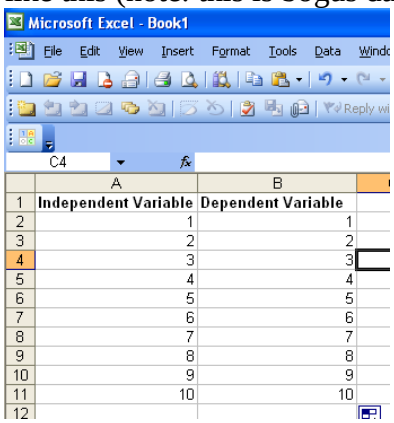
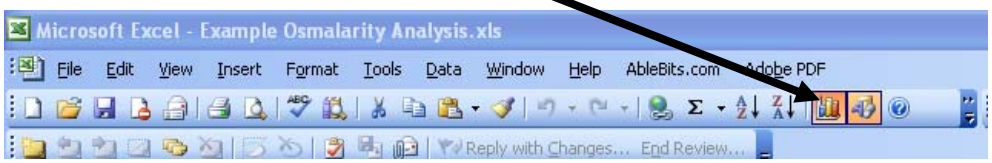
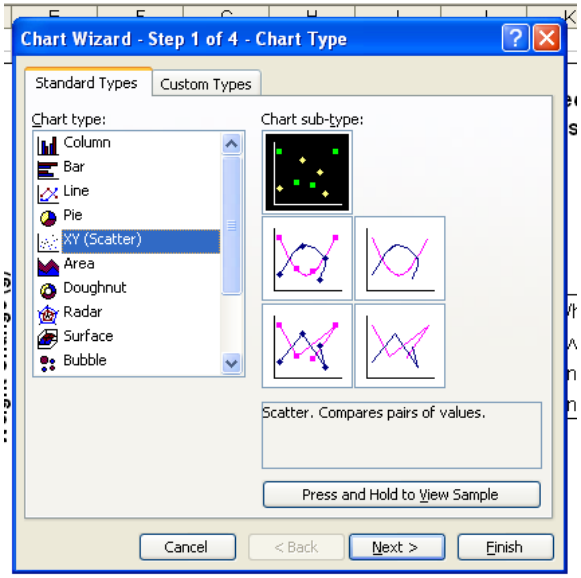
Instructions for Creating Best-fit Line Graph

1. You will need to enter your data into the spread sheet so that it looks something like this (note: this is bogus data):

