

## GCSE QUESTIONS

### Q1. NON-CALCULATOR

In a sale, the price of a jacket is reduced.

The jacket has a normal price of £52

The jacket has a sale price of £41.60

Work out the percentage reduction in the price of the jacket.

..... %

(Total for question = 3 marks)

### Q2. NON-CALCULATOR

Riddington and Greenwich are two small villages.

The population of Riddington has increased from 80 people to 120 people.

The population of Greenwich has decreased from 200 people to 120 people.

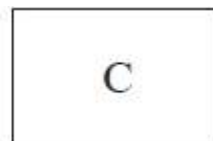
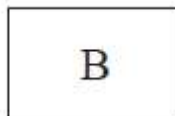
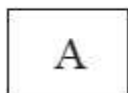
Show that Riddington has had the greater percentage change in its population.

You must show all your working.

(Total for question = 3 marks)

### Q3. NON-CALCULATOR

Here are three rectangles.



The area of rectangle **B** is 10% greater than the area of rectangle **A**.

The area of rectangle **C** is 10% greater than the area of rectangle **B**.

By what percentage is the area of rectangle **C** greater than the area of rectangle **A**?

..... %

(Total for question = 3 marks)

**Q4. NON-CALCULATOR**

A bonus of £2100 is shared by 10 people who work for a company.  
40% of the bonus is shared equally between 3 managers.  
The rest of the bonus is shared equally between 7 salesmen.

One of the salesmen says,

"If the bonus is shared equally between all 10 people I will get 25% more money."

Is the salesman correct?

You must show how you get your answer.

(Total for question = 5 marks)

**Q5. CALCULATOR ALLOWED**

Irena sells ice creams.  
One day she sells 80 ice creams.  
The next day she sells 108 ice creams.

Work out the percentage increase in the number of ice creams she sells.

..... %

(Total for question = 3 marks)

**Q6. CALCULATOR ALLOWED**

Last year Jo paid £245 for her car insurance.  
This year she has to pay £883 for her car insurance.

Work out the percentage increase in the cost of her car insurance.

..... %

(Total for question = 3 marks)

**Q7. CALCULATOR ALLOWED**

Franco buys a house for £146 500  
He sells the house for £158 220

Calculate the percentage profit Franco makes.

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

**Q8. CALCULATOR ALLOWED**

Emily buys a pack of 12 bottles of water. The pack costs £5.64  
Emily sells all 12 bottles for 50p each.

Work out Emily's percentage profit. Give your answer correct to 1 decimal place.

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

**Q9. CALCULATOR ALLOWED**

A pendulum of length  $L$  cm has time period  $T$  seconds.  
 $T$  is directly proportional to the square root of  $L$ .

The length of the pendulum is increased by 40%.

Work out the percentage increase in the time period.

..... %  
(Total for question is 3 marks)

**Q10. CALCULATOR ALLOWED**

A and B are two companies.

The table shows some information about the sales of each company and the number of workers for each company in 2004 and in 2014

	Company A		Company B	
	Sales (£ millions)	Number of workers	Sales (£ millions)	Number of workers
2004	320	2960	48	605
2014	388	3200	57	640

(a) Work out the percentage increase in sales from 2004 to 2014 for Company A.

..... %  
(2)

(b) Which company had the most sales per worker in 2014, Company A or Company B?  
You must show how you get your answer.

(3)  
(Total for question = 5 marks)

**Q11. CALCULATOR ALLOWED**

Marie invests £8000 in an account for one year.  
At the end of the year, interest is added to her account.

Marie pays tax on this interest at a rate of 20%  
She pays £28.80 tax.

Work out the percentage interest rate for the account.

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