Mathematics

Growth and Decay.
Downloadable Resource - Compound appreciation and depreciation (Part II).

Mr. Thomas

Try this

The population of Pythagoria in the year 2000 was 600000.

It's population increased by ▮ % in 10 years, and then by ▮ %

in the next 10 years.

The numbers underneath the ink stains add up to 60. Find some possible populations of Pythagoria.

What do you notice?

Connect

£1,200 increases by 4%, followed by 7% for 3 years.

£2,000 decreases by 5% for 4 years, followed by 10% for 2 years.

£9,149 decreases by 6% for 2 years, followed by an increase of 7% for a year, followed by an increase of 4.3% for 5 years.

Independent Task

1) £900 increases by 6%, followed by 8% for 3 years.

2) £10,400 decreases by 2% for 11 years, followed by 1% for 2 years.

3) £2.34 decreases by 3% for 6 years, followed by an increase of 2% for a year, followed by an increase of 9.1% for 5 years.

4) If I have an increase of 12%, followed by a decrease of 12%, and this cycle is repeated fives times over, what is the percentage multiplier for the original amount?

Explore

An special deal offers young people a 10% increase on a £300 investment for the first year, 30% for the second year, 10% for the third year, 30% for the fourth year, 10% for the fifth year and 30% for the sixth year. The deal does not go beyond 6 years.

How much would the £300 turn into after 6 years?