REGRESSION
on the TI-83 and TI-84

To restore lists if some are missing:

1. **STAT**
2. **5** (*Set Up Editor*)
3. **ENTER**

To clear and fill lists:

1. **STAT**
2. **ENTER**
3. To clear a list, arrow up to top of the list, darkening the name of the list, **CLEAR** , **ENTER**
4. Enter data into desired lists

To turn on/off data points for best fit, change graph style or graph scatter plot

The first time:

1. **2ND** **Y =** (*STAT PLOT*)
2. Choose Plot number
3. Choose **On**
4. Choose scatter plot for Type
5. Change lists if necessary
6. **ENTER**
7. **ZOOM** **9** (*ZoomStat*)

Anytime after:

1. **Y =**
2. Verify your PLOT is highlighted
3. If not, arrow up to your desired PLOT, **ENTER**
4. **ZOOM** **9** (*ZoomStat*)

To find the model of best fit and paste the model into the Y = list:

Preferred Method:

1. **STAT**
2. Choose **CALC** (*Right arrow*)
3. Choose the regression (linear,quadratic, exponential, etc.)
4. Type $\mathbf{L_1}$, $\mathbf{L_2}$, (or the lists you used for your data; be sure to type the commas.) If your lists are $\mathbf{L_1}$ and $\mathbf{L_2}$ you can skip this step and go straight to **VARS** in step 5.
5. **VARS**
6. Choose Y-VARS (*Right arrow*)
7. **ENTER**
8. Choose Y_1 (or other y)
9. **ENTER**

Alternate Method:

1. **STAT**
2. Choose **CALC** (*Right arrow*)
3. Choose the regression (linear, quadratic, exponential, etc.)
4. **ENTER**
5. **Y =**
6. Clear out Y_1
7. **VARS**
8. **5** (*Statistics*)
9. Choose **EQ** (*Right arrow*)
10. **ENTER**
11. **ENTER**
12. **GRAPH**

Once Your Equation is in [Y=] Follow the Steps Below

To find the output value (y) when given an input value (x):

Preferred Method:

1. [2ND] [WINDOW] (*TBLSET*)
2. Set **Table Start** to the given x-value
3. Make sure bottom says **Auto**
4. [2ND] [GRAPH] (*TABLE*)

Alternate Method (on graph):

1. Make sure your window includes the x-value
2. [2ND] [TRACE] (*CALC*)
3. [1] (*Value*)
4. Input the given x-value
5. [ENTER]

To find the input value (x) when given an output value (y):

1. [Y=]
2. Input your given y-value into $Y_2 =$
3. [GRAPH]
4. If necessary, adjust your window to view the intersection
5. [2ND] [TRACE] (*CALC*)
6. [5] (*Intersect*)
7. Move the blinking cursor to the intersection that you want
8. [ENTER] [ENTER] [ENTER]

To find the input value (x) where the output value (y) = 0 (x-intercept):

Preferred Method:

1. [Y=]
2. Input 0 into Y_2
3. [2ND] [TRACE] (CALC)
4. [5] (*Intersect*)
5. Move the blinking cursor to the x-intercept point
6. [ENTER] [ENTER] [ENTER]

Alternate Method:

1. [2ND] [TRACE] (*CALC*)
2. [2] (*Zero*)
3. Move the blinking cursor to the left of your desired point (*Left Bound*?)
4. [ENTER]
5. Move the blinking cursor to the right of your desired point (*Right Bound*?)
6. [ENTER] [ENTER]

To find the minimum/maximum value (called the *VERTEX* for quadratic functions):

1. [2ND] [TRACE] (*CALC*)
2. [3] (*Minimum*) or [4] (*Maximum*) depending on what you are looking for
3. Move the blinking cursor to the *left* of your desired point (*Left Bound*?)
4. [ENTER]
5. Move the blinking cursor to the *right* of your desired point (*Right Bound*?)
6. [ENTER] [ENTER]