

How can I create a line of best fit in Excel?

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Creating a line of best fit in Excel involves using the built-in trendline function to plot a line that best represents the relationship between two sets of data. This feature allows users to easily visualize patterns and make accurate predictions based on the data. By selecting the data points and adding a trendline, Excel will automatically calculate the best-fit equation and display it on the graph. Users can also customize the trendline by adjusting its type, color, and other parameters. This simple yet powerful tool is useful for analyzing data and making informed decisions in various fields such as finance, science, and business.

Create a Line of Best Fit in Excel

In statistics, a line of best fit is the line that best "fits" or describes the relationship between a predictor variable and a .

The following step-by-step example shows how to create a line of best fit in Excel.

Step 1: Enter the Data

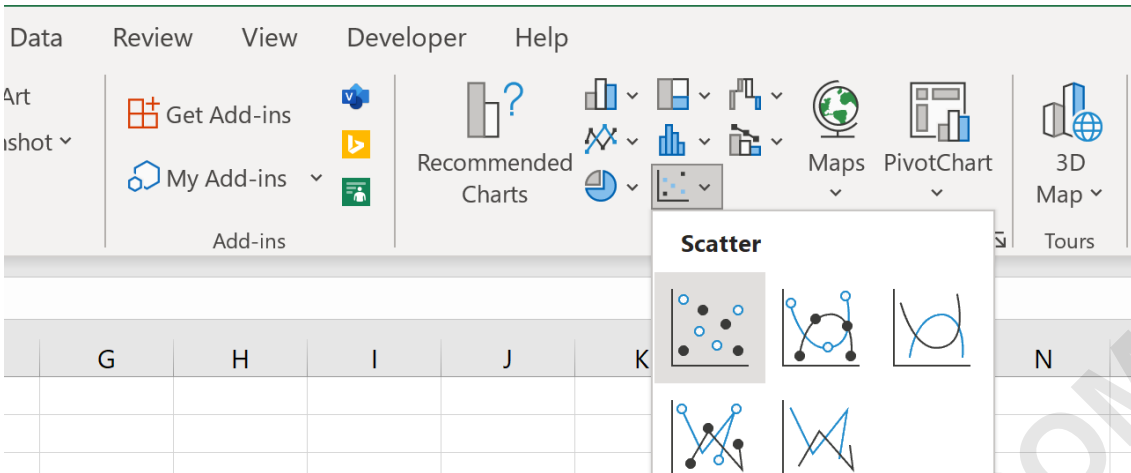
First, let's enter the following dataset that shows the number of hours spent practicing and the total points scored by eight different basketball players:

	A	B	C	D	E	F
1	Hours	Points				
2	1	2				
3	2	5				
4	3	6				
5	4	7				
6	5	9				
7	6	12				
8	7	16				
9	8	19				
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						

