**Using the TI-84 to Find a Line of Best Fit**

**Step One: Things that may or may not need to be done**

*****a. Clear the lists****.* Press the  key on the calculator then choose Edit. Put your cursor on L1 as shown in the diagram to the right. Press  to remove data. Repeat this process with L2. (Note: if L1 is deleted, press  and choose 5: SetUpEditor and press twice. This will reset all lists.)

***b. Turn on diagnostics.*** Press  then  to the “Stat Diagnostics” line and turn them on as shown to the right.

***c. Scatterplot settings*** Click on  to access the Stat Plot details. Be sure that Plot1 is turned on as shown to the right. Also, L1 must be selected as the XList and L2 must be selected as the YList.

**Step Two: Data Entry**. Enter data on L1 (independent variable) and L2 (dependent variable) as shown on the right.

**Step Three: Set Window.** After data is entered, press and select 9:ZoomStat. This will put the plotted points on the graph.





**Step Four: Finding the line of best fit (linear regression):** Press  and  to calc and select 4:LinReg(ax+b) as shown to the right. Press  one time.

(continued on other side)

On the next screen, scroll down to the “Store ReqEQ” line, hit  and choose Y1. Next, click  and the linear regression equation will appear. You can then press  to see the results.



**Step Five: Predicting y given x.** From the graph, press  then press  so that you are tracing Y1.

Then type in an x-value and hit . An example of this is to the right.

 **Step Six: Predicting x given y.** Press  and enter the y-value as Y2. Then return to the  and find the intersection. To find the intersection, click  and select 5:intersect. Then press  twice to select Y1 and Y2. Pressing  one more time (after an optional guess) will find the intersection.

**Note:** When extrapolation is used (predictions outside given data), it is often necessary to adjust the viewing window of the graph. To do this, press  then adjust the Xmin, Xmax, Ymin, and/or Ymax.