

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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## ***SCATTERPLOTS and REGRESSION ANALYSIS SUMMARY AND INSTRUCTIONS***

### **RESETTING THE CALCULATOR**

Press  $2^{\text{nd}}$   $\rightarrow$  +  $\rightarrow$  7  $\rightarrow$  1  $\rightarrow$  2

### **CREATING A SCATTER PLOT**

1. You need to set-up your calculator so it can perform regression.

Press  $2^{\text{nd}}$   $\rightarrow$  0 (zero)  $\rightarrow$   $x^{-1}$

$\rightarrow$  **DOWN** cursor key until you reach **Diagnostic On.**  $\rightarrow$  **ENTER**  $\rightarrow$   
**ENTER**

ClrList L<sub>1</sub>, L<sub>2</sub>

2. Clear the data table by pressing **STAT**  $\rightarrow$  4:ClrList  $\rightarrow$   $2^{\text{nd}}$   $\rightarrow$  1  $\rightarrow$  “,”  $\rightarrow$   $2^{\text{nd}}$   $\rightarrow$  2 (\* your screen should look like the one on the right)  $\rightarrow$  **ENTER**

3. Enter the data into the lists by pressing **STAT**  $\rightarrow$  1:Edit. Enter the data in L<sub>1</sub> and L<sub>2</sub>.

4. Create a scatter plot by pressing  $2^{\text{nd}}$   $\rightarrow$  Y=  $\rightarrow$  1  $\rightarrow$  **ENTER**. Make sure that the cursor is on “On” when you press *Enter*. By default, your Xlist should be L<sub>1</sub> and Ylist should be L<sub>2</sub>.

5. To display your graph, press **ZOOM** and **9**.

**MAP 4C1**

Name: \_\_\_\_\_

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**REGRESSION ANALYSIS**

Press **STAT** → **Right** cursor over to **CALC**

<b>LINEAR</b>	<b>QUADRATIC</b>	<b>EXPONENTIAL</b>
Press <b>4:LinReg(ax+b)</b> (this activates the linear regression function)	Press <b>5:QuadReg</b> (this activates the quadratic regression function)	Press <b>0:ExpReg</b> (this activates the exponential regression function)
<p>You must tell the calculator which data to perform the regression on. We do this by entering the lists from our data table. You do this by pressing</p> <p style="padding-left: 40px;"><b>2<sup>nd</sup> → 1</b> (this will tell it to pick L<sub>1</sub>) → “,” (comma key)  <b>2<sup>nd</sup> → 2</b> (this will tell it to pick L<sub>2</sub>) → “,” (comma key)</p> <p>Store the information for our line/curve of best fit in a variable called Y<sub>1</sub>. To do this, press:  <b>VAR</b>S → <i>Right</i> cursor key to <b>Y-VARS</b> → <b>1:Function</b> → <b>1:Y<sub>1</sub></b></p> <p>Press <b>ENTER</b> to execute. Fill the information that is given to you.</p>		
<p><b>LinReg</b></p> <p>y = ax+b  a =  b =  r<sup>2</sup> =  r =</p>	<p><b>QuadReg</b></p> <p>y = ax<sup>2</sup> + bx +c  a =  b =  c =  R<sup>2</sup> =</p>	<p><b>ExpReg</b></p> <p>y = a*b^x  a =  b =  r<sup>2</sup> =  r =</p>
<p>To display the <i>line or curve of best fit</i>, Press <b>ZOOM</b> then <b>9</b>.</p>		

**LINEAR, QUADRATIC or EXPONENTIAL?**

