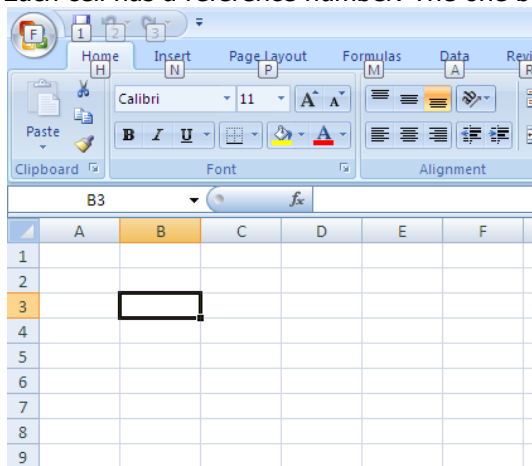


Using Excel 2007 in Chemistry: Part 1

Goals: Input and graph a set of data, Find the equation of a line, Use functions to calculate values.

A. Input and graph a set of data

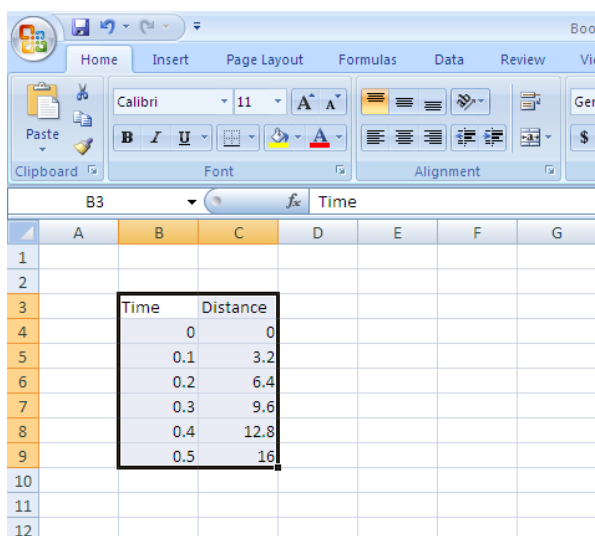
1. Run Excel: Click on start→Programs→Microsoft Excel
2. What appears is a blank worksheet divided into boxes called cells. Each cell has a reference number. The one below is B3



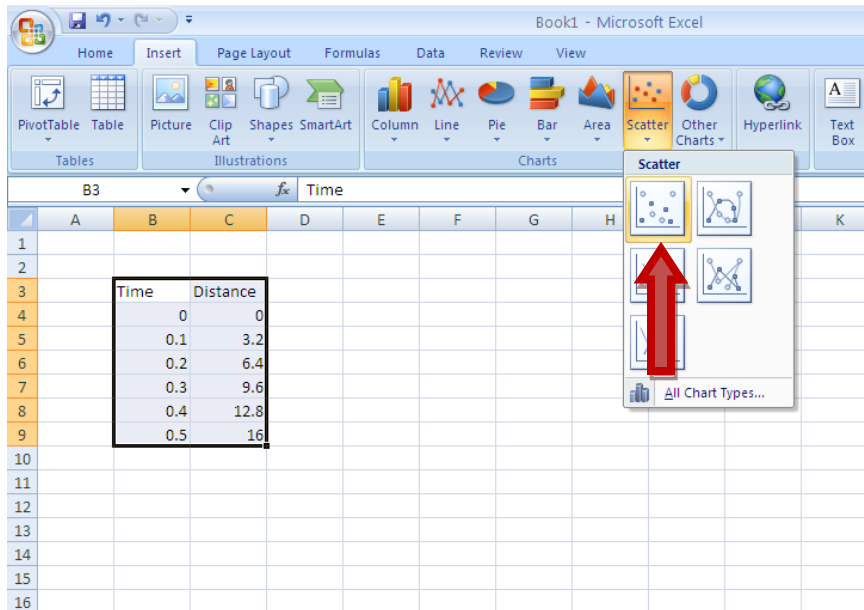
3. You will enter the data below in two columns. It doesn't really matter where on the worksheet you place the columns, just make sure they are next to one another. Be sure you include the heading of each column (i.e. Time, Distance)

