Summer 2017 Paper 1 Q5

1   Work out   60% of 70

....

(Total for Question 1 is 2 marks)

Autumn 2018 Paper 2 Q11

2   Adam gets a bonus of 30% of £80
Katy gets a bonus of £28

Work out the difference between the bonus Adam gets and the bonus Katy gets.

£...

(Total for Question 2 is 3 marks)

3 Bill wants to increase 150 by 3%
He writes down

$$150 \times 1.3 = 195$$

Bill's method is wrong.

(a) Explain why.

....

....

(1)

Sally wants to decrease 150 by 3%

(b) Complete this statement to show how Sally can decrease 150 by 3%

$$150 \times \text{...........................} = \text{...........................}$$

(1)

(Total for Question 3 is 2 marks)

4 There are men and women at a meeting.

There are 28 women.
30% of the people at the meeting are men.

Work out the total number of people at the meeting.

....

(Total for Question 4 is 3 marks)

5   Trevor buys a boat.
The cost of the boat is £14 200 plus VAT at 20%

Trevor pays a deposit of £5000
He pays the rest of the cost in 10 equal payments.

Work out the amount of each of the 10 payments.

£...

(Total for Question 5 is 4 marks)

6 Work out 15% of 160 grams.

.... grams

(Total for Question 6 is 2 marks)

7 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 7 is 2 marks)

8 There are 800 students at a school.
Each student has either a school dinner or a packed lunch.

31% of the students have packed lunches.

55% of the students are boys.
60% of the boys have school dinners.

How many girls have packed lunches?
You must show all your working.

....

(Total for Question 8 is 4 marks)

9   Work out 20% of 80

....

(Total for Question 9 is 2 marks)

10 214 people go on a school trip.
The people on the trip are either adults or children.

There are 14 adults on the trip.
35% of the children on the trip are wearing a hat.

Find the number of children on the trip who are **not** wearing a hat.

....

(Total for Question 10 is 4 marks)

11 Increase 240 by 20%

....

(Total for Question 11 is 3 marks)

12 There are 400 counters in a box.
The counters are red or yellow or green.

$\dfrac{3}{8}$ of the counters are red.

82 of the counters are yellow.

What percentage of the counters are green?

....%

(Total for Question 12 is 4 marks)

13 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.

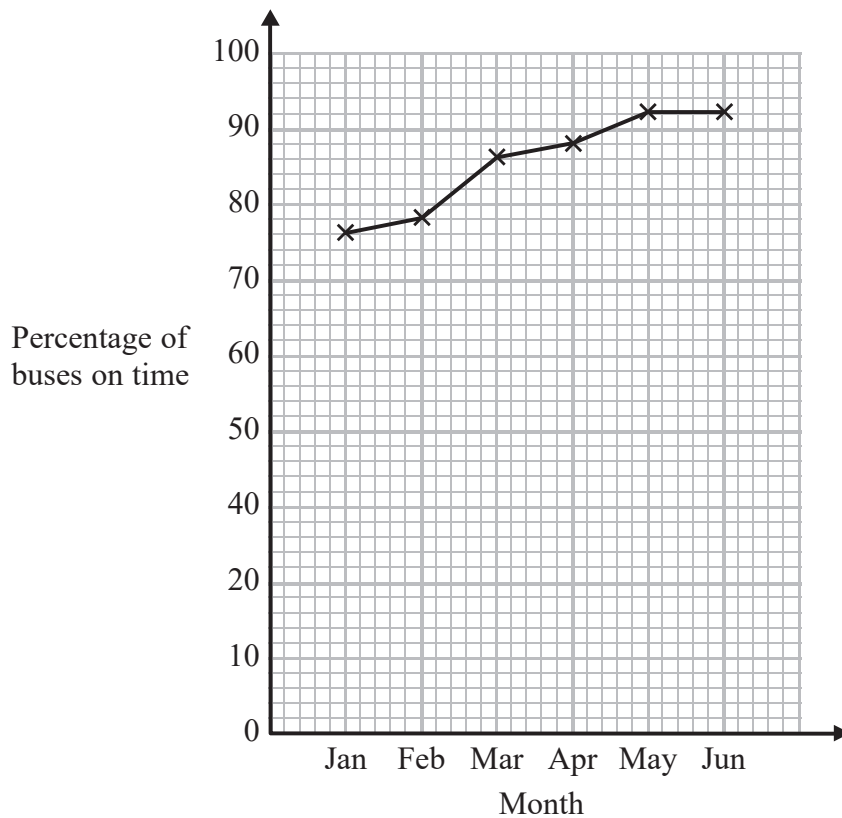£...

