Plotting on chart using Excel

1-Main elements of a chart

2-Plotting using scattering type chart

3-Adding elements or chart formatting

- ❖ Chart layout
- ❖ Chart data
- ❖ Axes formatting
- ❖ Adding Trendline & show the equation on chart
- ❖ Changing where vertical axis meets horizontal axis

4-Conclusions

1-Main elements of a chart

A-Chart title

B-x-label and y-label

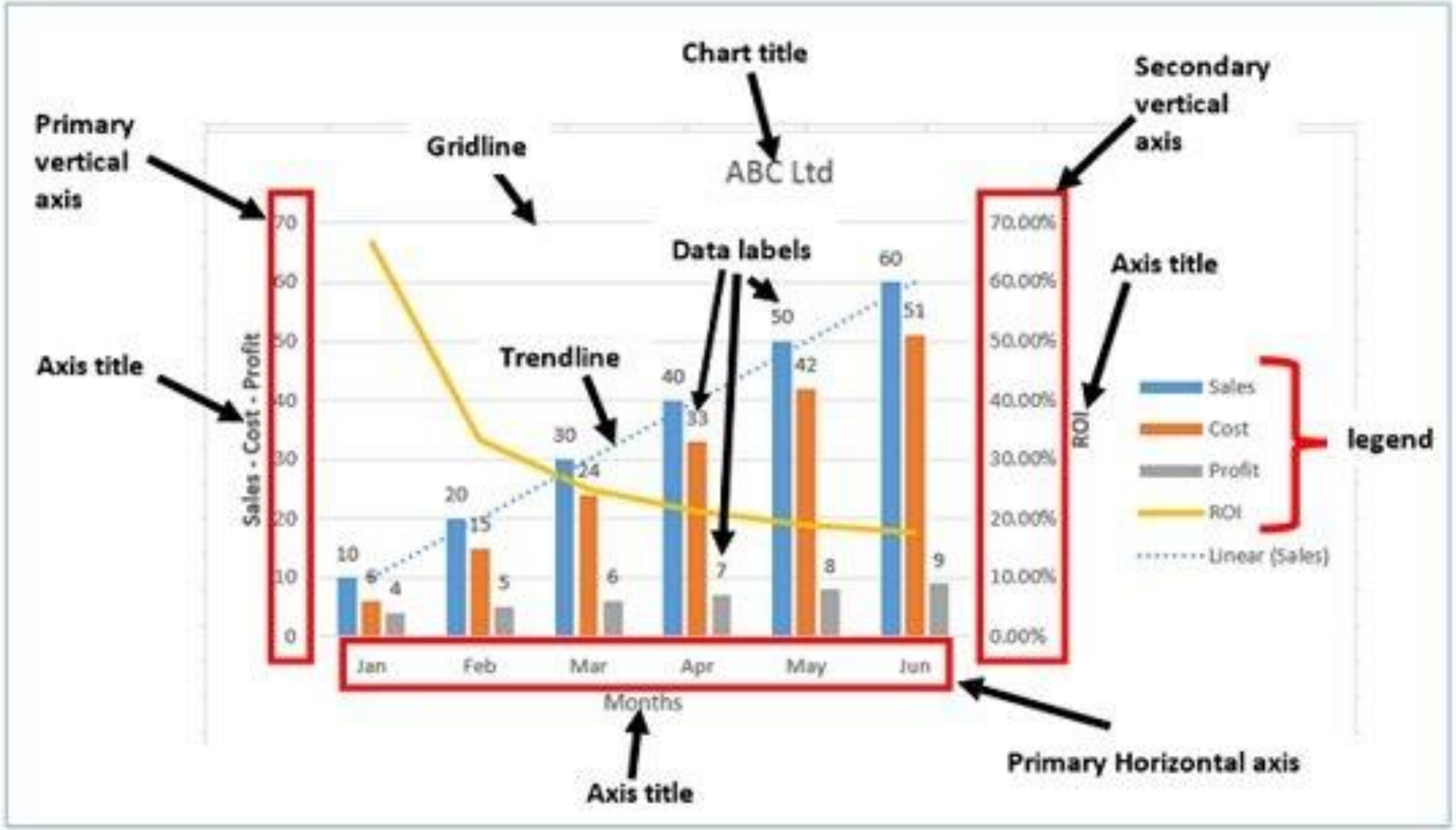
C-Legend

D-Trendline

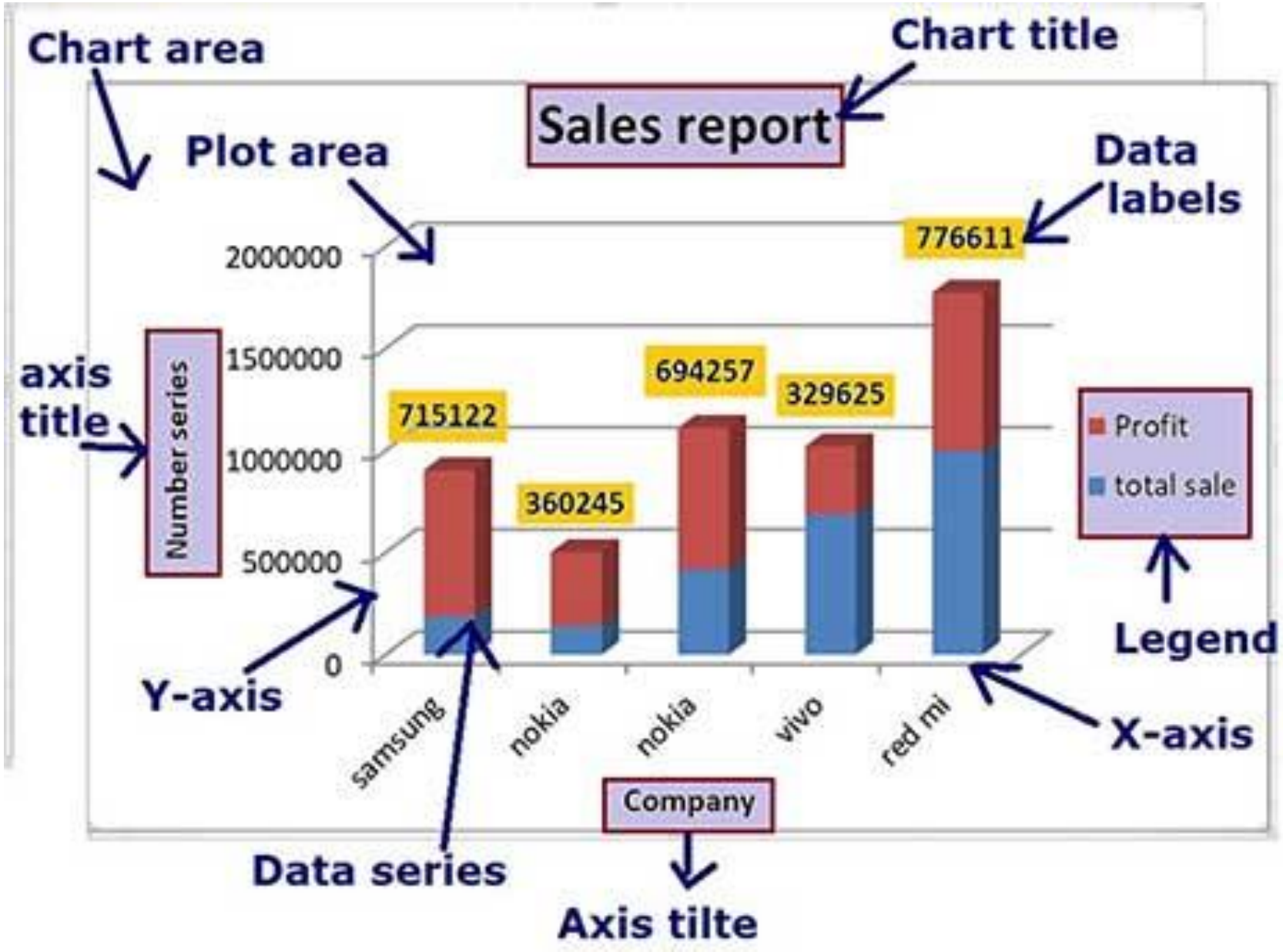
E-Trendline equation and R^2

F-Gridlines

Main elements of Excel Chart



Main elements of Excel Chart



