

Compound Interest & Depreciation

Question Paper

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| Course | Edexcel IGCSE Maths |
| Section | 1. Numbers & the Number System |
| Topic | Compound Interest & Depreciation |
| Difficulty | Medium |

Time allowed: 50
Score: /39
Percentage: /100

Question 1

Toby invested £7500 for 2 years in a savings account.
He was paid 4% per annum compound interest.

How much money did Toby have in his savings account at the end of 2 years?

[2 marks]

Question 2

Liam invests £6200 for 3 years in a savings account.
He gets 2.5% per annum compound interest.

How much money will Liam have in his savings account at the end of 3 years?

[3 marks]

Question 3

Peter has £20 000 to invest in a savings account for 2 years.

He finds information about two savings accounts.

Bonus Saver
Compound interest
4% for the first year
then
1.5% each year

Fixed Rate
Compound interest
2.5% each year

Peter wants to have as much money as possible in his savings account at the end of 2 years.

Which of these savings accounts should he choose?

[4 marks]

Question 4

This notice was in a car magazine.

Most new cars lose more than half of their value in the first three years

Paul bought a new car.

The value of the car was £15 000

In the first year, the value of the car depreciated by 23%.

After the first year, the value of the car depreciated by 18% each year.

Work out if Paul's car lost more than half of its value by the end of three years.

[4 marks]

Question 5a

Derek buys a house for £150 000

He sells the house for £154 500

Work out Derek's percentage profit.

[3 marks]

Question 5b

Derek invests £154 500 for 2 years at 4% per year compound interest.

Work out the value of the investment at the end of 2 years.

[3 marks]

Question 6

Anil wants to invest £25 000 for 3 years in a bank.

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|--|
| <p>Personal Bank Compound Interest 2% for each year</p> |
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| <p>Secure Bank Compound Interest 4.3% for the first year 0.9% for each extra year</p> |
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Which bank will give Anil the most interest at the end of 3 years?

You must show all your working.

[3 marks]

Question 7

Katy invests £200 000 in a savings account for 4 years.
The account pays compound interest at a rate of 1.5 % per annum.
Calculate the total amount of interest Katy will get at the end of 4 years.

[3 marks]

Question 8

Zhi bought a house on 1st January 2017
When she bought the house, its value was 120 000 yuan.

The value of the house increased by 1.8% per year.

Work out the value of Zhi's house on 1st January 2020
Give your answer correct to 3 significant figures.

..... yuan

[3 marks]

Question 9

Ali and Badia each have 25000 dollars to invest.

| Cyclone Bank | Tornado Bank |
|---|---|
| Invest 25 000 dollars 4.5% compound interest per year for 3 years | Invest 25 000 dollars Receive 1150 dollars interest each year for 3 years |

Ali invests in the Cyclone Bank for 3 years.

Badia invests in the Tornado Bank for 3 years.

By the end of the 3 years, Ali will have received more interest than Badia.

How much more?

Show your working clearly.

Give your answer correct to the nearest dollar.

..... dollars

[4 marks]

Question 10

Hamish buys a new car for \$20 000

The car depreciates in value by 19% each year.

Work out the value of the car at the end of 3 years.

Give your answer to the nearest \$.

\$

[3 marks]

Question 11

The value of a house is £120 000

The value is expected to increase by 5% each year.

Work out the expected value after 4 years.

Give your answer to 2 significant figures.

You **must** show your working.

£.....

[4 marks]