Excel Workshop

CHEM 2001, FALL 2013

Make some calculations

- Always begin a function with '='
- Multiply X and Y
- Multiply X by 50 (2 methods)
  - Absolute vs. Relative referencing
- Calculate the [average](#) of X
- [Find functions](#) in Excel

Insert a Scatter Plot

Scatter plots are useful for looking at the relationship between two variables.

a. Select the data.

b. 'Insert' tab, 'Scatter' drop-down box, select the 1st (a bunch of dots).

c. Name the data series by right clicking on the chart and choosing 'Select data...'. Type the name in the 'Name' text box.

Format the chart.

Formatting the chart makes the information clear.

1. Change the chart title and add axis titles.
2. Format the horizontal and vertical axes.
3. Add gridlines 'Chart Layout', 'Format', and selecting Gridlines box in the ribbon. Click the arrow next to the box for more options.
4. Change chart size.
5. Format the legend and plot area.
6. Format the data series.

Trendlines

Linear trendlines are useful for showing linear relationships between variables.

a. Select the scatter plot.

b. Insert the trendline by going to the 'Layout' tab in Chart Tools, 'Trendline', 'Linear'.

c. Format the trendline by right clicking on it and selecting 'Format Trendline'.

d. Add the equation of the line and R-squared.

One more function: Linest

Linest is used to estimate the parameters of a line of best fit (the trendline!). It also gives us the standard errors for the parameters of the line (which the graph does not).

Linest is an array function so it acts a bit differently than the other functions we covered earlier. The next few slides unpack it in great detail.

Linest: Getting the Function Right

- Select 4 cells in a 2 x 2 formation
- Start the function with '='
- Type Linest and follow the prompts in Excel:
  - Select your known y's
  - Select your known x's
  - For [const] type 1 (because you do NOT want to force the intercept to be 0)
  - For [stats] also type 1 (because you want the additional statistics)
- Press Command & Return simultaneously; NOT just Return!!!

Linest: Understanding the Output

- Press Command & Return simultaneously all 4 cells should have numbers in them.

	Linest Function	
	Slope	Intercept
	-0.5616415	0.80046869
Standard Errors	0.09166623	0.05376028

Copying & Pasting into Word

- Copying and pasting your charts into a Word document.

- Select the chart. Copy (CTRL C) & paste (CTRL V) it. Double check the formatting of your chart.

- DID THE FORMATTING CHANGE?
- Paste it as a picture in word. Right click on the Word document and under 'Paste Options' select 'Picture'.