

Scatter Diagrams and Curve Fitting - TI-83

Entering Data

STAT 1: Edit

Move to the Top of L1, **CLEAR**, **ENTER** to clear all of the data in list L1

Move to the Top of L2, **CLEAR**, **ENTER** to clear all of the data in list L2

Let L1 be the x-values of your data and let L2 be the y-values of your data.

Enter the x-values and y-values of your data. (It is often easier to enter all of your x-values first and then move to the L2 column and enter the corresponding y-values.)

X	Y
1	1
1	2
2	2
2	3
3	2
3	3
4	5
4	6
5	5
5	6

Plotting a Scatter Diagram

2nd F **STAT PLOT** 1: PLOT1 **ENTER**

ON

Type: 1st option – scatter plot

Xlist: L1

Ylist: L2

Mark: 1st option - square

```

Plot1 Plot2 Plot3
Off
Type: [ ] [ ] [ ]
Xlist: L1
Ylist: L2
Mark: [ ] + .
    
```

WINDOW Enter your Xmin, Xmax, Xscl, Ymin, Ymax, Yscl and Xres values

(Note: You may need to delete the equation(s) of any function already entered into **Y =**)

GRAPH to graph the scatterplot

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EDIT [ ] [ ] TESTS
1:1-Var Stats
2:2-Var Stats
3:Med-Med
4:LinReg(ax+b)
5:QuadReg
6:CubicReg
7:QuartReg
    
```

Regression Curves

Line of Best Fit: $y = ax + b$ (Linear Regression)

CLEAR **STAT** CALC 4: LinReg (ax+b) **ENTER** **ENTER**

(The following is an example of the linear regression model for the given set of data)

$$\left. \begin{array}{l} \text{LinReg} \\ y = ax + b \\ a = 1.1 \\ b = 0.2 \end{array} \right\} \Rightarrow \text{Line of best fit : } y = 1.1x + 0.2$$

Graph the Line of Best Fit

Enter the above equation of the line, then graph the line

Y = \Y1= 1.1 x + 0.2 **GRAPH**

or, alternately, paste the equation of the line into Y1

Y = \Y1= **VARS** 5: Statistics... EQ 1: RegEQ **ENTER** **GRAPH**

