

Compound Percentage Increase

Give your answers to a sensible degree of accuracy.

- Zaynab invests £400 in a bank account at 3% compound interest.
How much money is in the account after:
a. 2 years **£424.36** b. 5 years **£463.71** c. 20 years? **£722.44**
- The population of a city is 230 000. The population is expected to grow by 7% every year.
What is the expected population in:
a. 3 years **281 760** b. 8 years **395 182** c. 10 years? **452 444**
- There are 750 bacteria in a petri dish. The amount of bacteria is increasing by 27% every hour.
If the growth continues at this rate, how many bacteria will there be after:
a. 7 hours **3997** b. 1 day **232 461** c. 2 days? **72 050 976**
- The value of an antique painting is rising by 0.6% per month. It is currently worth £35 000.
If the value continues to rise at this rate, how much will the painting be worth after:
a. 6 months **£36 279.05** b. 1 year **£37 604.85** c. 3 years **£43 410.55**
- The membership of a website is increasing by 120% every year. In January 2009 there were 420 members.
If the growth continued at the same rate, how many members will there be in:
a. January 2011 **605** b. January 2018 **2167** c. January 2027? **11 182**
- Billy invests £1200 in a savings account with 4.5% compound interest per year.
How long will it take for Billy's savings to reach:
a. £1400 **4 years** b. £1800 **10 years** c. £2000? **12 years**