

## Math 180 – Section 2.4 – Scatter Diagrams – TI-83

### Finding an Equation for Linearly Related Data

#### Enter data

Enter (x) into List 1

Enter (y) into List 2

#### To Edit a List

##### Press **STAT**

Select 1:Edit by pressing **ENTER**

Arrow up to “sit” on the name of the list, press **CLEAR**, **ENTER** to clear the List

Enter data by pressing **ENTER** after each number

**2<sup>nd</sup>** **QUIT** to exit the editor and get to the “home screen”

#### Construct a Scatter plot

Press **2<sup>nd</sup> STAT PLOT** and press **ENTER** (this selects Plot 1)

Press **ENTER** to turn the plot on

Arrow to the first graph icon and press **ENTER** (this selects a scatter plot)

Arrow down, select **L<sub>1</sub>** for Xlist, and press **ENTER**

(**L<sub>1</sub>** is the **2<sup>nd</sup>** function of the key for number **1**)

Arrow down, select **L<sub>2</sub>** for Ylist, and press **ENTER**

(**L<sub>2</sub>** is the **2<sup>nd</sup>** function of the key for number **2**)

Press **ZOOM 9** (this opens window to see scatter plot)

Press **TRACE** and arrow right/left (this shows the ordered pairs)

#### Find the Regression Equation

**To calculate the regression equation, in the Home Screen, and to paste it into Y1:**

*Follow the steps outlined below until you have a command like this:*

***LinReg(ax+b) L1,L2,Y1***

Press **STAT**, arrow to **CALC**, and select 4:**LinReg(ax+b)**

Select **L1**, **L2**,

To get **Y1** press **VARS**, select **Y-VARS**, select **Function**, and then **Y1**

Press **ENTER**

**To Graph the line along with the scatter graph**

Press **ZOOM 9:Zoom Stat**

**To find the predicted values of y**

**2<sup>nd</sup> TRACE (CALC)**

Select **1:value**

Type the given x value and **ENTER**