Compound Percentage Change

Give your answers to a sensible degree of accuracy.

1. Jules invests £3500 in a bank account at 4.5% compound interest per year.

   How much money is in the account after:

   a. 2 years   b. 5 years   c. 20 years?

2. The population of a city is 1.5 million. The population is expected to decrease by 6% every year.

   What is the expected population in:

   a. 2 years   b. 5 years   c. 10 years?

3. The value of a house increases by 15% a year for three years, then decreases by 7% a year for five years. The original value of the house was £250 000.

   What was the value of the house after:

   a. 4 years   b. 6 years   c. 8 years?

4. Abdul puts £1 250 into a new savings account. The account has an introductory offer of 1.5% interest per month for 3 months, then drops down to 0.25% per month.

   How much money is in the account after:

   a. 4 months   b. 1 year   c. 5 years?

5. The population of a country is 55 million. If it is decreasing by 2% per year, how many years would it take before the population drops below:

   a. 52 million   b. 47 750 000   c. 45 million?

6. Prove that a 20% increase followed by a 10% decrease is the <u>same</u> as a 10% decrease followed by a 20% increase.

7. Which gives the biggest increase: 2% per year for 5 years or 5% per year for 2 years?