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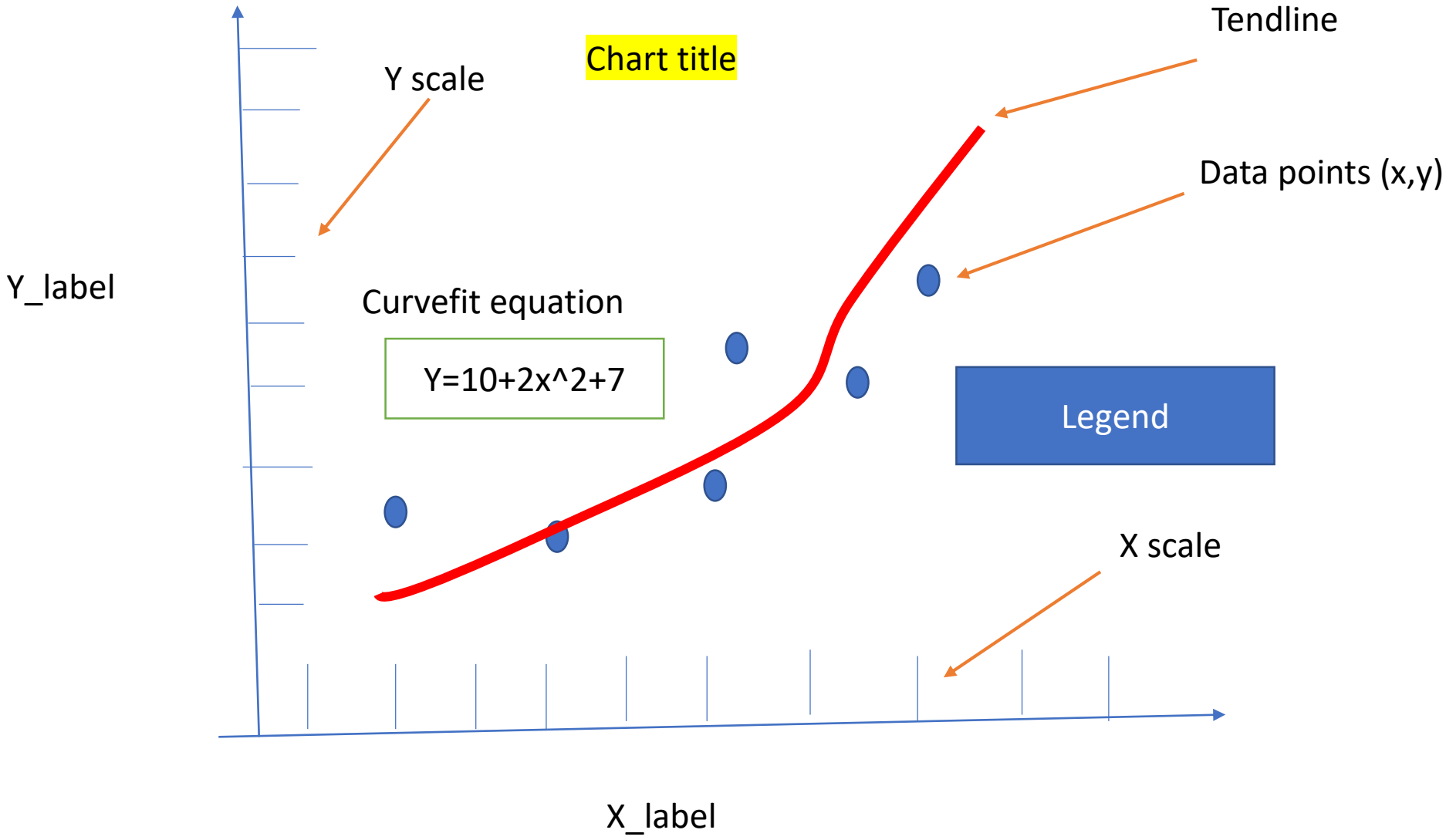

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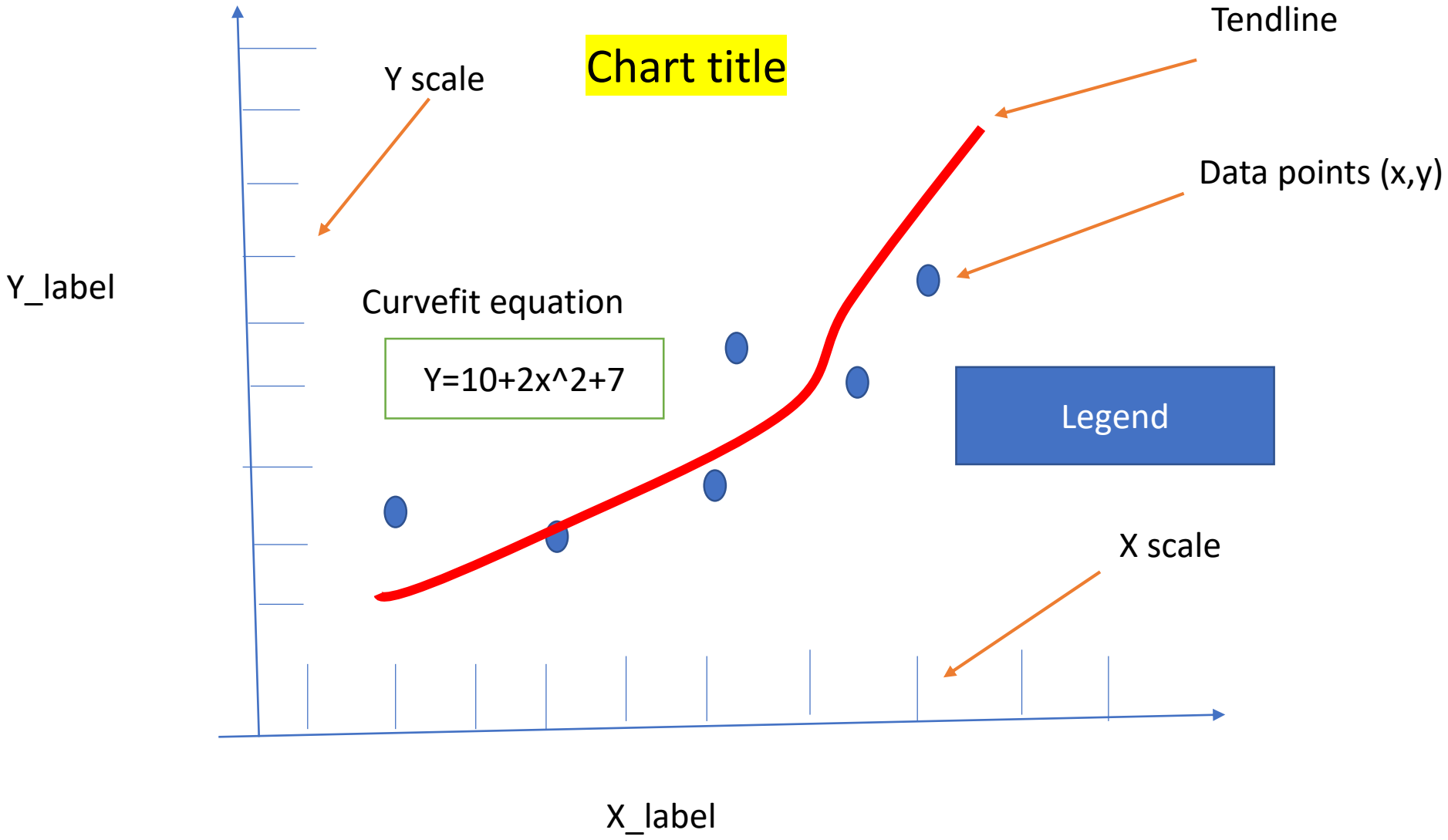


2- Scattering Plot using Excel

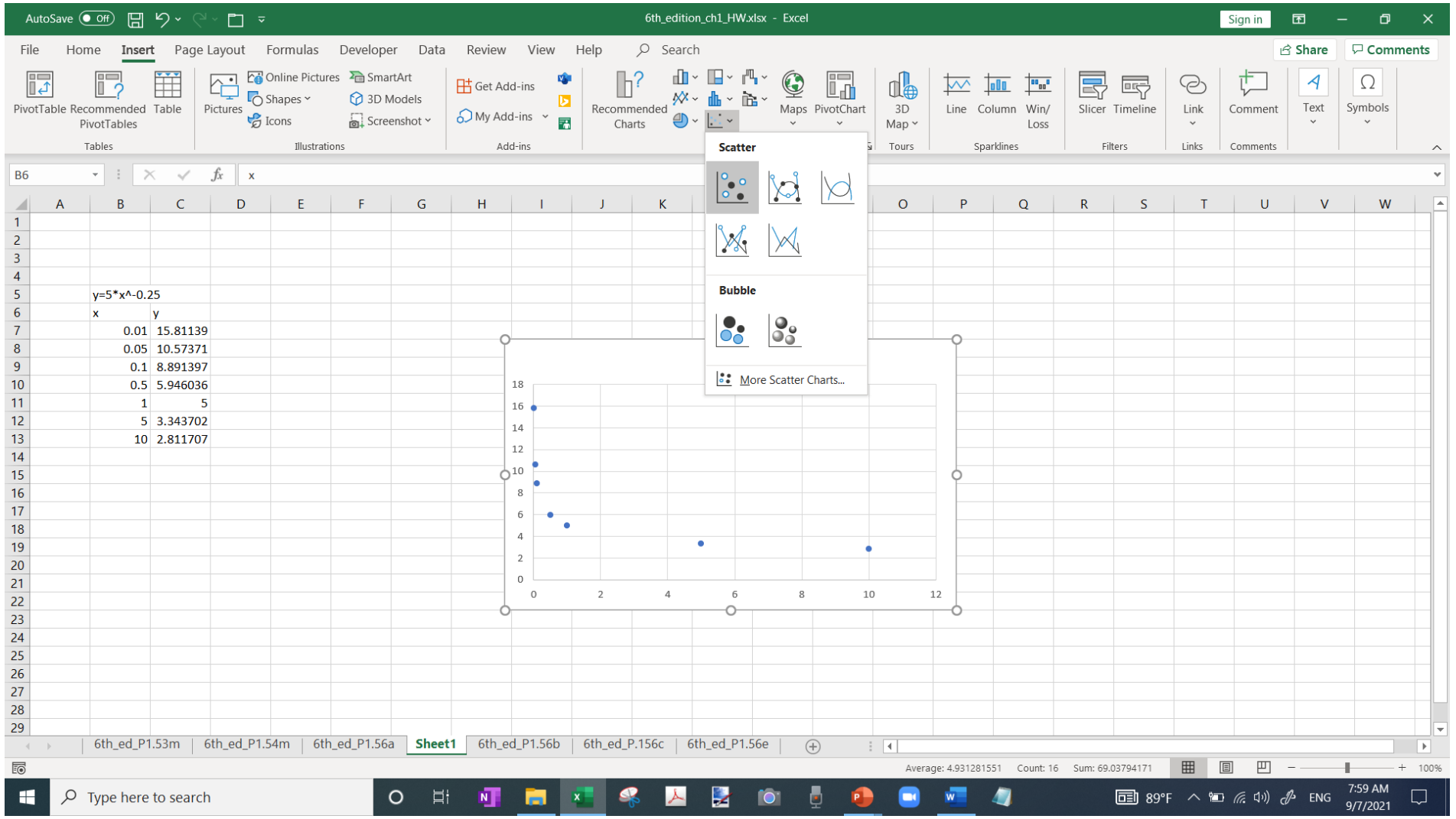
1-Select x and y data to be plotted. You can also include the heading (x for x data and y for y data)
2-Go to insert and select scattered data
3-You can through the plus sing on the right corner of the plot to add

a) X and y axes labels, Chart title
b) Trendline & curve-fit equation
c) More elements

