

## Line of Best Fit

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### Background Information:

- Students need to know how to find the equation of a line given two points on the line.
  - Students need to know how to enter data into LISTS function of the graphing calculator.
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### Materials and Equipment:

- Graphing calculator and view screen
  - Overhead projector
  - Each student will need:  
graphing calculator and handouts.
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### Notes to Teacher:

- Students should use the “eyeball” method to determine the two points they wish to use.
  - Since all data is linear, no matter which two points the student chooses, all will get the same equation.
  - Students may work alone or in pairs on this activity.
  - The time allotted for this activity varies depending on the ability level of the students.
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## Activity Sheet: Line of Best Fit

Data 1

Age (in months)	Median weight For girls (in lbs.)
0	
1	
2	
3	
4	
5	
6	

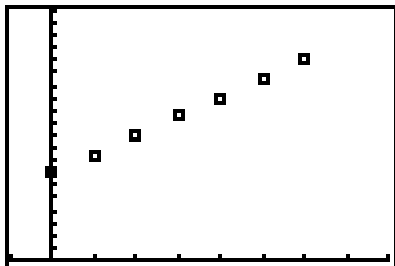
Enter the data from Data 1 into  $L_1$  and  $L_2$ .

L1	L2	L3
0	7	-----
1	8.5	
2	10	
3	11.5	
4	13	
5	14.5	
6	16	

L1(1)=0

WINDOW FORMAT
Xmin=-1
Xmax=8
Xscl=1
Ymin=0
Ymax=20
Yscl=1

Choose an appropriate window.



Make a STAT PLOT of the information.

Now that you can visualize the data, choose two points and determine a line of best fit through the data points.

You could use the STAT CALC function to find the line of best fit.

Follow the same procedure for each of the following data sets:

Data 2

Harvard Community Health Plan uses the following “rule” for the recommended weight for men. “Give yourself 106 lbs for the first 5 feet, plus 6 lbs for every inch over 5 feet”.

Data 3

Hours	Miles
0	0
1	5
2	10
3	15
4	20

Data 4

Gallons Of Gas	Dollars Spent
1	1.50
2	3.00
3	4.50
4	6.00
5	7.50

Data 5

Mean Height of Kalama Children

Age (months)	Height (cm)
18	76.1
19	77.0
20	78.1
21	78.2
22	78.8
23	79.7
24	79.9
25	81.1
26	81.2
27	81.8
28	82.8
29	83.5