**TI Exponential 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 0 : ExpReg.

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

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** (initial value) and **b** (related to the growth or decay rate) 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 curve of best fit and the scatter plot.

Note: If your calculator doesn’t show the  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), , 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 ∆Tbl settings and scroll through the column(s).

**Live and learn!**