the error value # N / A



- In case of 2 arrays of x and y, there is only 1 element -> the function returns the #DIV/0 error value .



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

Good luck!

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