Objective 3.03 Writing an Equation for a Line of Best Fit

Using the graphing calculator to find the line of best fit.

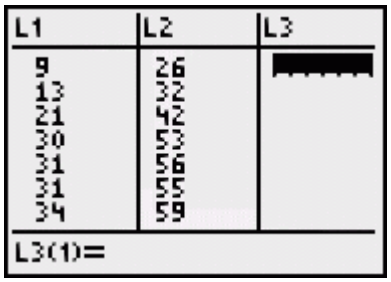
A trend line that shows the relationship between two sets of data most accurately is called the line of best fit. This line sums up the data points of a scatter plot.

You are given the following table that represents data collected in an experiment, where the mass of a solid that formed in a beaker after leaving it for a specified time was measured.

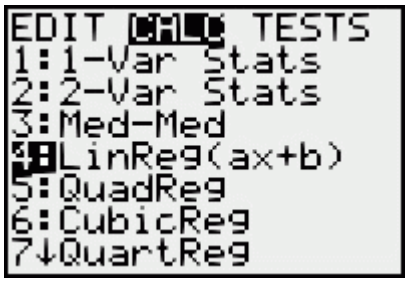
Time	Mass
9	26
13	32
21	42
30	53
31	56
31	55
34	59

Find the equation of the line of best fit for the data.

Step 1: Press STAT then EDIT
Enter in first column in L1 and the second column in L2



Step 2: Go back to STAT, go over to CALC, #4



This gives you the equation of the line of best fit.

The line of best fit is y=1.31x + 14.54

By using the equation, you can substitute in any value for x (time) to get y (mass).

You try:

1. Find the line of best fit for the following data:

US Crime Rate
(per 1000,000 inhabitants)

Year	Number of Crimes
1995	5275.9
1996	5086.6
1997	4930
1998	4619.3
1999	4266.8

2. Find the line of best fit for the given data.

x	1	2	3	4	5	6	7
y	54	52	45	40	33	27	18

Answers: 1. y=-248.55x + 501,190.07 2. y=-6.07x + 62.71