Solutions

Algebra II Journal

Module 2: Regression

A Deeper Look at Exponential Functions

This journal belongs to:

Module 2: A Deeper Look at Exponential Functions

Algebra II Journal: Reflection 1

Respond to the following reflection questions and submit to your teacher.

When is an exponential curve the best fit for a data set?

Answer:

An exponential model is the best fit for a data set when there is a relatively constant multiplier. The function is a curve that is either always increasing or always decreasing. Population growth, car depreciation and cooling curves are typically modeled with exponential data.

Compare the Bacteria scenario with the Coffee Cooling scenario. How were the exponential models similar? How were they different?

Answer:

Both of the scenarios represent data that should be modeled with exponential functions. The bacteria scenario represents exponential growth, whereas the coffee cooling scenario represents exponential decay. The bacteria scenario is an example of a discrete model, whereas the coffee cooling scenario represents a continuous model. In addition, the coffee cooling scenario includes a vertical translation of a regression equation, since the coffee will cool to room temperature.