

Using a TI-83/84 for Statistical Data

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Lists

Store statistical data in *lists*, L_1, L_2, \dots, L_6 , using the *list editor*: **STATS** 1:Edit. Place the cursor on the first blank line of a list and type in a value followed by **ENTER**.

To delete a single entry in a list, place the cursor on the entry and press **DEL**.

To delete the entire list, either delete all its entries or place the cursor on the name of the list (L_1, L_2, \dots) and press **CLEAR**.

For ordered pairs (x, y) , store the x -values in one list and the y -values in another. For example, to store the points $(0, 3)$, $(1, 0)$, $(2, -1)$, and $(3, 0)$, store $\{0, 1, 2, 3\}$ in L_1 and $\{3, 0, -1, 0\}$ in L_2 .

If L_1 is a list, then $L_1 + 5$ is the list where each entry in L_1 has been increased by 5. Similarly, if L_1 and L_2 are lists of the same length, then $L_1 + L_2$ is the list where each entry is the sum of the corresponding entries in L_1 and L_2 . You can store the result of such list arithmetic in yet another list: **L1** **+** **5** **STO→** **L2** **ENTER**.

Type **2nd** **1** to get **L1**.

Analysis

Use **STATS** **CALC** 1:1-Var Stats **L1** to find the mean \bar{x} , standard deviation σ_x , first, second, and third quartile, and much more.

To find the “least squares regression” line for the data points stored in L_1 and L_2 and store the expression for this line in Y_1 , type **STATS** **CALC** 4:LinReg(ax+b) **VARS** **Y-VARS** 1:Function 1:Y₁ and hit **ENTER**.

If your data is stored in lists other than L_1 and L_2 , include them in the command: **STATS** **CALC** 4:LinReg(ax+b) **L3** **,** **L2** **,** **VARS** **Y-VARS** 1:Function 1:Y₁ and hit **ENTER**.

Plotting

To draw a scatter plot of the data points stored in L_1 and L_2 , press **Y=**, place the cursor on **Plot1** and press **ENTER** to highlight **Plot1**. The

GRAPH button will now draw the points in L_1 and L_2 in addition to any functions listed as Y_1, Y_2, \dots . If you do not want to graph the functions, move the cursor to the appropriate = and press **ENTER** to un-highlight the =. You may want to use **ZOOM** 9:ZoomStat to set an appropriate window size.

To change which lists are plotted or how they are plotted, press **STAT PLOT** 1:Plot1 and change the settings.

Type **2nd** **Y=** to get **STAT PLOT**.

When you are done with your scatter plot, un-highlight **Plot1** in the **Y=** menu.

Conventions

You should by now have figured that **BUTTON** is a button on your calculator, **TAB** is a tab that you reach by pressing **→** or **←**, and **5:MENU** is a menu choice that you can reach with the cursor keys and **ENTER** or simply by pressing **5**.