

## Data Analysis Using the TI-83/84

### A. Entering data for a scatter plot

Go the STAT menu and select EDIT.

Your calculator has 6 built in lists to use for data storage: L1, L2, L3, L4, L5, L6

If there is data in L1 or L2 you can clear it by selecting the name of the list and then keying CLEAR (ENTER)

Enter the first column (x values) in L1 and the second column (y values) in L2. Simply type in the numbers and hit ENTER and the calculator will automatically advance to the next line.

**BOTH LISTS MUST BE THE SAME LENGTH**

### B. Graphing the Scatter Plot

Access the StatPlot menu (2<sup>nd</sup> Y=). Choose Plot1 and ENTER. Make sure the plot is turned ON, the first plot type is selected and the Xlist is L1 and Ylist is L2. The first mark (the box) is the easiest to see.

You may adjust the window settings yourself using the WINDOW menu or use the ZOOMSTAT option on the ZOOM menu.

Now hit the GRAPH key and your scatter plot should appear.

If you know that the settings for Plot1 are correctly set up to graph L1 versus L2 then you may turn Plot1 (and similarly Plots 2 and 3) on and off from the y= menu by simply moving the cursor up to the name of the plot and hitting ENTER to toggle between ON and OFF (The type is in reverse if the plot is on.)

### C. Finding a Regression Equation

From the STAT menu select the CALC menu.

Choose the type of regression equation that is appropriate for your data and hit ENTER. For linear models for example it is LinReg(ax +b).

This puts the command on the main screen. You may hit ENTER to accept the default values of using L1 for X values and L2 for Y values.

Alternately you can type L1,L2,Y1 after the command to use L1 and L2 and store the equation in Y1. So you would have a command like this:

LinReg(ax+b) L1,L2,Y1

Note: L1 and L2 are available as the 2<sup>nd</sup> function of the 1 and 2 keys. To get Y1 you select VARS and then the Y-VARS menu and then the Function option.

If you prefer to take the default values by hitting ENTER it will create the equation but not store it in Y1. To store it in Y1 go to the y= menu and select VARS, STATISTICS, the EQ menu, and finally RegEQ. **Note: In order to use this you must actually run the regression routine. Don't just put the data in the lists and go straight to this or you will get the regression equation from the last time you ran a regression.**