

Calculus AB

P-4

Fitting Models to Data

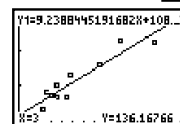
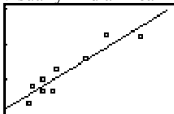
5) The ordered pairs give the exposure index x of a carcinogenic substance and the cancer mortality y per 100,000 people in the population.

(a) Plot the data. From the graph, do the data appear to be approximately linear?

On Calc, go to Stat, then edit. Enter the ordered pairs with x in one column and y in the other. Go to Window and set the dimensions to fit all the numbers in the list. Press Stat Plot (2nd y=) and turn on Plot 1. Graph to see the points. Decide on a regression (linear in this case) and go back to Stat, then Math. Find LinReg and press enter. ***Looks like this LinReg(L1,L2,Y1)*** and press enter. L1 and L2 are 2nd 1 and 2. Y1 is under Vars, YVars, Function. Then Graph.

(3.50, 150.1)
(3.58, 133.1)
(4.42, 132.9)
(2.26, 116.7)
(2.63, 140.7)
(4.85, 165.5)
(12.65, 210.7)
(7.42, 181.0)
(9.35, 213.4)

(b) Visually find a linear model for the data. Graph the model.



(c) Use the model to approximate y if $x = 3$.

Assignment:

Pg. 34

1 - 4 all,

6 - 12, even

15, 16, 18