Time	Distance
0	0
.1	3.2
.2	6.4
.3	9.6
.4	12.8
.5	16

4. Highlight the two columns of data by clicking and dragging



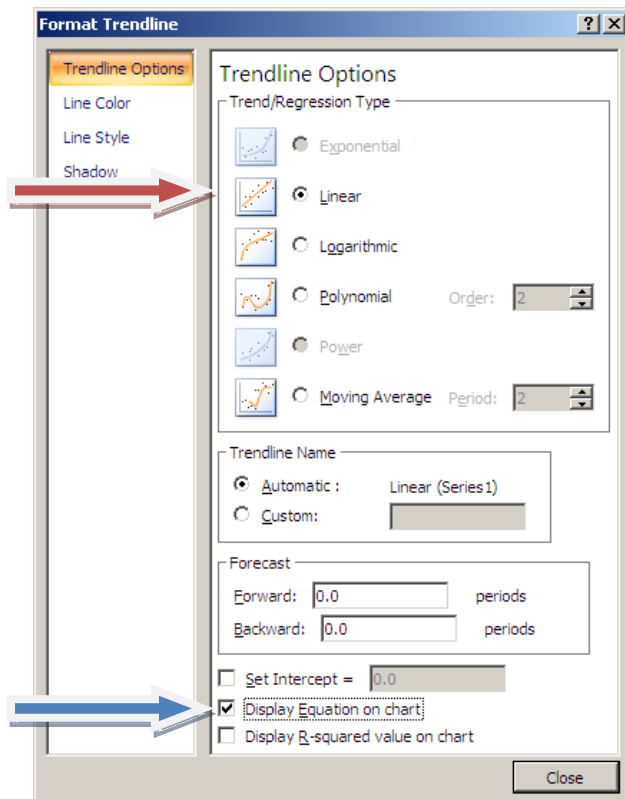
- Click the insert menu, then go to the selection of charts and pick the scatter plot as shown below:



- To label the axes of your graph and give it a title, click on your graph to select it, then click on Layout under Chart Tools. There you will find pull down menus for labeling the various parts of your graph. Give it a title of Distance vs. Time and label the axes correctly.

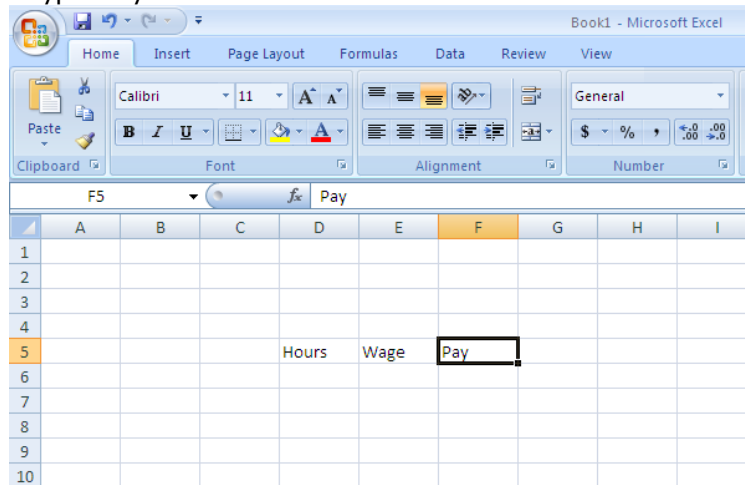
B. Using Excel to find the equation for a line.

- Right click one of the data points from your graph in Part I. Select "Add Trendline".
- Select a "Linear" Trend.
- Then go to bottom of format trend lines and put a check in [Display equation](#)
- Type the equation for this graph and its slope in a cell below your data.



C. Use functions to calculate values

1. Select "Sheet2" at the bottom of the program. This allows you to have multiple spreadsheets in the same file.
2. In cell D5 type "Hours".
3. In cell E5 type "Wage".
4. In cell F5 type "Pay".



5. In the cell below wage type 8. This means you are being paid \$8/hr.
6. In the cell below hours type 10. This means you worked 10 hours.
7. In the cell below Pay, type $=D6 * E6$ This means you want the Spreadsheet to calculate the value of this cell by multiplying what's In D6 (Hours worked) times E6 (How much you get paid; your wage)
8. Now move to the cell below Hours. Replace the 10 with 43.7. Move away from the cell by pressing ENTER or by pressing an arrow key. This action should update the cell under the Pay label.

Write the value of Pay here: _____

9. Now change the label of Pay to Gross Pay. To the right of that cell, add a cell named Net pay. Tell the spreadsheet to calculate this new value (in the cell below the label) as 78% of the Gross pay. See if you can figure out how to do this! (Hint: to find 45% of 12, you'd multiply $12 * .45$!)
10. When you have completed step 9, enter 34.8 in the cell below Hours. Move off the cell (arrow or ENTER) and see that the cell under Net Pay is updated.

Write the value of Net Pay here: _____

Using Excel 2007 in Chemistry: Part 2

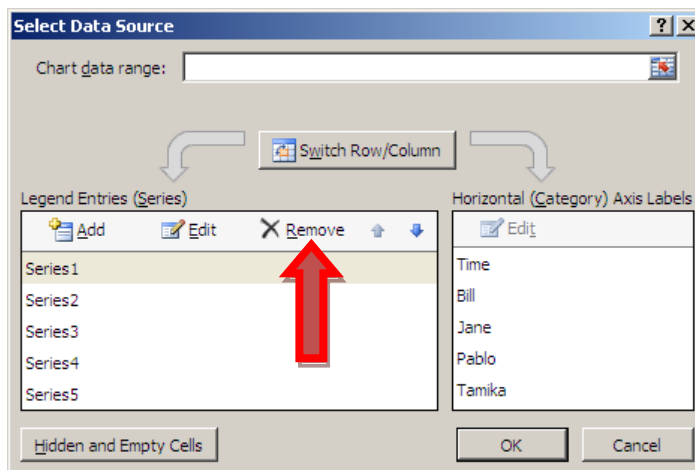
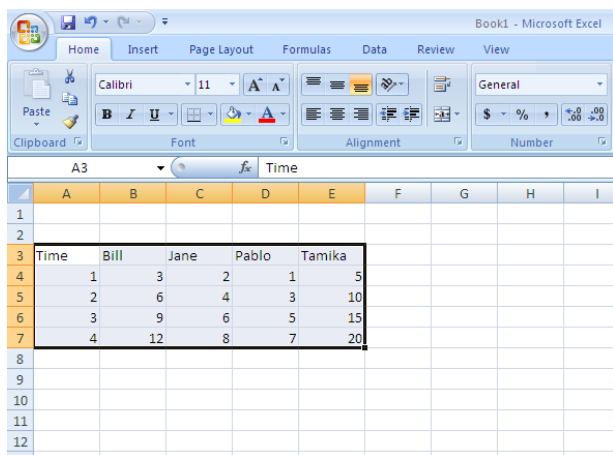
Goals: In this tutorial you will find out how to tweak Excel to suit your needs. Most of the time when you tell Excel to graph a set of data, it guesses which values are x-values, and which ones are y-values. If it guesses wrong, you need to know how to re-direct it.

