

Infant Mortality Rates Revisited
Version 2.21

Recall from the Linear Modeling activities that we examined data on infant mortality rates for the years 1982 to 1994. The data is shown below:

Year	1982	1984	1985	1986	1987	1988	1989	1990	1992	1994
Infant Mortality (rate per 1000 live births)	16.1	14.7	14.2	13.2	12.8	12.2	12.8	11.6	10.5	9.4

In the earlier activity, we produced a linear model of best fit for the data. We found that the linear model was not a very good model to use. Why not?

Now, let's model the data with an exponential model. *What properties* of the exponential make it a good model to use?

Use your calculator to produce the exponential model for the data and show it below. Remember to use the labeling system for the years (i.e., 1980 = year 0).

Our linear model predicted that the infant mortality rate would reach zero in the year 2012. What does the exponential model predict the rate to be in that year?

According to our model, in what year will the infant mortality rate reach 6 deaths per 1000 live births?

By what percent, on average, does the infant mortality rate decline each year? Use your exponential function to answer this.