(Total for Question 13 is 2 marks)

14 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 14 is 3 marks)

15 Chrissy drew this graph to show the percentage of buses that got to a bus stop on time for six months.

Percentage of buses on time

Month

(a) Write down **one** thing that is wrong with the graph.

....

....

(1)

(b) Describe the trend in the percentage of buses that got to the bus stop on time.

....

(1)

(Total for Question 15 is 2 marks)

16 Azmol is paid £1500 per month.
He is going to get a 3% increase in the amount of money he is paid.

Work out how much money Azmol will be paid per month after the increase.

£...

(Total for Question 16 is 2 marks)

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

<table>
<tr><td>

Personal Bank

Compound Interest

2% for each year

</td><td>

Secure Bank

Compound Interest

4.3% for the first year
0.9% for each extra year

</td></tr>
</table>

Which bank will give Anil the most interest at the end of 3 years?
You must show all your working.

(Total for Question 17 is 3 marks)

18 Harley's house has a value of £160 000 correct to 2 significant figures.

(a) (i) Write down the least possible value of the house.

£..
(1)

(ii) Write down the greatest possible value of the house.

£..
(1)

The value of Rita's house increased by 5%.
Her house then had a value of £210 000

(b) Work out the value of Rita's house before the increase.

£..
(2)

(Total for Question 18 is 4 marks)

19 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 19 is 5 marks)

20 Remi invests £600 for 5 years in a savings account.
By the end of the 5 years he has received a total of £75 simple interest.

Work out the annual rate of simple interest.

....%

(Total for Question 20 is 3 marks)

21 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 21 is 3 marks)

22 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 22 is 4 marks)

23 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 23 is 4 marks)

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

$$H = 4f + 12$$

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

Calculate the percentage profit Franco makes.

.... %

(Total for Question 24 is 3 marks)

25 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.

£..

(Total for Question 25 is 3 marks)

26 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 26 is 3 marks)

27 An exam has two papers, Paper 1 and Paper 2

Paper 1 has 60 marks.
Paper 2 has 90 marks.

The pass mark is $\dfrac{2}{3}$ of the total number of marks.

Danielle gets 70% of the marks for Paper 1

How many of the marks for Paper 2 must Danielle get in order to get the pass mark?

....

(Total for Question 27 is 4 marks)

28 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 28 is 4 marks)

29 Robin buys a watch for £80
He sells the watch for £56

Work out his percentage loss.

....%

(Total for Question 29 is 3 marks)

30 At the end of 2017

the value of Tamara's house was £220 000

the value of Rahim's house was £160 000

At the end of 2019

the value of Tamara's house had decreased by 20%

the value of Rahim's house had increased by 30%

At the end of 2019, whose house had the greater value?

You must show how you get your answer.

(Total for Question 30 is 4 marks)

31 In a sale, the normal price of a boat is reduced by 15%
The sale price of the boat is £272 000

Work out the normal price of the boat.

£...

(Total for Question 31 is 2 marks)

32 Ella invests £7000 for 2 years in an account paying compound interest.

In the first year, the rate of interest is 3%
In the second year, the rate of interest is 1.5%

Work out the value of Ella's investment at the end of 2 years.

£...

(Total for Question 32 is 3 marks)

Autumn 2022 Paper 2 Q26

33 The population of a town increased by 9% between 2018 and 2019
The population in 2019 was 165 680

Calculate the population in 2018

....

(Total for Question 33 is 2 marks)

Summer 2022 Paper 2 Q26

34 A new phone cost £679
The value of the phone decreases at a rate of 4% per year.

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

£.......................................

(Total for Question 34 is 3 marks)

35 The value of Michelle's car has decreased by 15%
The car now has a value of £13 600

Work out the value of Michelle's car before the decrease.

£...

(Total for Question 35 is 2 marks)