

All instructions are for the TI-83 Plus, however these should work with little or no modification for the TI-83 or the TI-84 and TI-84 Plus calculator models. All directions assume that you are starting from the home screen.

### Data Entry into a list:

**STAT** **ENTER**

Enter the data into the list of your choice, but using  $L_1$  as your default choice is a good idea since the calculator will use  $L_1$  as a default for most operations.

### Clearing a list:

While editing a list, use the arrows to maneuver to the list you want, then press the up arrow ( $\blacktriangle$ ) until the list title is highlighted, then press:

**CLEAR** **ENTER**

### 1-variable stats calculations:

**STAT**  $\blacktriangleright$  (to CALC) **ENTER**

Select the list you want to perform this operation on by pressing  $2^{nd}$  and the number that your list is stored in (e.g.  $1 = L_1$ ,  $3 = L_3$ ) and press **ENTER**

### Linear Regressions:

Enter data for the independent variable in one list, and enter data for the dependent variable in another list. Once again, it is convenient to make  $L_1$  your independent data, and  $L_2$  your dependent data. Then press:

**STAT**  $\blacktriangleright$  **4** (LIN REG) **ENTER** **ENTER**

If your data is not stored in  $L_1$  and  $L_2$  then you need to enter the lists that your data is stored in, independent followed by dependent, prior to pressing the second enter:

$2^{nd}$  **1** **COMMA** (,)  $2^{nd}$  **2**

### Diagnostic Function:

The diagnostic function tells the calculator to report the  $r$  and  $r^2$  values (a measure of the quality of fit of a regression model to the data. To turn this function on, press:

$2^{nd}$  **0**  $x^{-1}$   $\blacktriangledown$  (to "DiagnosticOn") **ENTER**  
**ENTER**

### Other Regressions:

Follow the directions above, but instead select the desired regression.

- 3: Median-Median
- 4: Linear Regression ( $ax + b$ )
- 5: Quadratic Regression
- 6: Cubic Regression
- 7: Quartic Regression
- 8: Linear Regression ( $a + bx$ )
- 9: Logarithmic Regression
- 0: Exponential Regression
- A: Power Regression
- B: Logistic Regression
- C: Sinusoidal Regression

### Graphing Scatter Plots:

After entering data into lists for your independent and dependent variables, you can view a scatter plot of the data by pressing:

$2^{nd}$  **Y=** **ENTER** **ENTER** (to turn on)

Then select the graph type and tell which list your xlist (independent variable) and ylist (dependent variable) are stored by using the arrow keys.

To select a quality viewing window for the scatter plot before graphing, press:

**ZOOM** **9** (ZoomStat) **GRAPH**

### Graphing Regression Equations:

Your graphing calculator automatically stores your *most recent* regression equation and its parameters as variables. You can easily graph regression equations on top of your scatter plots to see the quality of fit if you know where the variables are located. To do so, press:

**Y=** **VARS** **5** (Statistics)  $\blacktriangleright$  (to EQ) **ENTER**

### Common Errors:

The most common error is "ERR: INVALID DIM". When this occurs, check that each list has the same number of elements. Or if this error occurs when you are trying to graph a new equation, turn off the scatter plot by pressing:

**Y=**  $\blacktriangle$   $\blacktriangleright$  (to select highlighted plot) **ENTER**