

TI Linear Regression Steps

1. Hit the **STAT** key, then select **1**: Edit under EDIT and **ENTER**.

(If there are already numbers in any list, arrow up to L1, L2, etc.; then hit **CLEAR** and **ENTER** to clear an entire column of numbers. Another option is to use the **4**: ClrList command in the STAT EDIT menu followed by the name of the list.)

Enter elements in each list by typing the number and then **ENTER** or use the arrow down key. When you've entered one list, arrow right **▶** to start the next list.

2. Once the lists are entered into L1 (Xlist) and L2 (Ylist), hit **2nd** **Y=** to enter the STAT PLOT menu, then hit **ENTER**.

Turn the Plot On; select the statistical graph (the scatter plot is the first option next to Type); and check to see if your lists are matching up correctly with Xlist and Ylist.

3. When plot characteristics are set, you may enter **ZOOM** **9** (the statistical zoom) to view a scatter plot. The calculator automatically sets the window for you. You may also enter **WINDOW** to change the window settings [Xmin, Xmax, Xscl, Ymin, Ymax, Yscl], if you wish.

4. Hit **STAT**, then arrow right **▶** to CALC, then select **4**: LinReg(ax+b).

Since the data is in L1 and L2, enter **2nd** **1** for the Xlist **2nd** **2** for the Ylist **2**

In order to place the best-fit equation into Y1 automatically, hit **VARS**, then arrow right **▶** to Y-VARS, hit **ENTER** (on Function), then hit **ENTER** again (on Y1).

Another **ENTER** runs the regression calculations. The calculator will give the values for **a** (slope of line) and **b** (y-intercept) for the line of best fit. If you press **Y=**, you'll see the regression equation pasted in Y1. If Plot 1 is on, press **GRAPH** to see both the line of best fit and the scatter plot.

Note: If your calculator doesn't show the r^2 or r values, hit **2nd** **CATALOG** and scroll down to turn "DiagnosticOn". Then the calculator will find the constants for the regression equation along with the correlation coefficient (r), r^2 , or both values, depending on which regression function is involved.

5. The next most important step is making predictions. Use **2nd** **TBLSET** to select the "ASK" (Independent variable) and "AUTO" (Dependent variable) options. When you go back into **2nd** **TABLE**, the table is blank. You input any X-value, and the calculator will compute the corresponding Y value using the formula. The predicted prices for various numbers of nuggets are shown below, along with the decision.

AUTO AUTO mode is also fine if you use the TblStart and Δ Tbl settings and scroll through the column(s).

Live and learn!