

Compound Interest and Depreciation

Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Compound Interest and Depreciation
Grade Level	Grade 4
Booklet	Question Paper

Time Allowed: 42 minutes

Score: /35

Percentage: /100

Grade Boundaries:

1. Toby invested £4500 for 2 years in a savings account.
He was paid 4% per annum compound interest.

How much did Toby have in his savings account after 2 years?

£

(Total 3 marks)

2. The value of a car depreciates by 35% each year.

At the end of 2007 the value of the car was £5460

Work out the value of the car at the end of 2006

£

(Total 3 marks)

3. Mario invests £2000 for 3 years at 5% per annum **compound** interest.
Calculate the value of the investment at the end of 3 years.

£.....

(Total 3 marks)

4. 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)

(Total 3 marks)

5. Henry invests £4500 at a compound interest rate of 5% per annum.

At the end of n complete years the investment has grown to £5469.78.

Find the value of n .

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(Total 2 marks)

6. A company bought a van that had a value of £12 000

Each year the value of the van depreciates by 25%.

Work out the value of the van at the end of three years.

£

(3)

(Total 3 marks)

7. Bill invests £500 on 1st January 2004 at a compound interest rate of $R\%$ per annum.
The value, £ V , of this investment after n years is given by the formula

$$V = 500 \times (1.045)^n$$

- (a) Write down the value of R .

$$R = \dots\dots\dots$$

(1)

- (b) Use your calculator to find the value of Bill's investment after 20 years.

$$\text{£} \dots\dots\dots$$

(2)

(Total 3 marks)

8. Gwen bought a new car.
Each year, the value of her car depreciated by 9%.

Calculate the number of years after which the value of her car was 47% of its value when new.

.....

(Total 3 marks)

9. 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?

£

(Total 3 marks)

10. Toby invested £4500 for 2 years in a savings account.
He was paid 4% per annum compound interest.

(a) How much did Toby have in his savings account after 2 years?

£
(3)

Jaspir invested £2400 for n years in a savings account.
He was paid 7.5% per annum compound interest.

At the end of the n years he had £3445.51 in the savings account.

(b) Work out the value of n .

.....
(2)

(Total 5 marks)

***11** Viv wants to invest £2000 for 2 years in the same bank.

<p>The International Bank</p> <p>Compound Interest</p> <p>4% for the first year</p> <p>1% for each extra year</p>
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<p>The Friendly Bank</p> <p>Compound Interest</p> <p>5% for the first year</p> <p>0.5% for each extra year</p>

At the end of 2 years, Viv wants to have as much money as possible.

Which bank should she invest her £2000 in?

(Total 4 marks)