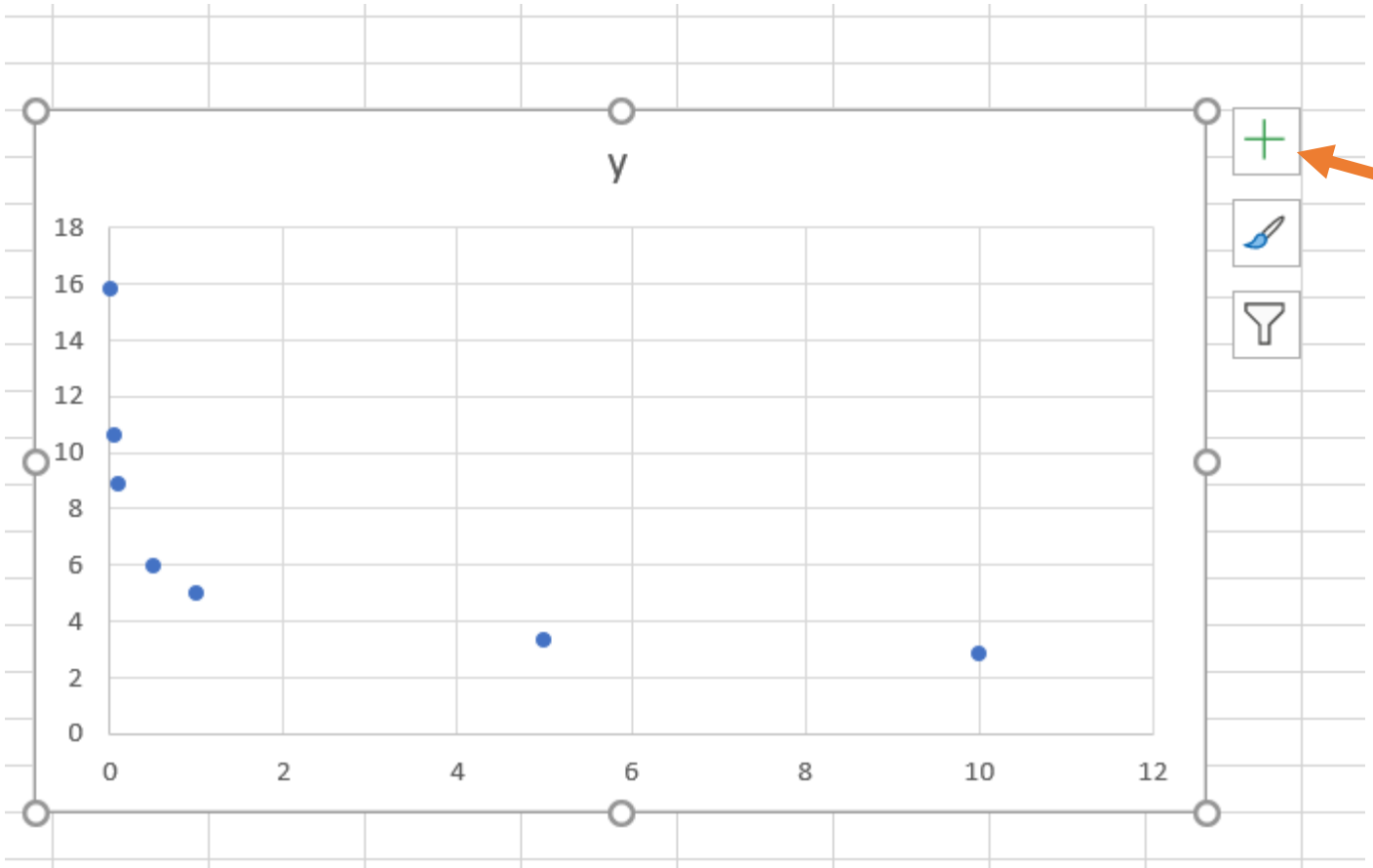
4-If you double click on the graph then a pup up window to the right will be shown where you can play and change how the plotting area changes, how the axis scale can be changed to log or linear and more (i.e. Format chart)

Select the data then go insert and select scatter chart

y=5*x^-0.25	
x	y
0.01	15.81139
0.05	10.57371
0.1	8.891397
0.5	5.946036
1	5
5	3.343702
10	2.811707



Use the plus sign to add chart element



Add item to the chart such as axes title, chart title, terndline etc

Chart Tools

Chart ribbon or chart tools
For chart modification

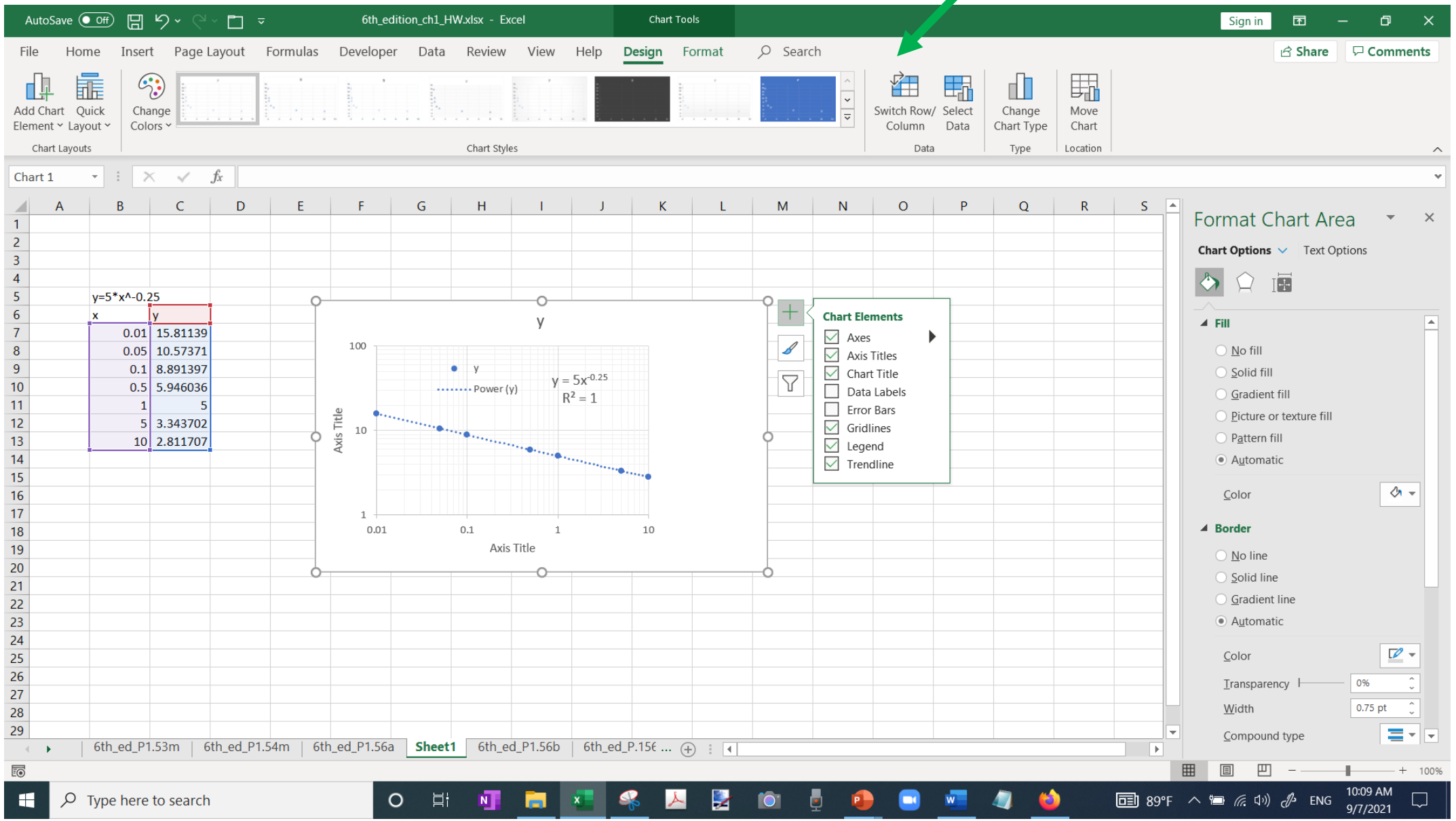
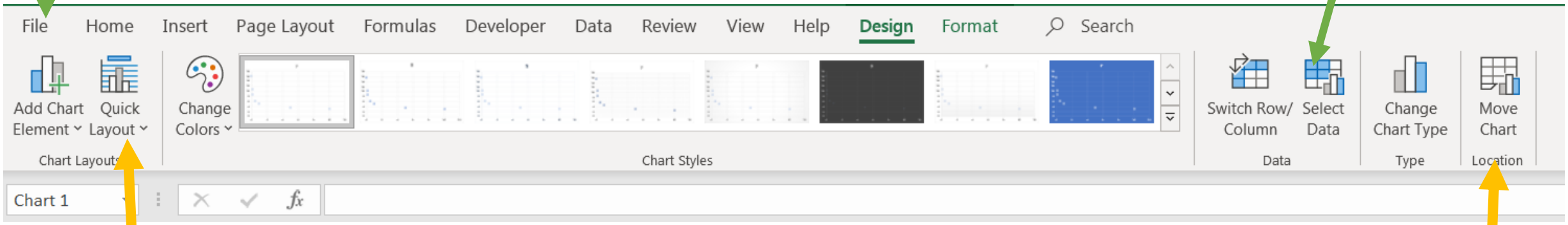


