

## GCSE QUESTIONS

### Q1. CALCULATOR ALLOWED

Derek buys a house for £150 000

He sells the house for £154 500

(a) Work out Derek's percentage profit.

.....  
(3)

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

(b) Work out the value of the investment at the end of 2 years.

.....  
(3)

(Total for Question is 6 marks)

### Q2. CALCULATOR ALLOWED

Sakira invested £3550 in a savings account for 3 years.

She was paid 2.6% per annum compound interest for each of the first 2 years.

She was paid  $R\%$  interest for the third year.

Sakira had £3819.21 in her savings account at the end of the 3 years.

Work out the value of  $R$ . Give your answer correct to 1 decimal place.

.....  
(Total for question = 3 marks)

**Q3. CALCULATOR ALLOWED**

Katy invests £2000 in a savings account for 3 years.

The account pays compound interest at an annual rate of

- 2.5% for the first year
- $x\%$  for the second year
- $x\%$  for the third year

There is a total amount of £2124.46 in the savings account at the end of 3 years.

(a) Work out the rate of interest in the second year.

.....  
(4)

Katy goes to work by train. The cost of her weekly train ticket increases by 12.5% to £225

(b) Work out the cost of her weekly train ticket before this increase.

£.....  
(2)

(Total for question = 6 marks)

**Q4. CALCULATOR ALLOWED**

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.

(Total for question = 4 marks)

**Q5. CALCULATOR ALLOWED**

The value of a van depreciates at the rate of 20% per year.

Gary buys a new van for £27 500

After  $n$  years the value of the van is £11 264

Find the value of  $n$ .

.....  
(Total for Question is 2 marks)

**Q6. CALCULATOR ALLOWED**

Helen invested £6000 for  $n$  years in a savings account.

She got 3% compound interest each year.

At the end of  $n$  years Helen had £7379.24 in her savings account.

Work out the value of  $n$ .

You must show your working.

.....  
(Total for question = 2 marks)