

LESSON
16-2

Modeling Exponential Growth and Decay

Practice and Problem Solving: A/B

Write an exponential growth function to model each situation. Determine the domain and range of each function. Then find the value of the function after the given amount of time.

1. Annual sales for a fast food restaurant are \$650,000 and are increasing at a rate of 4% per year; 5 years _____

2. The population of a school is 800 students and is increasing at a rate of 2% per year; 6 years _____

Write an exponential decay function to model each situation. Determine the domain and range of each function. Then find the value of the function after the given amount of time.

3. The population of a town is 2500 and is decreasing at a rate of 3% per year; 5 years _____

4. The value of a company's equipment is \$25,000 and decreases at a rate of 15% per year; 8 years _____

Write an exponential growth or decay function to model each situation. Then graph each function.

5. The population is 20,000 now and expected to grow at an annual rate of 5%. _____
6. A boat that cost \$45,000 is depreciating at a rate of 20% per year. _____