Chart Tools

Add an item

When you click on the chart you get this window on the top where you can add an item such as legend, trendline, , change the layout, change the type of the chart and do other things

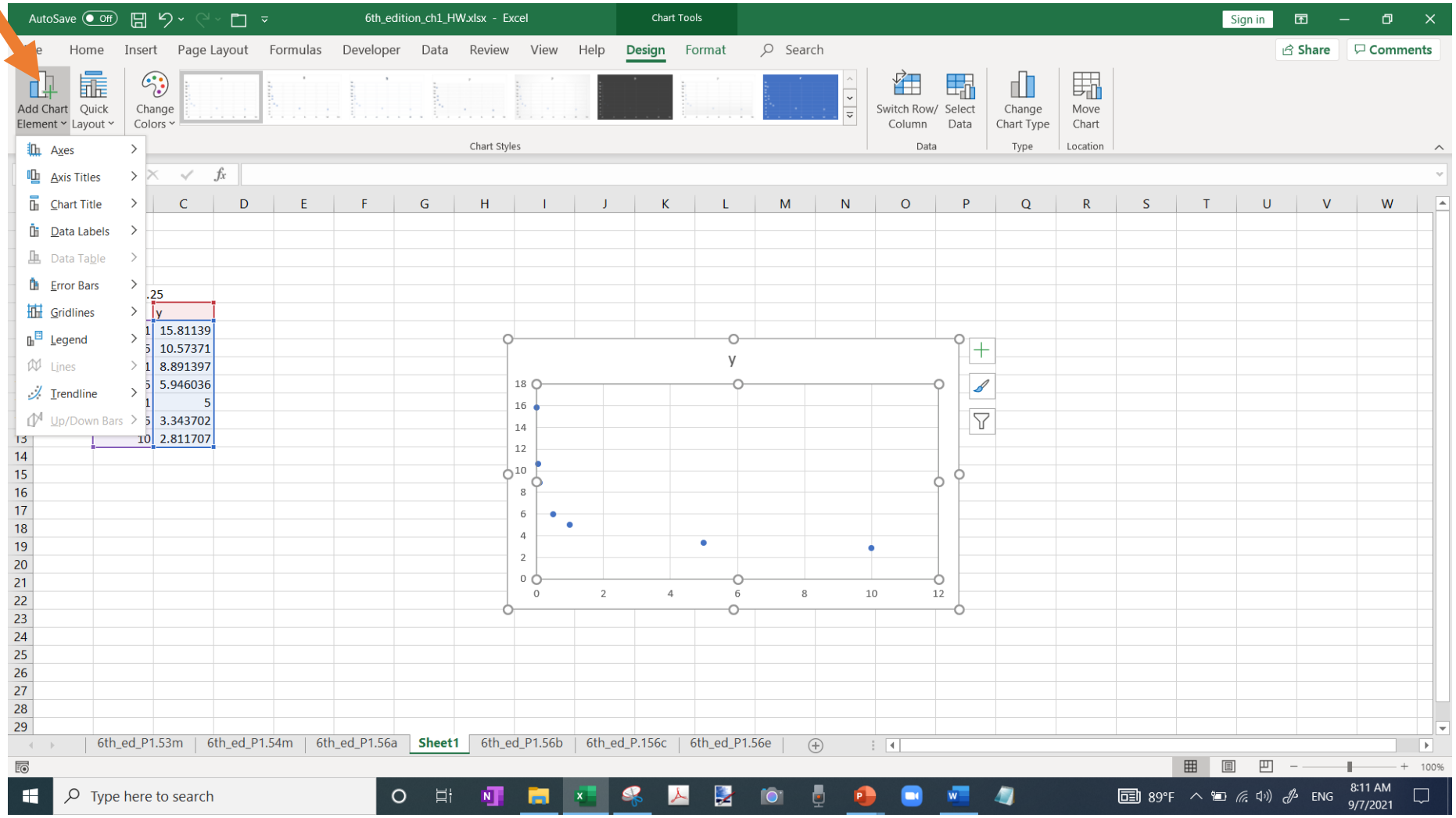
Select data
Add Data



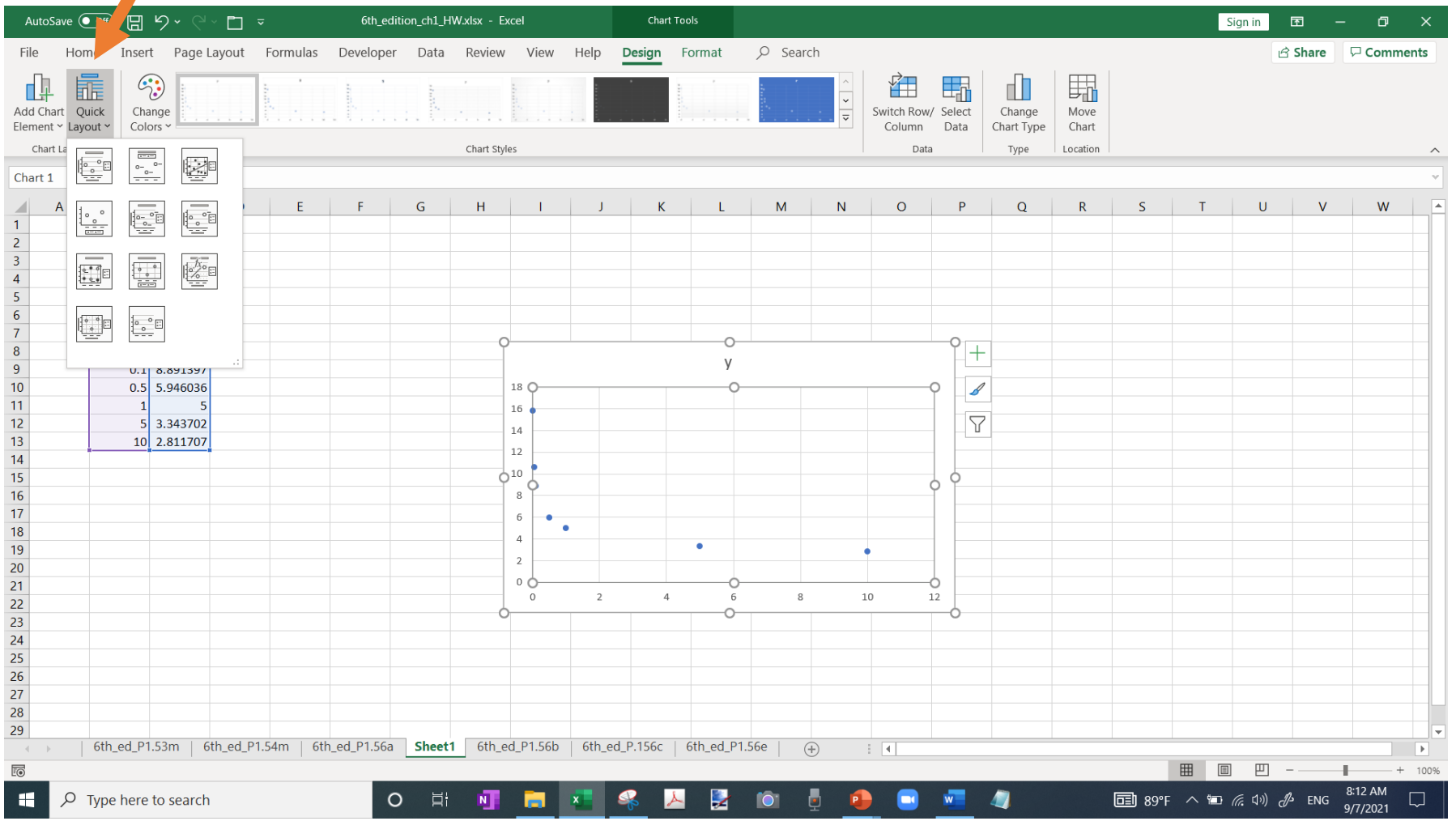
Select a layout of the chart some of the layout include legend, x and y lables, etc