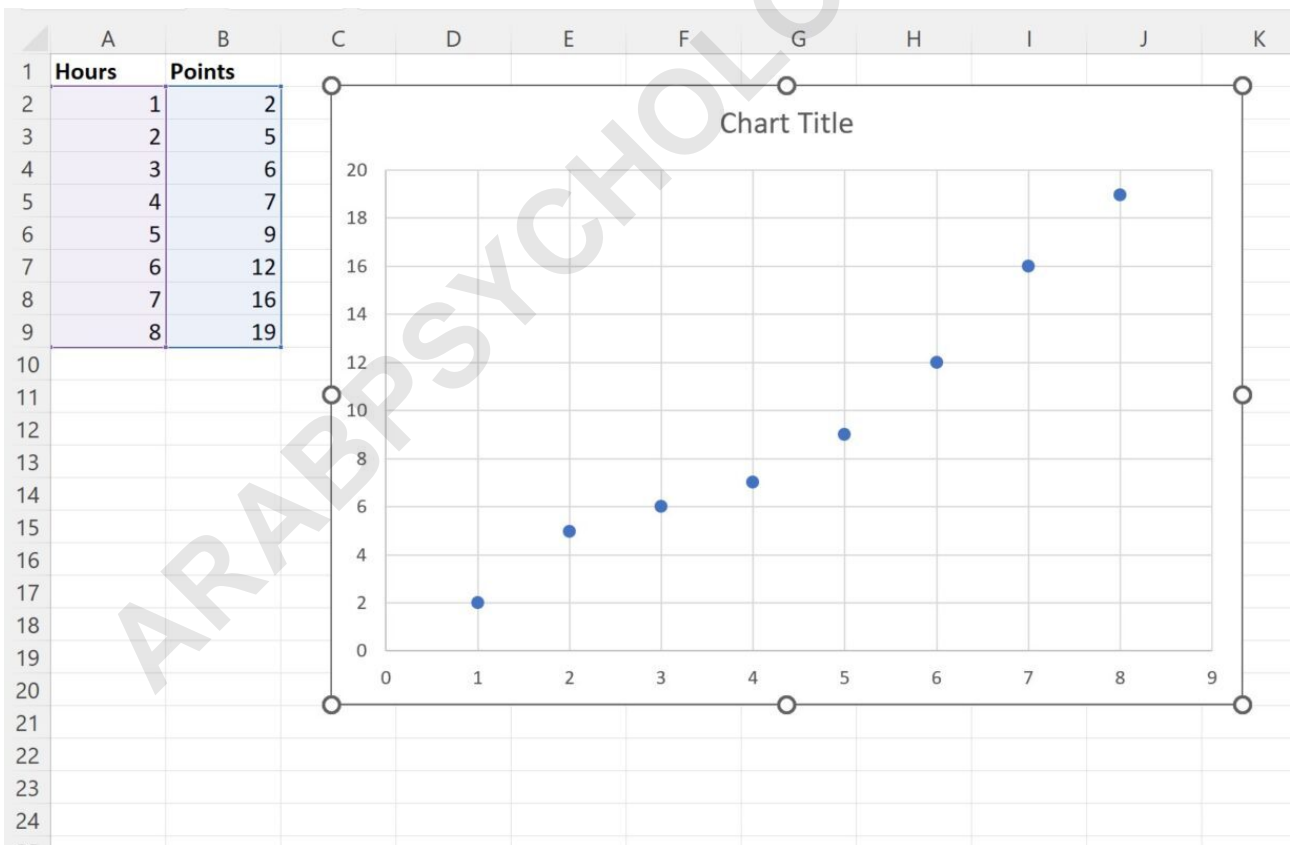
Step 2: Create a Scatter Plot

Next, let's create a scatter plot to visualize the relationship between the two variables.

To do so, highlight the cells in the range A2:B9, then click the Insert tab along the top ribbon, then click the option titled Scatter in the Charts group:



