

8300

GCSE MATHEMATICS

Foundation and Higher tier – Questions by Topic

Number

Finding percentages of amounts without a calculator

v1.0

Name _____

Materials

For this paper you must have:

- Mathematical instruments
- You must not use a calculator



Information

- The marks for questions are shown in brackets

Advice

- In all calculations, show clearly how you work out your answer

Questions 1 to 22 are **foundation** tier only

Q1.

Work out 51% of 400

(Total 2 marks)

Q2.

Work out 80% of 300

(Total 2 marks)

Q3.

(a) Work out one-quarter of 240.

(1)

(b) Work out 10% of 390.

(1)

(Total 2 marks)

Q4.

Work out 35% of 1200

(Total 3 marks)

Q5.

(a) What is 70 out of 200 as a percentage?

(1)

(b) Work out 0.5% of 920

(2)

(Total 3 marks)

Q6.

What is 150% of 36 ?

Circle your answer.

18

24

54

186

(Total 1 mark)

Q7.

(a) Work out 60% of 35

(2)

(b) Work out $\frac{4}{5}$ of 150

(2)

(Total 4 marks)

Q8.

Work out 20% of 14 000

(Total 2 marks)

Q9.

Work out 65% of 300

(Total 3 marks)

Q10.

Work out 110% of 80

(Total 2 marks)

Q11.

- (a) Laura wants to work out 3% of 1700
Her method is 1700×0.3
Is her method correct? Tick a box.

☐

Yes

☐

No

Give a reason for your answer.

(1)

- (b) Laura wants to work out $\frac{30}{29}$ of 60
Her answer is 58
Is her method correct? Tick a box.

☐

Yes

☐

No

Give a reason for your answer.

(1)

(Total 2 marks)

Q12.

Work out 150% of 36

(Total 2 marks)

Q13.

Shona has 14 dresses.

50% of these dresses are red.

She gives 5 of her red dresses to a charity shop.

She buys 1 new red dress.

What percentage of the dresses she has now are red?

(Total 4 marks)

Q14.



The multipack costs 10% **less than** 6 single bags.
Work out the cost of the multipack.

(Total 4 marks)

Q15.

A ball is dropped from a height of 50 metres.
After each bounce, the ball reaches 20% of its previous height.
How high does it reach after the second bounce?

(Total 2 marks)

Q16.

Sam wants to buy a camera for £345
He has already saved £96
Each week
 his pay is £80
 he saves 30% of this pay.
How many **more** weeks must he save?

(Total 4 marks)

Q17.

600 people visit a cinema.
 $\frac{1}{4}$ go to screen 1.
 40% go to screen 2.
 The rest go to screen 3.
How many people go to screen 3?

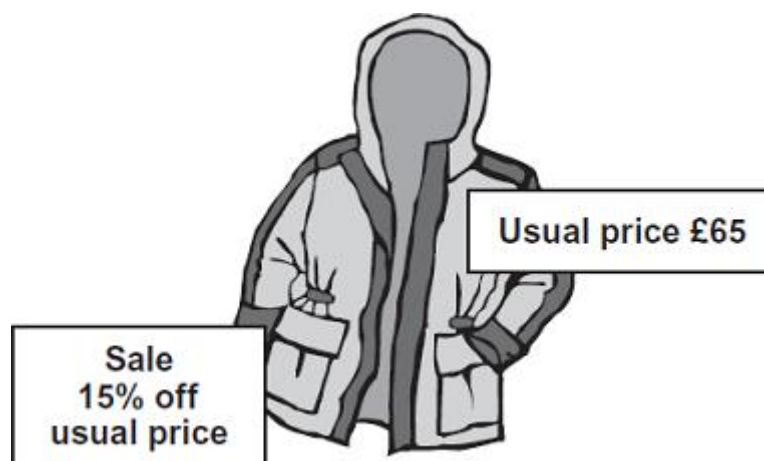
(Total 5 marks)

Q18.

Shabir buys 30 bottles of lemonade for a party.
He is given 20% discount off the total price.
One bottle costs 80p **before** the discount.
How much does he pay?

(Total 4 marks)

Q19.



Work out the sale price.

(Total 3 marks)

Q20.

Last season a football club sold 4000 season tickets at £250 each.

This season the season ticket price is reduced by 20% to £200

If the club sell 20% **more** tickets, will the amount of money they receive increase, decrease or stay the same? You **must** show your working

(Total 5 marks)

Q21.

Here are three offers for a computer.

Tablet World
Usual price £170
20% off

IT Supplies
Usual price £180
 $\frac{1}{4}$ off

PC Heaven
Special offer
Pay £23 each month
for 6 months

Which offer is the cheapest? You **must** show your working.

(Total 6 marks)

Q22.

In May, a coat costs £64.

In June, the May price is rounded to the nearest £10.

In July, the June price is reduced by 20%.

Ian has £50. Does he have enough money to buy the coat in July?

(Total 3 marks)

Questions 23 to 26 are **higher** tier only

Q23.

Circle the calculation that increases 400 by 7%

400×0.07

400×0.7

400×1.07

400×1.7

(Total 1 mark)

Q24.

Circle the calculation that decreases 250 by 15%

$250 \div 1.15$

250×0.15

250×0.85

$250 \div 0.85$

(Total 1 mark)

Q25.

Increase 6800 by 12%.

(Total 3 marks)

Q26.

The price of a book is £4

In a sale the price is reduced by 30%

Work out the sale price.

(Total 3 marks)