How do I use the RSQ function in Excel?

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The RSQ function in Excel is a statistical tool that calculates the square of the correlation coefficient between two given sets of data. It is used to measure the strength and direction of the linear relationship between two variables. To use the RSQ function, simply select the cell where you want the result to appear and type in "=RSQ(" followed by the range of cells for each variable, separated by a comma. Press enter and the result will be displayed. This function is useful for analyzing and understanding the relationship between different data sets in Excel.

This article describes the formula syntax and usage of the **RSQ** function in Microsoft Excel.

Description

Returns the square of the Pearson product moment correlation coefficient through data points in known_y's and known_x's. For more information, see the PEARSON function. The r-squared value can be interpreted as the proportion of the variance in y attributable to the variance in x.

Syntax

RSQ(known_y's,known_x's)

The RSQ function syntax has the following arguments:

Known_y's Required. An array or range of data points.

Known_x's Required. An array or range of data points.

Remarks

Arguments can either be numbers or names, arrays, or references that contain numbers.

Logical values and text representations of numbers that you type directly into the list of arguments are counted.

If an array or reference argument contains text, logical values, or empty cells, those values are ignored; however, cells with the value zero are included.

Arguments that are error values or text that cannot be translated into numbers cause errors.

If known_y's and known_x's are empty or have a different number of data points, RSQ returns the #N/A error value.

If known_y's and known_x's contain only 1 data point, RSQ returns the #DIV/0! error value.

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

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

where x and y are the sample means AVERAGE(known_x's) and AVERAGE(known_y's).

RSQ returns r2, which is the square of this correlation coefficient.

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