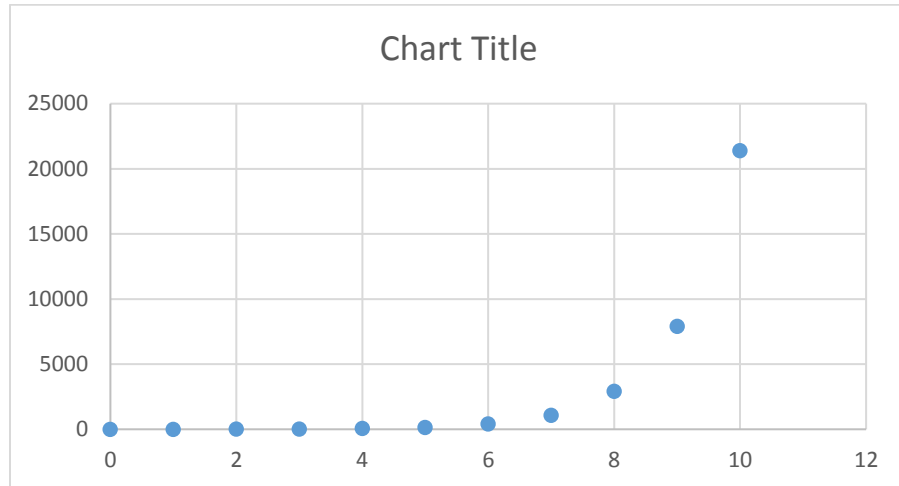


Curve Fitting Tutorial

Given some data, this tutorial provides a quick introduction for performing nonlinear curve fitting in Microsoft Excel.



Since this data is clearly not linear, how do you find the “best” equation that fits the data? That is where nonlinear curve fitting comes in.

Nonlinear Curve Fitting

You begin by entering your data into Microsoft Excel. To do this, simply run Excel and enter your data as shown below.

X	Y
0	1
1	3.564736
2	9.550932
3	21.94906
4	54.74586
5	151.0903
6	399.1598
7	1083.075
8	2912.726
9	7897.043
10	21379.29

These values are actual from $y = e^x$, with a little random noise

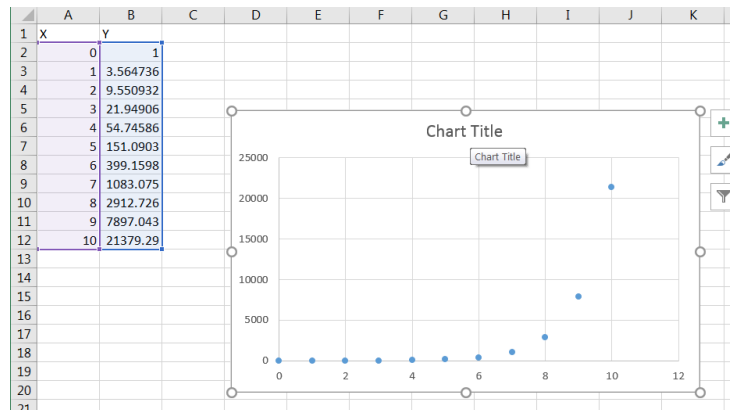
The data corresponding to the x-axis should be in the left column and the data corresponding the ordinate or y-axis should be in the right column.

Procedure:

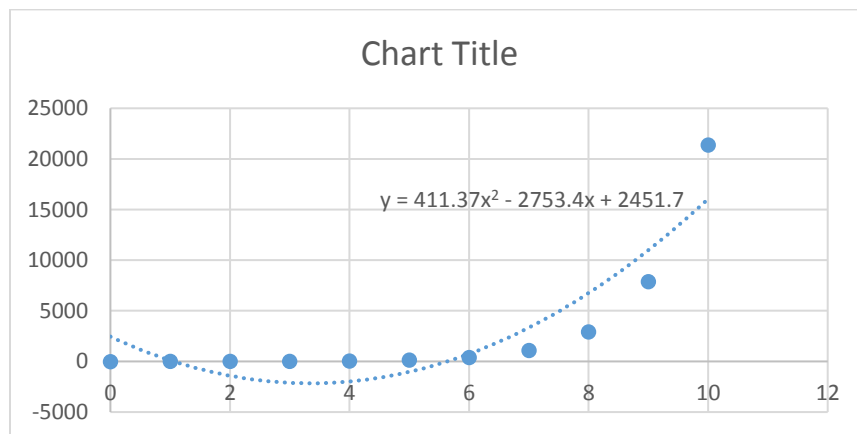
1. Select your data in the spreadsheet.

	A	B	C
1	X	Y	
2		0	1
3		1	3.564736
4		2	9.550932
5		3	21.94906
6		4	54.74586
7		5	151.0903
8		6	399.1598
9		7	1083.075
10		8	2912.726
11		9	7897.043
12		10	21379.29
13			
14			

2. Select Insert -> Scatter. You should get something like the following:



3. Right-click a data point, then select *Add Trendline* → *Polynomial*. Also choose order 2 and *Display Equation on Chart*.
 - a. Alternative. Select the chart, then Design→Add Chart Element→Trendline→More Trendline options→the graph symbol.



Optional: you can display R-squared value in chart to get an idea of how well your equation fits the data, Closer to 1 the better.