

Data Analysis on the TI-83/84

Entering Data, Producing a Scatterplot, and Obtaining a Regression Equation

I. Entering Data in Lists

1. Press the STAT key and select 1:Edit to go into the Statistics Editor.
2. You should see columns for lists with headings L1, L2, L3. (Note: You also can see headings for lists L4, L5, and L6 if you use the "right-arrow" to scroll to the right.)
3. If there is "old data" in any of the lists that you want to clear out, use the "up-arrow" and place the cursor on top of the list name (L1, for example), press CLEAR and then ENTER. Repeat this to clear out data from any other lists.
4. Enter your data in L1 and L2. Be sure there are the same number of data items in L1 and L2!

II. Producing a Scatterplot of the Data.

1. Press the 2nd key, followed by the Y= key to take you into the STAT PLOTS.
2. Press ENTER to set up Plot1.
3. Turn Plot1 on by pressing ENTER when the cursor is on top of the ON selection.
4. Press the "down-arrow" key to select the type of plot you want. If the first icon is not highlighted, again with the cursor on top of the first icon (for scatterplot), press ENTER. If it is already highlighted, then scatterplot is the current selection.
5. Press the "down-arrow" key to select the list to be used on the x-axis of your scatterplot (XList). If it does not indicate L1, press the 2nd key, then the number 1, for list L1. (Note: You can not type the letter "L" followed by the number "1".) Repeat to make the Ylist L2. (Press 2nd, 2, for L2.)
6. Press the "down-arrow" key to select the type of "mark" to be used for the data points on the scatterplot. (Note: If you do not have more than 10 data points, the first mark, the "box", is recommended. The more data points you have, the smaller the mark you may want to use.) To select the mark desired, highlight the mark and press ENTER.
7. Press the Y= key to take you to the Y= Editor. Clear out any functions you may have in Y1, Y2, etc. Set up the WINDOW for your scatterplot by hand or press ZOOM and 9:ZoomStat for the calculator to set the window for you. Press GRAPH to see the scatterplot.

III. Obtaining a Regression Equation for the Data and the Scatterplot.

1. From the Home screen (2nd, MODE, for QUIT), again press the STAT key. Press the "right-arrow" key to move the cursor to CALC.
2. Use your "down-arrow" or "up-arrow" keys to select the type of regression equation you want (Linear Regression, Quadratic Regression, Exponential Regression, etc.). When the type of regression equation is highlighted, press ENTER. This should bring the command to the Home screen.
3. Before pressing ENTER, indicate which lists to perform the regression on by entering L1 (again 2nd, 1), a comma, and L2. For example, if you were selecting a linear regression on data in L1 and L2, your command should appear as LinReg L1,L2. Press ENTER to obtain your regression equation. (Note: If you are performing the regression on data in L1 and L2, it is not necessary to indicate L1 and L2, since these are the "default" lists for the calculator. That is, a command of LinReg with no lists indicated, will perform a linear regression on data in L1 and L2.)
4. Optional: Your calculator can automatically "paste" the regression equation into the Y= menu after it does the regression. For example, if you want to do an exponential regression on data stored in L3 and L4, and then paste the regression equation into Y2 of the Y= menu, you can enter: ExpReg L3,L4,Y2. The Y2 can be found by pressing the VARS key (for Variables), the "right-arrow" key (for a Y-VARS), ENTER (to select the Y-Variables), ENTER again (to select a Function variable), and 2 (to select Y2).