Math 1   Name_____

Lesson 4 Assignment Exponential Growth

Date_____ Period_____

Write an exponential equation for each question. Then solve.

1) On the island of Exponia, there are 800 square miles of farmland. Each year, the farmland area is increasing by 20%. How many square miles of farmland will there be after 5 years?

2) Dr. Frog has 45 bacteria in a lab dish. His dish is increasing by 28% each hour. How many bacteria will be in his lab dish after 24 hours?

3) John wants to buy a new motorcycle. He puts $700 into a savings account with a 3.4% interest rate. If John leaves his money in the bank for 3 years, how much money will he have?

4) A population of 80 rabbits is growing exponentially at a rate of 11% a year. How many rabbits will there be after 8 years?

5) If I have $500 in my account after 4 years investing at 2.5% interest per year, how much money did I start with?

6) The population of Hickory, NC grows at a rate of 4% per year. The population in 1995 was 300,000. After ten years, what is the predicted population of Hickory?

7) In 1985, there were 285 cell phone subscribers in the small town of Centerville. The number of subscribers increased by 75% per year after 1985. How many cell phone subscribers were in Centerville in 1994?

Answers to Lesson 4 Assignment Exponential Growth (ID: 1)

1) 1990.656 square miles   2) 16836.5 bacteria   3) $773.86

4) 184 rabbits   5) $452.98   6) 444,073 people   7) 43,871 people