

Simple and Compound Interest

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **25**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator.

- 1** £2000 is invested for 4 years.
Simple interest is paid at 3% per year.
Work out the total interest paid.

[2 marks]

Answer £ _____

- 2** An amount is invested for 3 years at 4% compound interest per year.
Circle the number the amount is multiplied by to find its value after 3 years.

[1 mark]

1.04×3

1.12

1.04^3

0.04^3

- 3** £5000 is invested for 3 years at 2% compound interest per year.
Work out the value of the investment at the end of 3 years.

[3 marks]

Answer £ _____

- 4** Tia buys an e-bike for £1600
Its value depreciates by 12% each year.
Work out the value of the e-bike after 3 years.

[3 marks]

Answer £ _____

- 5** Nadia puts £2400 in an account that pays 3% simple interest per year.
Owen puts £2300 in an account that pays 3.5% compound interest per year.
After 4 years, who has more money in their account, and by how much?
You must show your working.

[4 marks]

Answer _____

- 6** A phone loses 20% of its value each year.
Ben says,
‘After 5 years the phone will be worth nothing, because $5 \times 20\% = 100\%$ ’
Explain why Ben is wrong.

[1 mark]

- 7** £4000 is invested at 5% compound interest per year.

After how many years will the investment first be worth more than £5000?

[3 marks]

Answer _____ years

- 8** A museum had 250 000 visitors this year.
The number of visitors is expected to rise by 6% each year.

Work out the expected number of visitors in 3 years' time.
You must show your working.

[3 marks]

Answer _____

- 9 Kwame has £5000 to put in a savings account for 2 years.
Two banks offer these compound interest rates.

Bank A Year 1: 6% Year 2: 2%	Bank B Year 1: 2% Year 2: 6%
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Kwame says,

‘Bank A is better, because it pays the higher rate first.’

Is he correct?

You must show your working.

[3 marks]

☐ Yes

☐ No

- 10 House prices on a street increase by 6.2% each year.

Show that after 12 years the house prices on the street will be at least double.

[2 marks]