Section 8.7 Worksheet

Name: _____

Write an exponential decay function to model the situation.

1. A $25,000 car depreciates at a rate of 9% each year.

2. A population of 310,000 decreases by 15% each year.

3. A new sound system, valued at $800, decreases in value by 10% each year.

4. You buy a used truck for $20,000. The truck depreciates 7% per year. Find the value of the truck after the given amount of years.

Model:_____

    a. 3 years   b. 8 years   c. 10 years   d. 12 years

5. The deer population in Wisconsin has reached a level of 1.7 million deer. With a death rate 5% each year, write a model to represent this information.

Model:_____

    a. Using the model, what would the population of deer be in 5 years?

    b. What would the population of deer be in 10 years?

6. A population of 80 pheasants is released in a wildlife preserve. The population is half of the previous year, each year for 4 years. What is the exponential decay model this information?

Model:_____

    a. What is the pheasant population after 2 years?

    b. What is the pheasant population after 4 years?

    c. Graph the exponential decay of the model using a table: (label the axis and numbers)

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