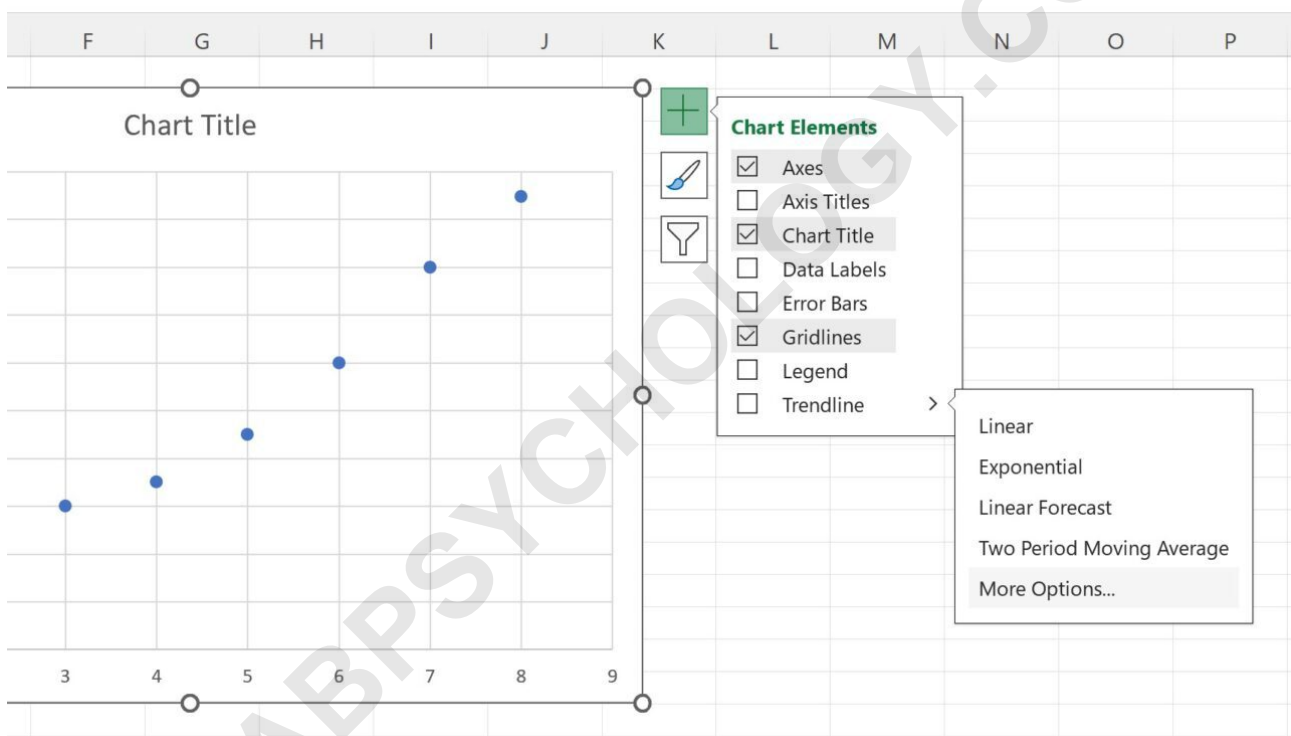
The following scatter plot will automatically be created:



