Scatter Plots and Regression Lines on Excel

Data for Example – Tuition for State Universities (Residential)

University	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
University 1	4,822	5,036	5,258	5,624	5,882	6,194	6,592	7,018	7,574	8,585	9,706
University 2	5,119	5,472	5,842	6,074	6,253	6,549	6,735	6,926	7,375	7,960	8,481
University 3	3,506	3,750	3,958	4,153	4,374	4,554	4,770	4,994	5,754	6,704	7,010

- Step 1: Open Excel
- Step 2: Enter Data (Column A: *x*-values and Column B: *y*-values)
  (Note: Since I want to find a prediction line for all state colleges collected I must enter them in columns A and B. If I was comparing I would enter the *x*-values in Column A still but then I would enter each tuition, *y*-values, under columns B, C, D, etc)
- Step 3: Highlight the data you want to graph.
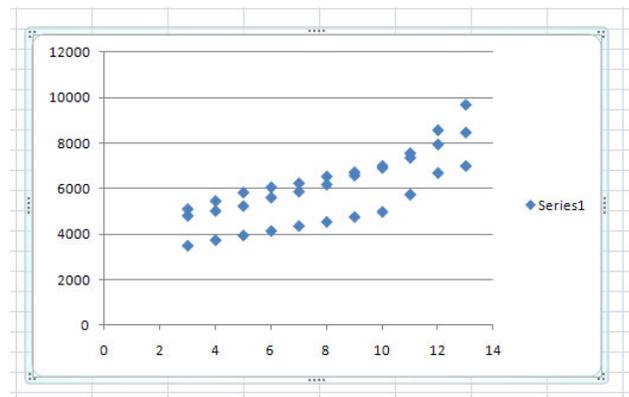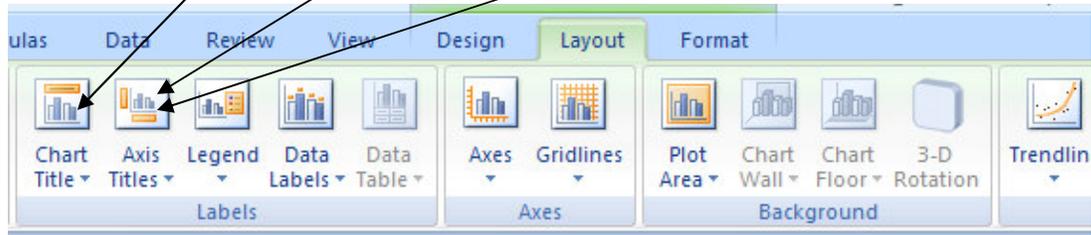- Step 4: Click on the Insert Tab.

- Step 5: Select the XY (Scatter) and then select the one with points only
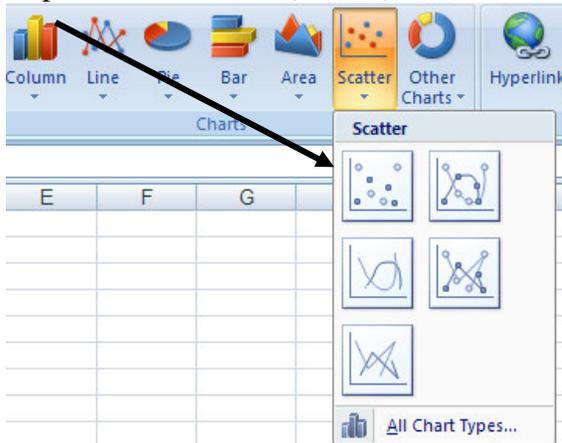
You should get a graph appear. This is what your graph will look like.
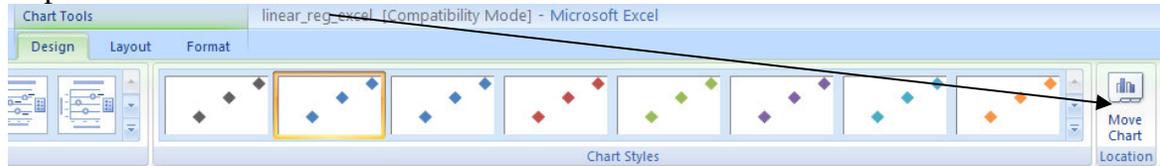Click Next.

