

- 1 Berenika wants to buy 35 T-shirts.

Each T-shirt costs £5.80

Berenika does the calculation $40 \times 6 = 240$ to estimate the cost of 35 T-shirts.

- (a) Explain how Berenika's calculation shows the actual cost will be less than £240

.....
.....
(1)

There is a special offer.

T-shirts £5.80 each. Buy 30 or more T-shirts. Get 10% off the total cost.

- (b) Work out the actual cost of buying 35 T-shirts using the special offer.

£.....
(4)

(Total for Question is 5 marks)

- 2 In a sale, the normal price of a book is reduced by 30%.
The sale price of the book is £2.80

Work out the normal price of the book.

£.....

(Total for Question is 2 marks)

3 Mr Page uses oil to heat his home.

At the beginning of November there were 1000 litres of oil in his oil tank.

Mr Page bought enough oil to fill the tank completely.

He paid 50p per litre for this oil.

He paid a total amount of £750

At the end of February Mr Page had 600 litres of oil in the tank.

He bought enough oil to fill the tank completely.

The cost of oil had increased by 4%.

Work out the total amount Mr Page paid for the oil he bought in February.

£.....

(Total for Question is 5 marks)

- 4 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 is 3 marks)

- 5 Jack's driving school has two offers.

Offer 1 First driving lesson free All other driving lessons normal price	Offer 2 All driving lessons 5% off the normal price
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The normal price of a driving lesson is £24

Douglas is going to have 12 driving lessons.

Which is the cheaper offer for 12 driving lessons, Offer 1 or Offer 2?

You must show how you get your answer.

(Total for Question is 3 marks)

- 6 Renee buys 5 kg of sweets to sell.
She pays £10 for the sweets.

Renee puts all the sweets into bags.
She puts 250 g of sweets into each bag.
She sells each bag of sweets for 65p.

Renee sells all the bags of sweets.

Work out her percentage profit.

.....%

(Total for Question is 4 marks)

- 7 A force of 70 newtons acts on an area of 20 cm^2

The force is increased by 10 newtons.

The area is increased by 10 cm^2

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

Helen says,

“The pressure decreases by less than 20%”

Is Helen correct?

You must show how you get your answer.

(Total for Question is 3 marks)

- 8** 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 is 5 marks)

- 9 Maria invests £4500 in a savings account for 3 years.
The account pays simple interest at a rate of 1.8% per year.

Work out the total amount of interest Maria gets by the end of the 3 years.

£.....

(Total for Question is 2 marks)

- 10 An estimate of the height, H metres, of a tall building can be found using the formula

$$H = 4f + 12$$

where the building is f floors high.

A tall building is 110 floors high.

The real height of the building is 442 m.

Seb uses the formula to find an estimate of the height of this building.

He then finds the difference between his estimate and the real height.

Show that this difference is less than 5% of the real height.

(Total for Question is 4 marks)

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

Calculate the percentage profit Franco makes.

..... %

(Total for Question is 3 marks)

- 12** Sean pays £10 for 24 chocolate bars.
He sells all 24 chocolate bars for 50p each.
Work out Sean's percentage profit.

..... %

(Total for Question is 3 marks)

13 Carlo puts tins into small boxes and into large boxes.

He puts 6 tins into each small box.

He puts 20 tins into each large box.

Carlo puts a total of 3000 tins into the boxes so that

number of tins in small boxes : number of tins in large boxes = 2 : 3

Carlo says that less than 30% of the boxes filled with tins are large boxes.

Is Carlo correct?

You must show all your working.

(Total for Question is 5 marks)

14 Here are the types of sandwiches sold in a cafe last week.

Sandwiches
Tuna
Cheese
Chicken
Egg

56 tuna sandwiches were sold.

This was 40% of the total number of sandwiches sold.

(a) Work out the total number of sandwiches sold.

.....
(2)

Of the 56 tuna sandwiches sold, 18 were sold on Friday.

(b) Write 18 as a percentage of 56

Give your answer correct to the nearest whole number.

..... %
(2)

(Total for Question is 4 marks)