Move the chart

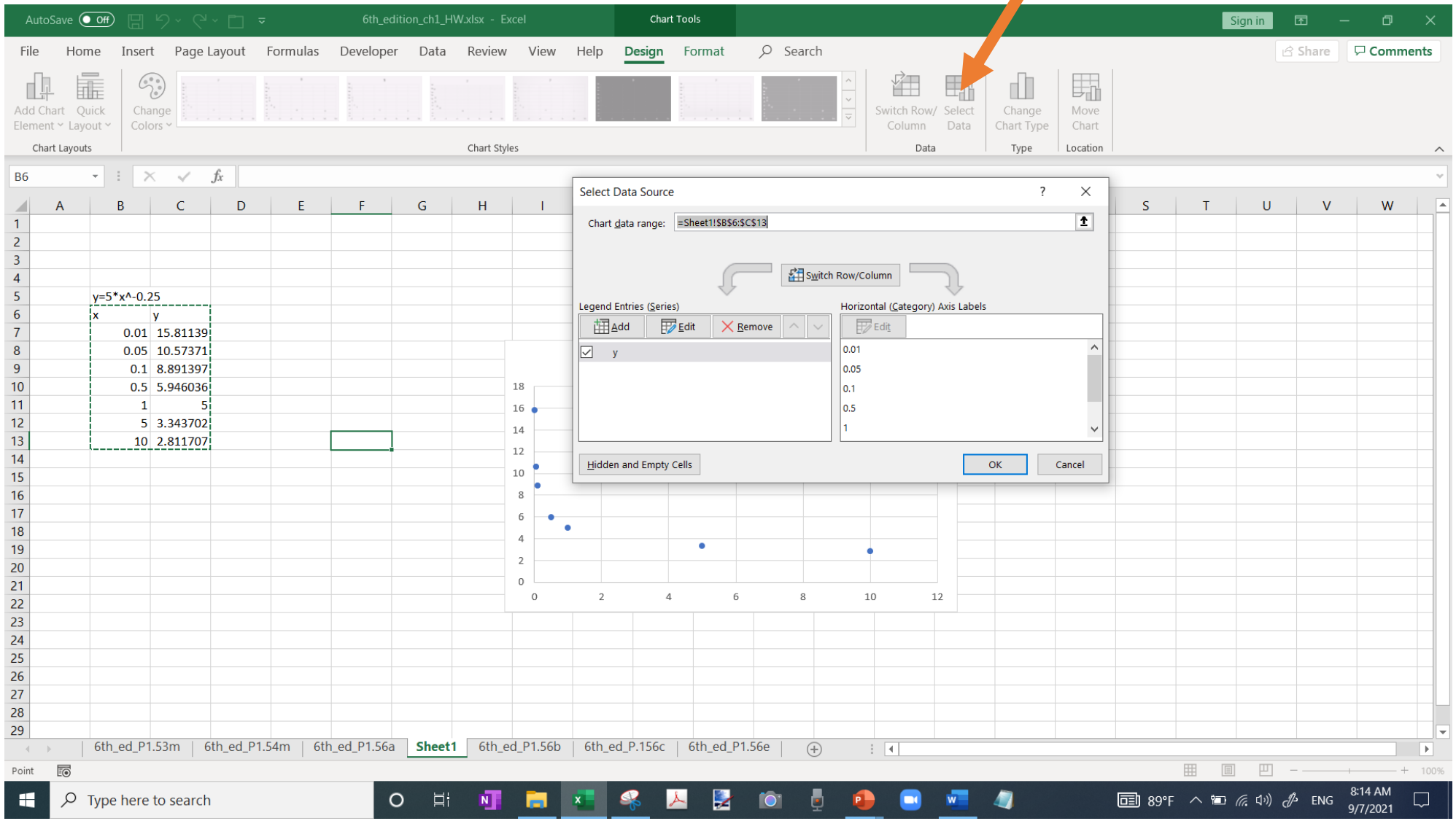
Add chart item or element



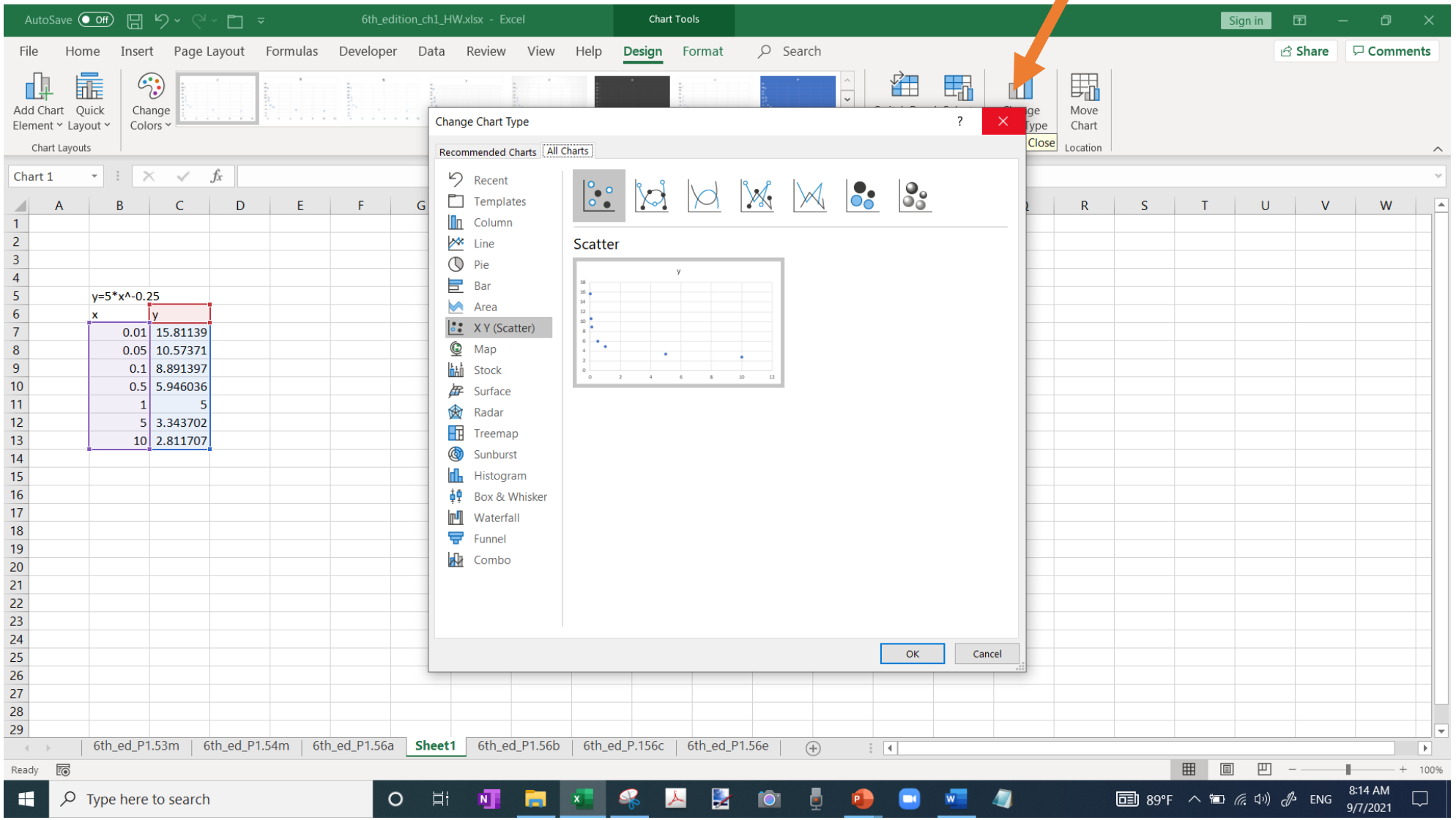
Select chart layout



Select data (Add and remove data

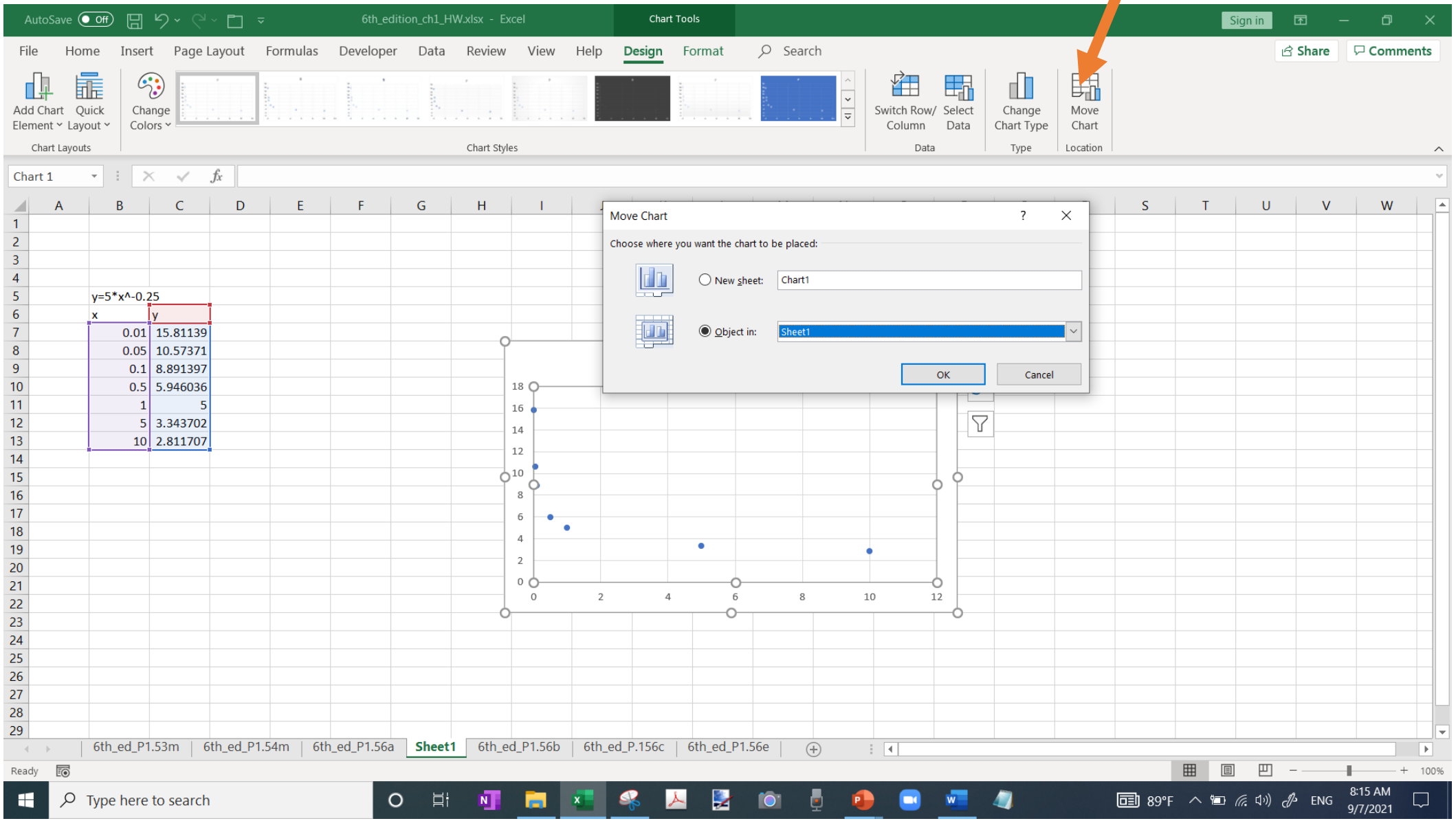


Change chart type

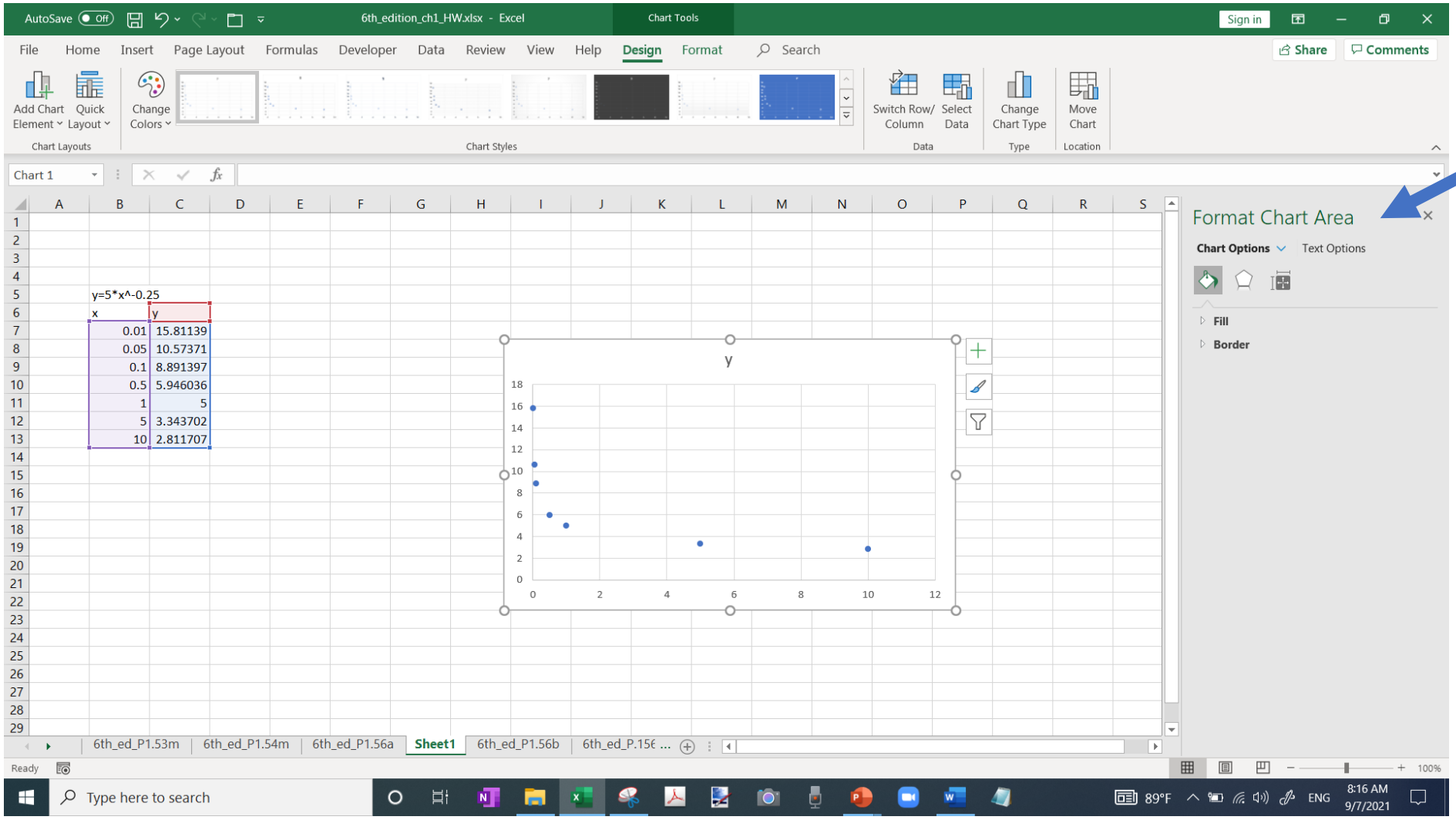


Move chart

You can make the chart in a separate sheet



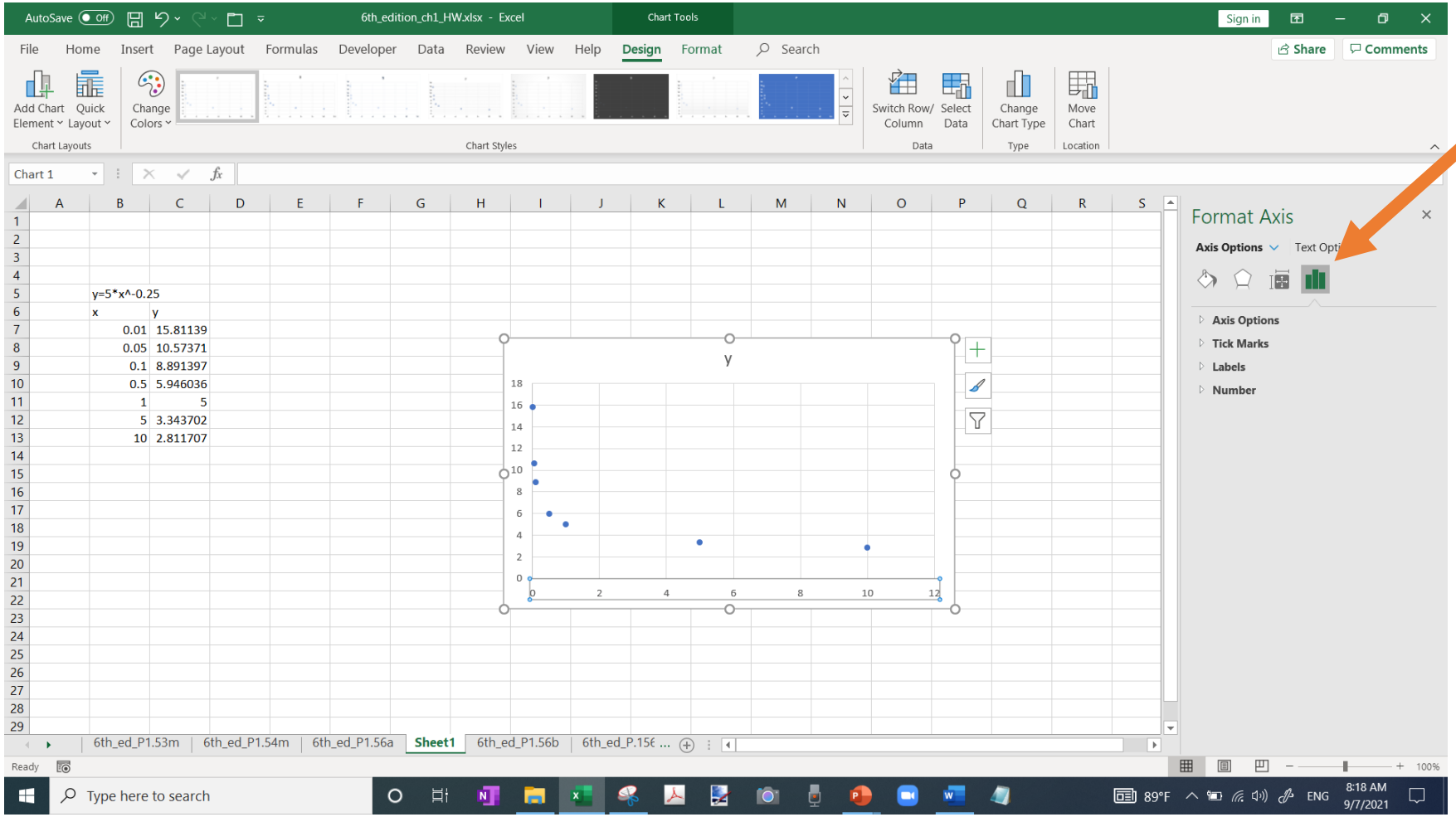
By double clicking on the chart you get format chart axes