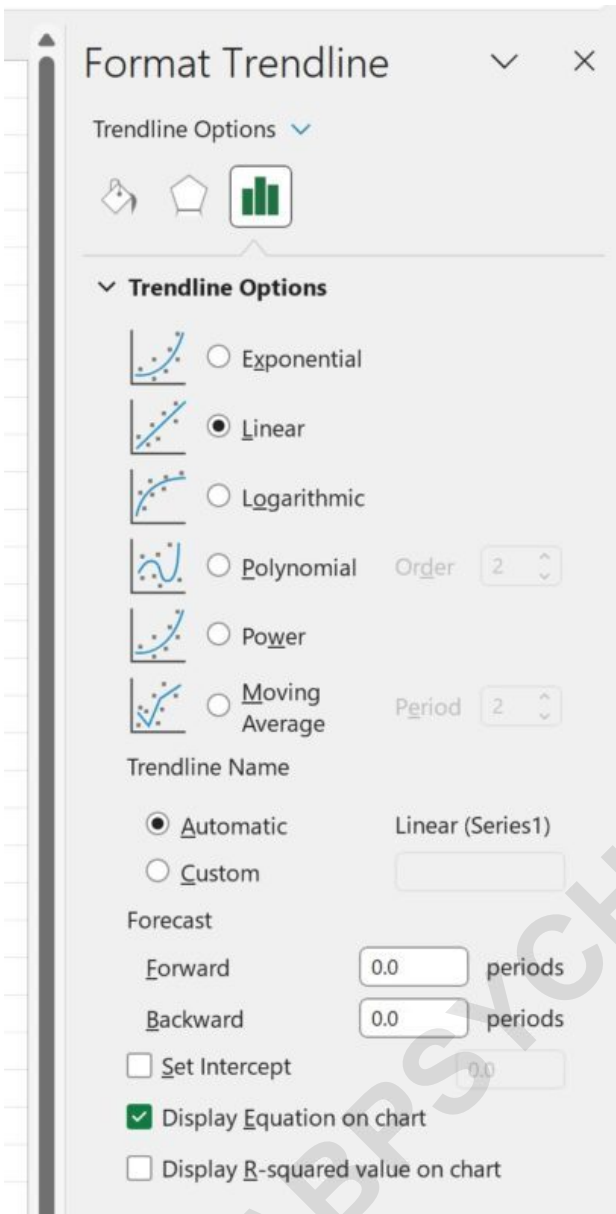
Step 3: Add the Line of Best Fit

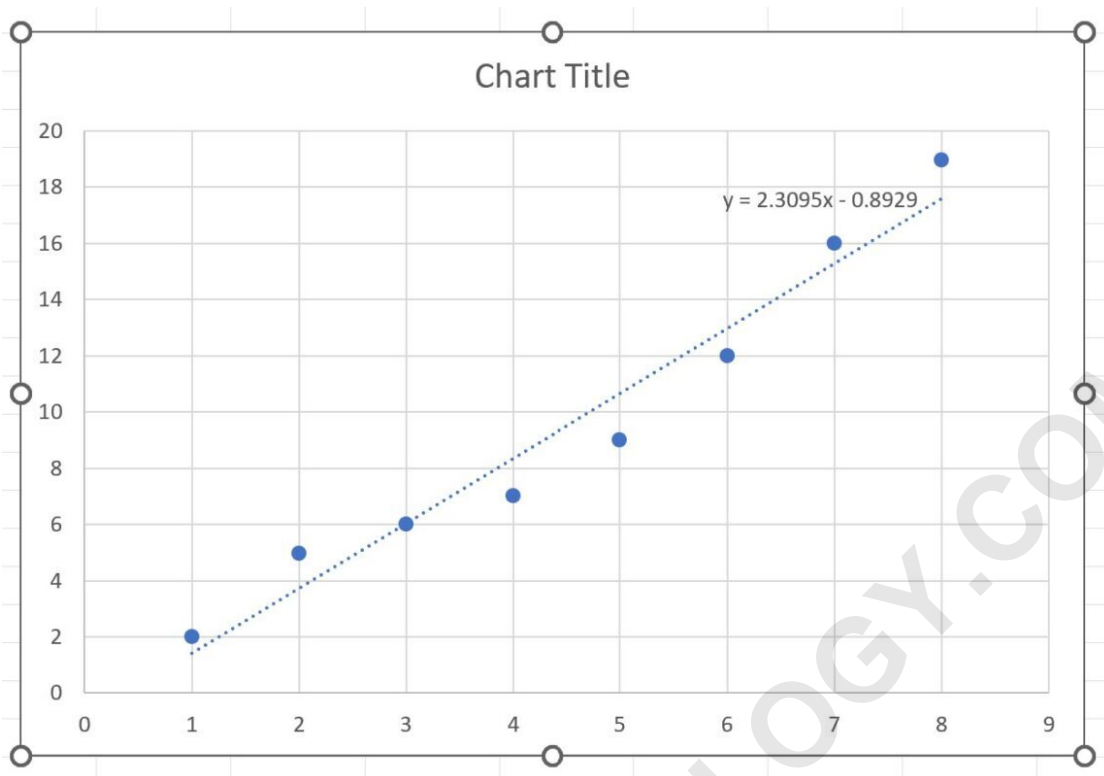
To add a line of best fit to the scatter plot, click anywhere on the chart, then click the green plus (+) sign that appears in the top right corner of the chart.

Then click the arrow next to Trendline, then click More Options:



In the Format Trendline panel that appears, click the button next to Linear as the trendline option, then check the box next to Display Equation on chart:





Step 4: Interpret the Line of Best Fit

From the chart we can see that the line of best fit has the following equation:

$$y = 2.3095x - 0.8929$$

Here is how to interpret this equation:

For each additional hour spent practicing, average points scored increases by 2.3095. For a player who practices zero hours, average points scored is expected to be -0.8929.

Note that it doesn't always make sense to interpret the intercept value in a regression equation.

For example, it's not possible for a player to score negative points.

In this particular example, we're mostly interested in the value for the slope of the regression line which is 2.3095.

The following tutorials explain how to perform other common tasks in Excel: