

1. Ben puts \$2000 into a savings account that pays 5% interest compounded annually. Justin puts \$2500 into a different savings account that pays 4% annually. After 15 years, whose account will have more money in it if no more money is added or subtracted from the principal?

2. The population in the town of Brookfield is presently 42,500. The town has been growing at a steady rate of 2.7%. Find the number of years ago that the population was 30,000.

3. At what annual percent of interest must \$1000 be invested in order to double in value after 15 years?

4. The value of a stock when purchased was \$10 a share. The stock grew at a monthly rate of 7%. Find the number of months it took to reach a value of \$15.75 a share.

5. A fully inflated beach ball loses 6% of its air every day. If the beach ball originally contains 4000 cubic centimeters of air, how many cubic centimeters does it hold after 10 days?

6. The annual consumption of pork per person was about 35 lb in 1997 and about 20 lb in 2007. Assuming consumption is decreasing according to the exponential-decay model:

a. Find the value of r , the rate of growth. Write the corresponding exponential equation.

b. Estimate the consumption of pork in 2012.

c. In what year (theoretically) will the consumption of pork be 10 lb per person?