

Basic Instructions for the TI –82 Graphing Calculators

We want to get the basic descriptors, scatterplot, correlation coefficient, and linear regression equations for the following data.

Age (months)	36	48	51	54	57	60
Height (cm)	86	90	91	93	94	95

Note: these directions assume you haven't substantially altered the calculators basis settings. If you have please see me.

Entering Data

To enter data hit the **[STAT]** function key and chose the edit option.

You should have lists L1 and L2

To clear these lists of unwanted data

- Use the up key to move the cursor into the list name area and press the **[CUSTOM]** and **[ENTER]** keys to delete the data in that particular column.
- Repeat for the other columns as necessary.

To enter data

Enter the x and y values in the L1 and L2 columns respectively. Your calculator should look like:

L1	L2	L3	Z
36	86	---	---
48	90	---	---
51	91	---	---
54	93	---	---
57	94	---	---
60	95	---	---
---	---	---	---
L2(1)=86			

Make sure all the columns contain the same number of values or you will get a dimension error when you try to compute the various statistical results we are after.

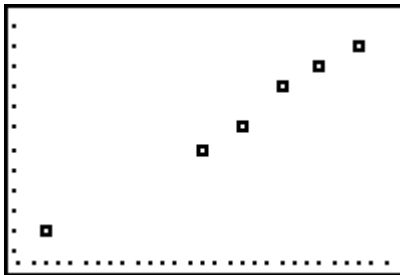
Press the QUIT function key, **[2nd][MODE]**, to return to the home screen. or **[STAT]** to return to the Statistics menu.

Scatterplot

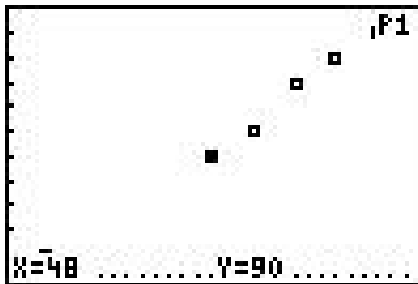
Starting from the home screen, press the $\boxed{2\text{nd}}\boxed{Y=}$ key to get to the Stat Plot menu. Select 1: Plot 1. Move the cursor over to the ON option and press enter. This selects the plot. If you want to turn it off just reverse the process.

Press $\boxed{Y=}$ to display any equations in the equation editor. If you have any equations selected to plot (equal sign with a black box around it), move the cursor down to them and delete them or move the cursor over the equal signs and press $\boxed{\text{ENTER}}$ to deselect the equation.

Press the $\boxed{\text{ZOOM}}$ function key and select 9: ZoomStat and you should get a scatterplot like this:



You can press the $\boxed{\text{TRACE}}$ key and use the arrow keys to trace along the data points if you are interested) the values are displayed along the bottom of the screen.



Press the QUIT function key, $\boxed{2\text{nd}}\boxed{\text{MODE}}$, to return to the home screen. or $\boxed{\text{STAT}}$ to return to the Statistics menu.

Basic Descriptive Statistics, Linear Regression, and Correlation Coefficient

Press the $\boxed{\text{STAT}}$ function key and chose the CALC option. Then you can select (not all at the same time)

- 1-Var Stats to get basic descriptors for the variables in $x\text{Stat}$
- 2-Var Stats to get basic descriptors for the variables in $x\text{Stat}$ and $y\text{Stat}$.
- LinReg ($ax + b$) to get the coefficients of the regression equation and the correlation coefficient r .

Press $\boxed{\text{ENTER}}$ to view the results.

Plotting the Regression Line on the Scatterplot

Press the **[STAT]** function key and chose the CALC option

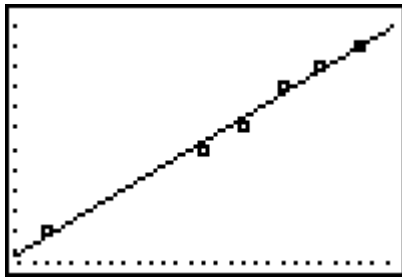
Select LinReg (ax +b).

Press **[ENTER]** the regression coefficients will display.

Press the **[Y=]** key. Move your cursor to the point where you would like to put the regression equation., Y₁ for example. Press **[VARS]** and select 5: Statistics... . Move the cursor to EQ, and select 7: RegEQ.

You should now have the regression equation in the equation editor in the Y₁ position.

Press the **[ZOOM]** function key and select 9: ZoomStat and you should get a scatterplot along with the regression line that looks like:



Note: Your calculator can do many of the plots that we've done class, you will need to read your manual to do these plots.