

Producing an XY Scatter Graph with Linear Regression Analysis in Microsoft Excel

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Place your X axis data (abscissa) beginning in cell A1 and continuing vertically downward. Do the same with your Y axis data (ordinate) beginning in cell B1 on downward. You should now have two columns of data on your worksheet. Beginning at cell A1, click and hold the left mouse button while you drag the mouse diagonally until you have highlighted the complete block of data cells. Now select the chart wizard icon from the toolbar at the top of the worksheet (it has a little picture of a chart on it). Begin by choosing XY (scatter) as your type of graph. Select the chart sub-type that is described as "Scatter. Compares pairs of values". Click the button that says *Next*. Click the *Series* tab and highlight *Series1* from the series window. Click in the *Name* window and type a good description of your data. Click the *Next* button again. On the *Titles* tab, enter a descriptive title for your chart. (Note that the title will default to the Series1 name that you typed in. You may leave it at that if that's what you want). For *Value (X) axis*, type in a description of your independent variable (A column data). For *Value (Y) axis*, type in a description of your dependent variable (B column data). Click the *Gridlines* tab and select only the minor gridlines for x and only the major gridlines for y. (This setting for gridlines is only a guided suggestion. You may have to adjust this setting according to your needs).

(Optional: In the Data Labels tab you may want to check *Label Contains X Value* and *Label Contains Y Value* if you would like to have your ordered pairs listed next to the data points on your graph.)

Now click on the *Finish* button. Your graph should now be visible within your worksheet.

Linear Regression Analysis:

With the graph still selected in your spreadsheet, choose *Chart* from the Excel menu then click on *Add Trendline...* from the submenu.

On the *Type* tab select *Trend/Regression Type* as *Linear*.

On the *Options* tab, select *Display Equation on Chart*.

Finally, click OK in the lower right hand corner of the window.

You may have to click and drag your linear regression equation to another area of the chart if it is in the way of your data plots, but otherwise your graph should be done.

Importing into Microsoft Word: Open a new Microsoft Word document and type a heading for your report. Be sure to include your name(s). Go back to Excel and highlight the data cells from your spreadsheet then copy and paste them into your Word document. Do the same thing for your chart by clicking on the graph to select it and then using the copy/paste function.

Do your post-lab analysis and questions on this document as well.

If you have any questions, be sure to ask your instructor before you turn the assignment in.