Format chart area

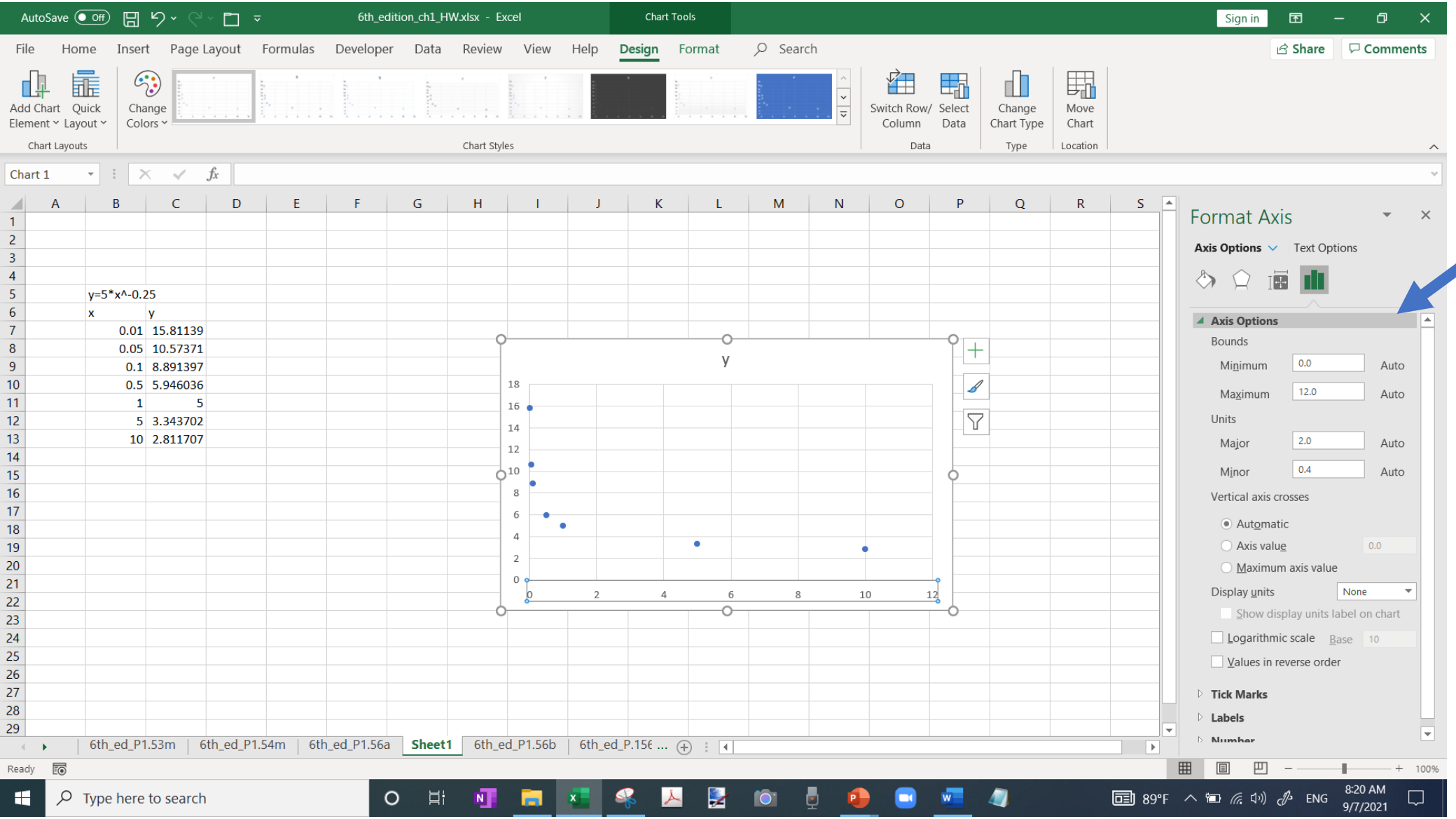
Format axes

Axes options



From format chart area select x axis and then click on this chart icon to go to axes options

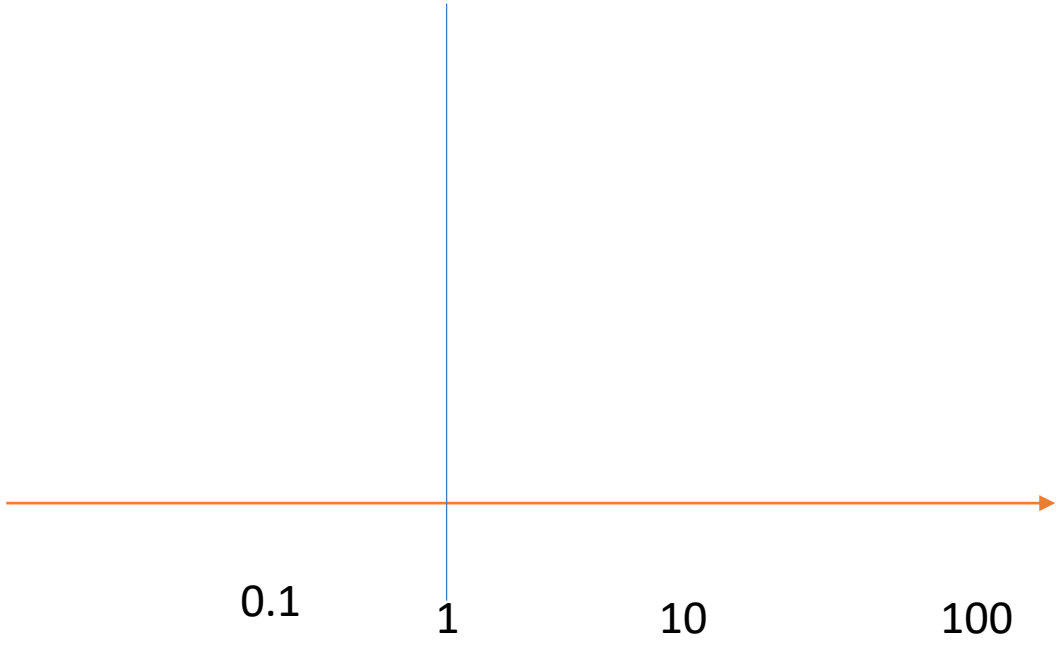
Change axis scale

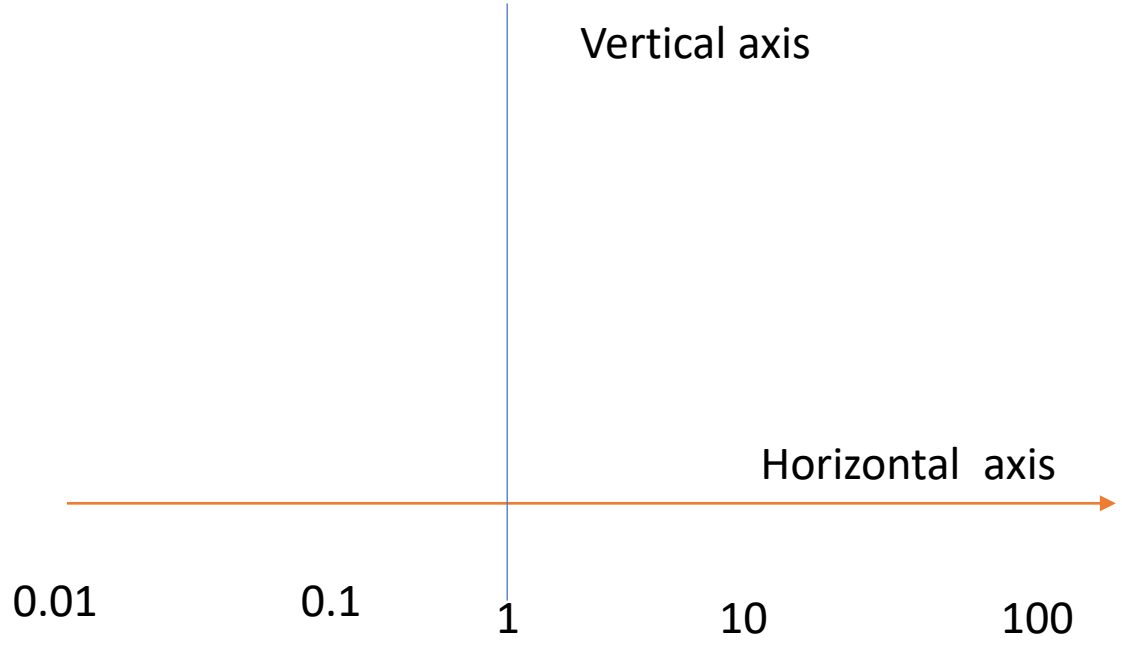


Through this axis option, the axis scale can be changed to logarithmic and how the x axis crosses the vertical axis.

