NCM1B Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Unit 5 Lesson 4 Homework: Percent Decay**

**![C:\Documents and Settings\kkelley\Local Settings\Temporary Internet Files\Content.IE5\I00G7SPA\MP900433172[1].jpg]()Use equations, graph, or tables to find the solutions to the problems below.**

1. A computer valued at $6500 depreciates at the rate of 14.3% per year.

a) What is the initial value of the computer?

b) What is the percentage rate of depreciation?

c) Write a function that models the value of the computer.

d) Find the value of the computer after three years.

2. A new truck that sells for $29,000 depreciates 12% each year. Write a function that models the value of the truck. Find the value of the truck after 7 years.

3. A new car that sells for $18,000 depreciates 25% each year. Write a function that models the value of the car. Find the value of the car after 4 years.

4. Assume that your kidneys can filter out 10% of a medication in your blood every 6 hours. You take one 200-milligram dose of the medicine. How many milligrams of the medicine are in your blood after 2 days?

**Complete the Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| Exponential Decay Equation | **Initial Amount** | **Decay Factor** | **% Percent of decay** |
| $$y=27(1-.85)^{x}$$ |  |  |  |
| $$y=32(.83)^{x}$$ |  |  |  |
| $$y=17(1-.03)^{x}$$ |  |  |  |