Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mod 4 Lesson 9 Homework

Solve each of the following for x. Round each answer to the nearest hundredth.

1. 4.
2. 5.
3. 6.

7. The population of coyotes in a certain county is represented by , where t represents the number of years since 2000. Using this formula, how many coyotes were in the county in the year 2004? How many years, to the nearest tenth of a year, will it take for the population to be cut in half?

8. You buy a new computer for $2100. The value of the computer decreases by 50% annually. When will the computer have a value of $600?

9. You drink a beverage with 120 mg of caffeine. Each hour, the caffeine in your system decreases by about 12%. How long until you have 10mg of caffeine?

10. You invest $3000 in a bank that gets 4.2% interest annually. If the interest is compounded continuously, how long will it take for the initial amount to double?

11. You deposit $1600 in a bank account. Find the balance after 3 years for each of the following situations:

a) The account pays 2.5% annual interest compounded monthly.

b) The account pays 1.75% annual interest compounded quarterly.

c) The account pays 4% annual interest compounded continuously.

Review

1. Solve the equation:
2. Expand