A. Tweaking a Graph to Meet Your Needs

- Start Excel if it isn't already started.
- Copy the data below into a spreadsheet. Retain the positions shown (i.e. 'Time' will be in cell A3):

	A	B	C	D	E
3	Time	Bill	Jane	Pablo	Tamika
4	1	3	2	1	5
5	2	6	4	3	10
6	3	9	6	5	15
7	4	12	8	7	20

- Highlight all the cells.
- Click insert then select a scatter plot chart.
- Locate the Design Tab under Chart Tools and then click on the Select Data on the menu. You should see a screen just like the illustration to the right.

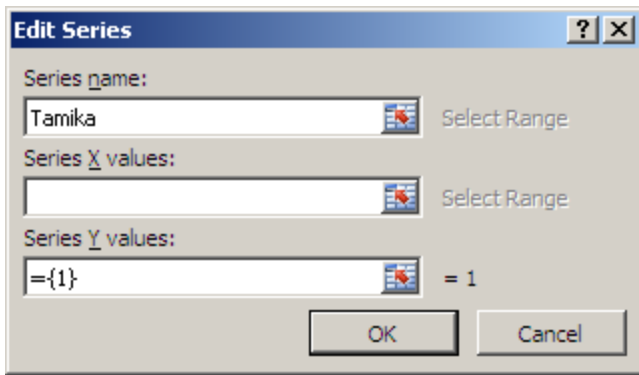


- You will see Legend Entries called Series with five items:

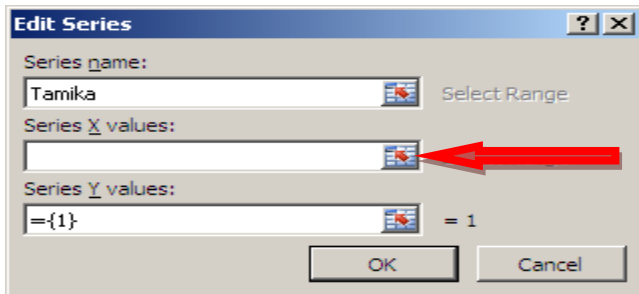
Series1, Series2, Series3, Series4, Series5

Click on the button below its called **REMOVE** until all of the series have disappeared.

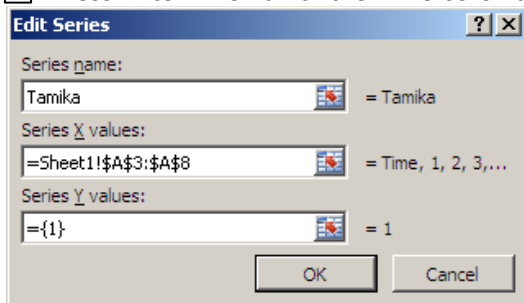
- Now click on the Add button to add a new series
- In the Name textbox, type in "Tamika's" (No quotes)



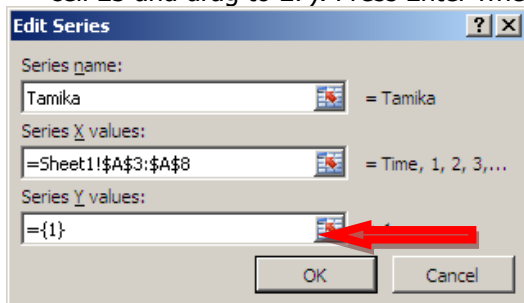
- To the far right of the box called **X-Values** you will see a spreadsheet icon:



- Click on it. The box will disappear and you will be taken back to the spreadsheet. Once there, click on the Time cell (A3) and hold the mouse down. Drag through all the data cells for Time and release the mouse when the cursor gets to the last cell (A7)
- Press Enter when all of the Time cells have blinking lines (called marching ants) around them.



- Now define the **Y-values** similarly: Click on the box to the far right of the Y-values. Again, the box will disappear and take you to the spreadsheet. This time, select all of Tamika's values (Start the click on cell E3 and drag to E7). Press Enter when your marching ants surround all of Tamika's data.



- Press OK and select options that dress up your graph. Mess around with different values for gridlines, legend, etc. Make sure you properly label the graph, by going to chart tools then layout and then Axis Titles.