1. Suppose a population currently has 40 individuals, and increases by 20% each year.

   (a) Write an equation for the number of individuals after $t$ years.

   (b) How long will it be before the population doubles?

   (c) How long will it be before the population quadruples?

2. Suppose the concentration of a drug in the bloodstream starts at 50 ng/ml, and the concentration is reduced by 10% every hour. How long will it be before the concentration is cut in half? (This is called the elimination half-life, or $t_{1/2}$.)