Axes options

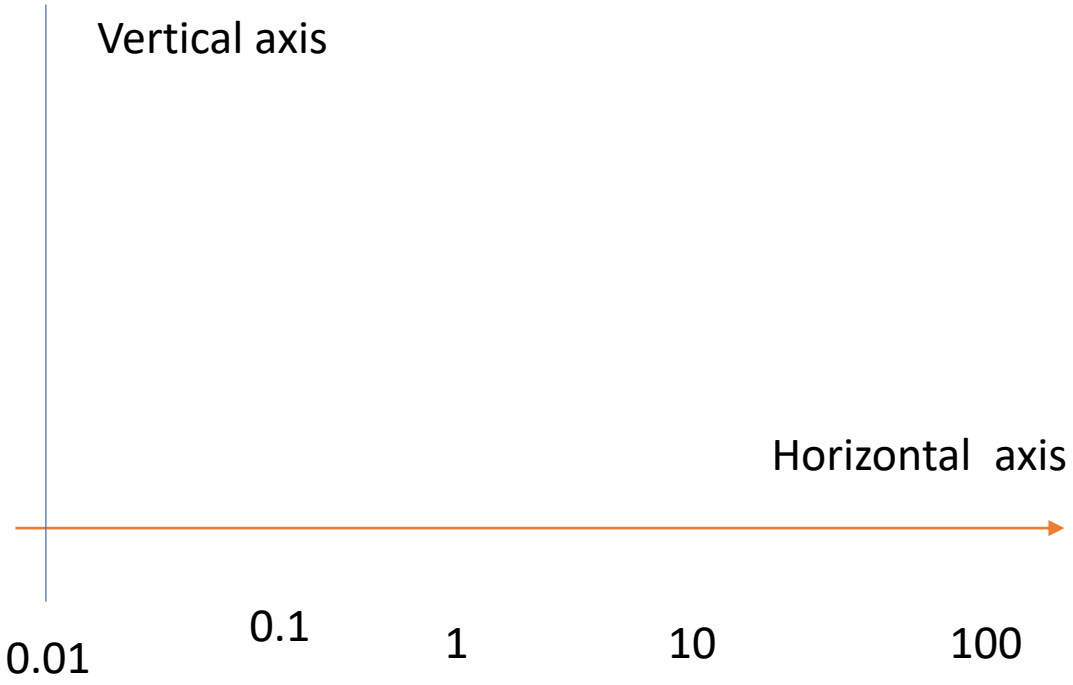
You can change where the vertical axis meets the x-axis and where the horizontal axis meets the vertical axis





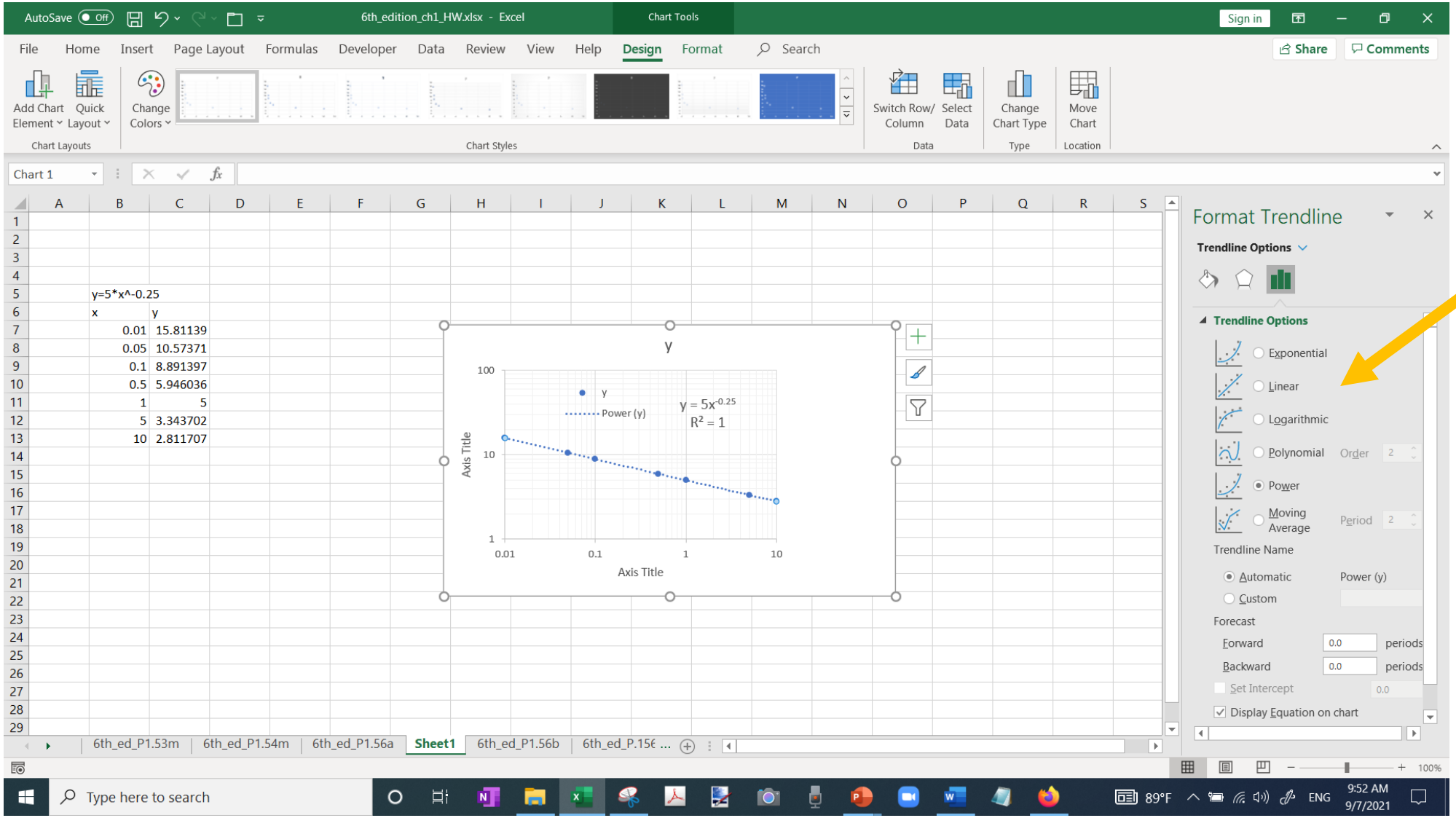
A-Vertical axis crosses horizontal axis at 1.0

Where the vertical axis meets the horizontal axis



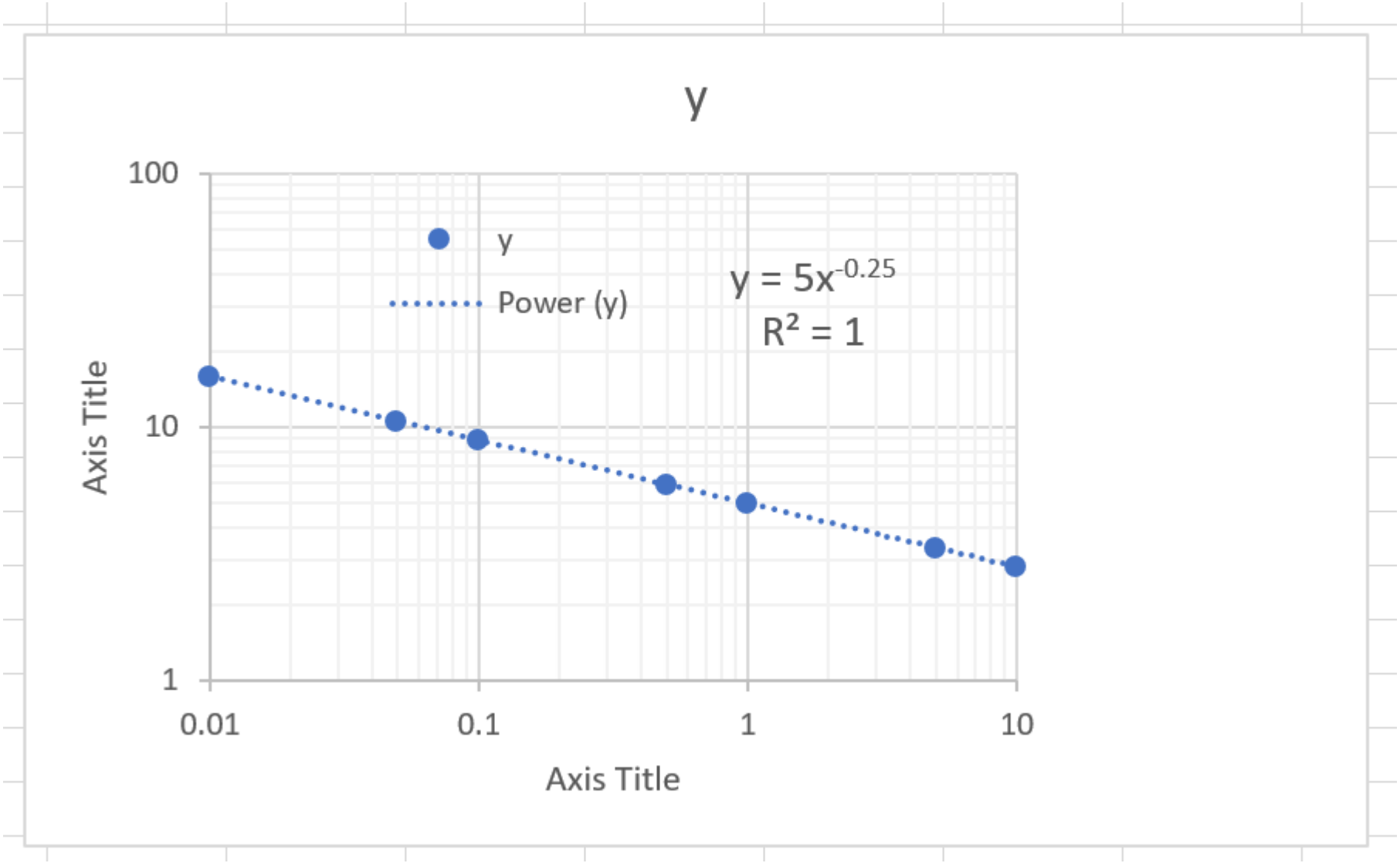
B-Vertical axis crosses horizontal axis at 0.01

Adding Trendline & equation curvefit



Different types of fit equations

Adding Trendline and curvfit equation



Conclusions

1-Excel chart plotting is very useful and strong in generating engineering plots
2-Curvefitting is easily done and can be shown on the chart along with the appropriate curvfit equation
3-The scale of the axes can be adjusted instantly
4-It is highly recommended to familiarized yourself in using Excel in general and in generating charts and formatting