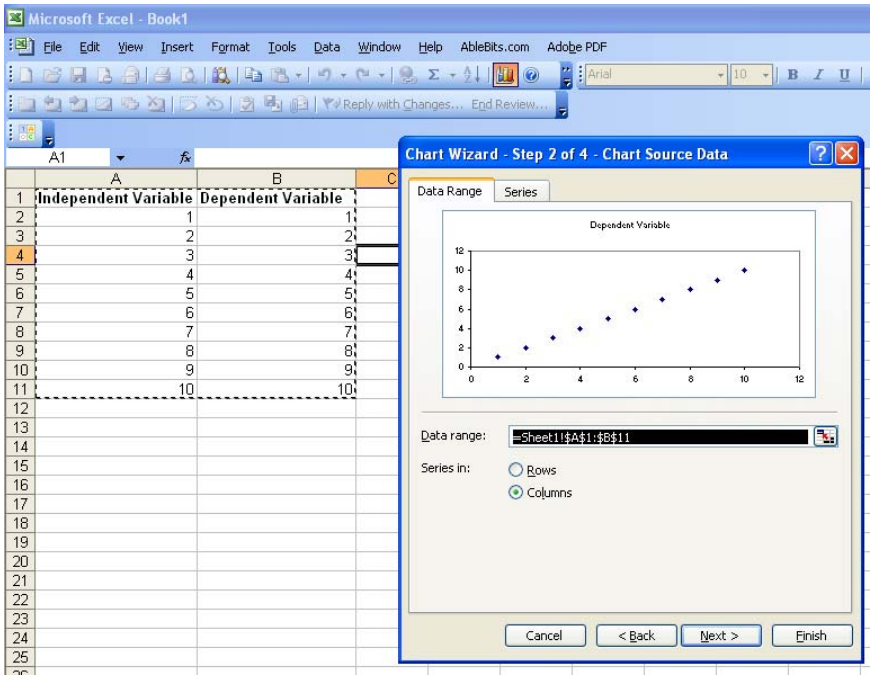


2. You will need to select Chart Wizard to make an XY (Scatter) graph without a line.

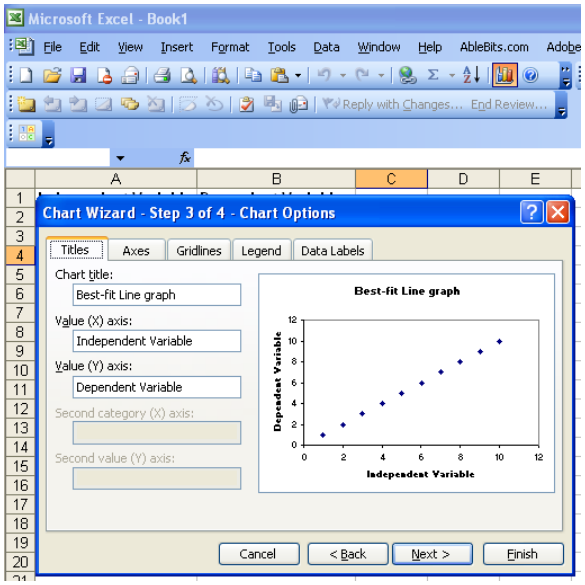




3. Select your entire data range:

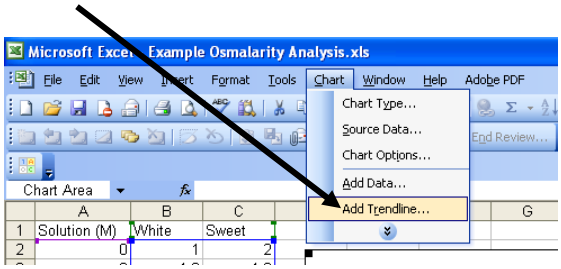


4. Add Titles and Label your Axes (select show legend if appropriate)

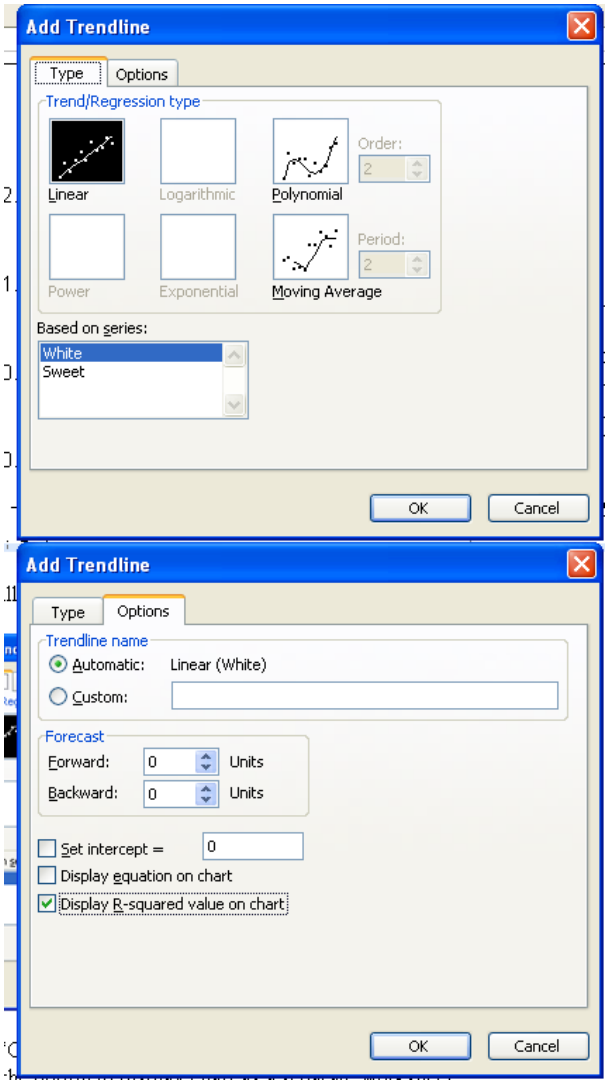


5. Click “Finish”

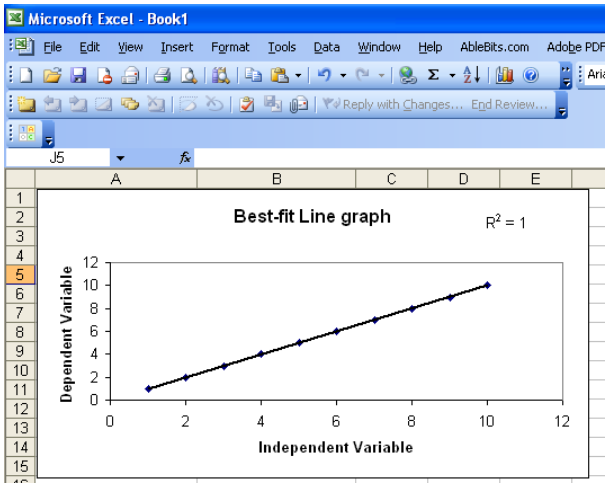
6. You will notice that your graph does not have any lines on it, only data points. To add a best-fit line you need to click anywhere on your chart and then Select "Add Trendline" from the Chart Menu:



7. You will need to select "Linear" within the "Type" menu and select "Display R-squared value on chart" under "Options":



8. You will then have a graph that looks something like this:



9. Show your TA your graph to confirm that you have done everything correctly.

10. A note about the meaning of R^2. The value of R^2 indicates the goodness of fit of the line; it ranges between 0 and 1. A value of 0 means that there is no correlation between the independent variable and the dependent variable; whereas, a value of 1 means that you have a perfect correlation between these two variables and you would be able to predict the value of a dependent variable perfectly if given the value of the independent variable. In reality, a value of 1 is never achieved in biology experiments, but a high value indicates a strong correlation – or a 'good fit."