Algebra Lab Name: _____
Standard 6.3 – Homework
Writing Exponential Equations

The Turtle Problem:
An initial population of 750 endangered turtles triples each year. What will the population of turtles be after 5 years?

The Population Problem:
The population of Baconburg starts off at 20,000 and grows by 13% each year. Write an exponential growth model and find the population after 10 years.

The House Problem:
A house is purchased for $150,000 in 2002. The value of the house depreciates at a rate of 7%. How much is the house worth in 2013?

The Frog Problem:
A population of 100 frogs increases at an annual rate of 22%. How many frogs will there be in 6 years?

The Bird Problem:
The number of birds in a forest is decreasing by 3% every year. Originally there were 5,400 birds. How many birds will there be in 9 years? Round your answer to the nearest whole number.

The Bacteria Problem:
A type of bacteria has a very high exponential growth rate at 80% every hour. If there are 10 bacteria, determine how many there will be in 5 hours, in 1 day, and in 1 week.

The Rare Fish Problem:
A species of extremely rare, deep water fish has an extremely long lifespan and rarely have children. If there are a total of 821 of this type of fish and their growth rate is 2% each month, how many will there be in half a year? What will the population be in 10 years and in 100 years?