

# Linear Modeling

## Part II

Now we're ready, with the help of the statistical functions of our technology, to produce the line that best fits the data. You will need a graphics calculator, a scientific calculator with 2-variable statistical functions or a spreadsheet. Here's the data you saw before:

Year	1982	1983	1984	1985	1986	1987	1988	1989	1990
Infant Mortality (rate per 1000 live births)	16.1	15.0	14.7	14.2	13.2	12.8	12.2	12.8	11.6

1. First, input your ordered pairs (x,y). Find the best fit line and record the information:

Slope: \_\_\_\_\_ Line Equation: \_\_\_\_\_

Prediction for '92: \_\_\_\_\_ '95: \_\_\_\_\_ '99: \_\_\_\_\_

y-intercept: \_\_\_\_\_ x-intercept: \_\_\_\_\_

2. Did any of your slope or intercept "guesses" from AB, AC, or BC (from Linear Modeling, Part I) come close?
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3. Find the x-intercept of the regression line. Do you think that infant mortality rates will ever reach zero, as our regression equation indicates? If not, what's wrong with our model? (Note that you have not been asked to state your opinion about infant mortality. You have been asked to explain what is wrong with the model (equation) you recorded above.) Write your answer here: