Algebra 1 Name:

Unit 12 – Day 7 Practice

1) In Biology, you are studying about bacterial cells. You have a culture of 150 cells and they are doubling every hour.

a. Write an exponential function to model this situation.

b. How many bacterial cells will you have after 12 hours?

2) A certain drug decays at a rate of 15% per hour. If the initial dose is 500 mg, how much will be left in a person’s system after 4 hours?

3) The world population in 2000 was approximately 6.08 billion people. The annual rate of increase was about 1.26%.

a. Find the growth/decay factor for the world population.

b. Write an exponential function to model this situation.

c. If x represents the number of years past 2000, what was the population in 2010?

4) The value of a truck bought new for $28,000 depreciates 9.5% each year.

a. Write an exponential function to model this situation.

b. Between what two years will the value fall to about $5000?