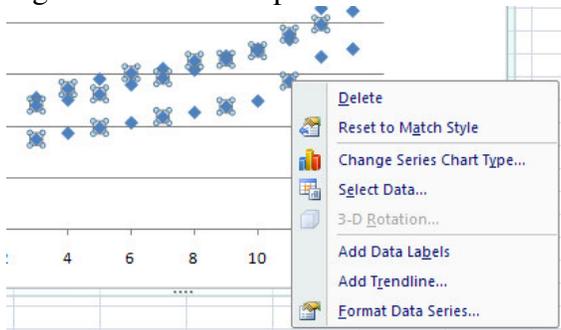Step 6: Fill in Title, Value (X) axis, and Value (Y) axis

Click next when finished.
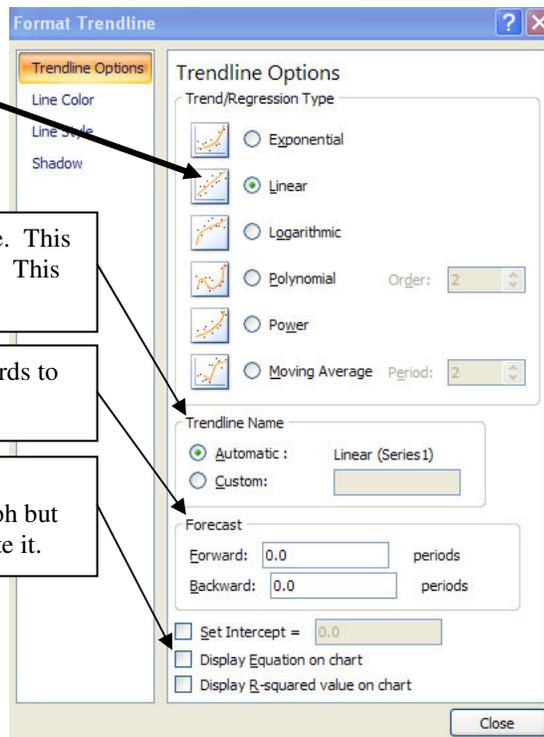
- Step 7: Move Chart to a sheet and title it.

Click finish when done. You should now have a nice scatter plot of the data.

- Step 8: Prediction Line
  - o Right click on a data point and select add trend line


  - o Select Linear

  - o Options

Trendline name: You can put a custom name in here. This is especially useful when comparing several graphs. This will make the legend more understandable.

Forecast: You can move your model forward or backwards to show the tend of things in the past or in the future.

Display equation on chart: This will give the prediction equation. You do not usually include this with your graph but it is nice to write it down so you can use it and then delete it.

  - o When done click on close.

o   Now your final graph should look like this. The equation produced was:
    $y = 361.85x + 3123.5$ Where x is years since 1990.

Public University Tuition History

$y = \$361.95x + \$3,122.60$
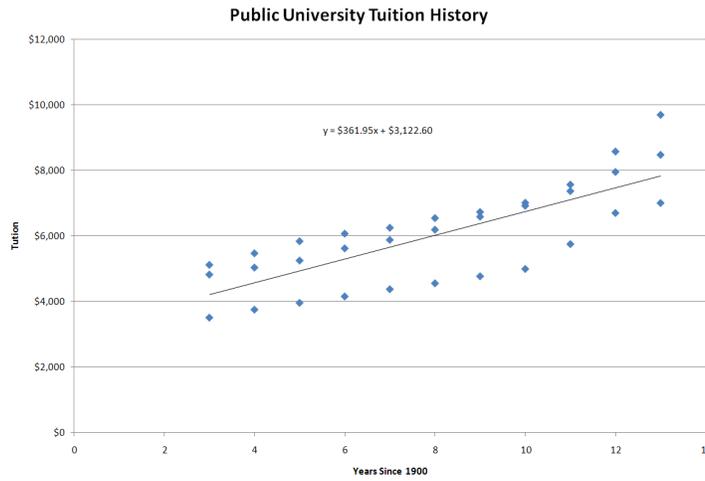
Note: There are several other things you can do with the graph. Add color, change font size, etc.