Exponential Growth sample problems.

1. The example from class….
In 2000, the human population was estimated to double in size in approximately 40 years. (a) Assuming population growth is continuous, calculate $r$ for the human population. (b) If the population size in 2000 was 6.5 billion, what is the projected population size for the year 2010?

2. You are studying a population of beetles of size 3000. During a one-month period, you record 400 births and 150 deaths in this population. Estimate $r$ and project what the population size will be in 6 months.

3. A population of annual grasses increases in size by 12% every year. What is the approximate doubling time?