

Finding the Line of Best Fit Using the TI-83+

Objective: To draw the scatter diagram for the given data, find the equation of the line of best fit and graph the line of best fit on the scatter diagram.

Data	x	3	5	7	9	11	13
	y	0	2	3	6	9	11

(Clear all previously saved functions)

To enter the data:

STAT
1:Edit

If there are values already stored in L_1 and L_2 , **highlight** L_1 , press **Clear**, then **Enter**. Do the same with L_2 .

Enter the x values in L_1
Enter the y values in L_2

To create the scatter diagram:

Set the Stat Plot:

2nd StatPlot

1:Plot 1

Highlight **ON** and press **Enter**

Type: **scatter** (1st picture)

xlist: L_1

ylist: L_2

Mark: Your choice

Set the viewing window and graph the scatter diagram:

Zoom

9: ZoomStat

To Calculate the Line of Best Fit

Stat

Highlight **CALC**

4:LinReg (ax+b)

Enter

LinReg

$$y=ax+b$$

$$a=1.12857$$

$$b=-3.86190$$

The calculator gives the linear equation in $y=ax+b$ form. So the equation of the line of best fit is:

$$y_1 = 1.12857x - 3.86190$$

This tells us the slope of the line is 1.12857 and the y-intercept is -3.86190.

To Draw the Line of Best Fit on the Scatter Diagram:

Y=

VARS

5:Statistics

Arrow to **EQ**

1:RegEQ

Graph