



**Bishops  
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Education Consultancy

# Edexcel GCSE Mathematics

## FRACTIONS OF AN AMOUNT

### Materials Required:

- Pen
- HB Pencil
- Ruler (in centimetres and millimetres)
- Protractor
- Compass

### Instructions:

- Use a black ink pen to answer all questions
- Fill your name in the section below
- Answer the questions in the spaces provided
- Show your working out for all answers

### Information:

- The marks allocated for each question are displayed within brackets – utilise this information to gauge the appropriate amount of time to dedicate to each question
- Questions marked with an asterisk (\*) will assess your written communication; be careful of spelling, punctuation and grammar with these questions

### Advice:

- Carefully read the question before attempting to answer it
- Be vary of time and try to answer every question
- If you have enough time in the end, go back and check your answers. A good way to check your answers is to retry the question with the hope of getting the same answer as before without looking at your working out from before

# NO CALCULATOR ALLOWED

**NAME:**

1.

A school has 1200 pupils.  
575 of these pupils are girls.

$\frac{2}{5}$  of the girls like sport.

$\frac{3}{5}$  of the boys like sport.

$$\begin{array}{r} 1200 \\ - 575 \\ \hline 625 \end{array}$$

Work out the total number of pupils in the school who like sport.

1200 students

575 = Girls

625 = Boys

$$\frac{2}{5} \times \frac{575}{1} = \frac{1150}{5} = \frac{230}{1} = 230$$

$$\frac{3}{5} \times \frac{625}{1} = \frac{1875}{5} = \frac{375}{1} = 375$$

$$230 + 375$$

$$\boxed{= 605}$$

$$\dots\dots\dots 605$$

(Total 3 marks)

2.

A train travels from London to Manchester.

It leaves London at 16:55

It arrives in Manchester at 19:45

$$5 \text{ mins} + 2 \text{ hrs} + 45 \text{ mins}$$

$$= 2 \text{ hrs} \& 50 \text{ mins}$$

$$= 170 \text{ minutes}$$

(a) Work out the number of minutes this train takes to travel from London to Manchester.

$$16:55 + 5 \text{ mins} = 17:00$$

$$17:00 + 2 \text{ hrs} = 19:00$$

$$19:00 + 45 \text{ mins} = 19:45$$

$$170$$

(3)

There are 800 people on the train at Manchester.

$\frac{1}{10}$  of these 800 people are children.

(b) (i) Work out  $\frac{1}{10}$  of 800

$$\frac{1}{10} = \frac{10}{100} = 10\%$$

$$80$$

$\frac{3}{8}$  of those 800 people are women.

(ii) Work out  $\frac{3}{8}$  of 800

$$\frac{3}{8} \times \frac{800}{1} = \frac{2400}{8} = 300$$

$$300$$

The rest of the 800 people are men.

(ii) Work out the number of men on the train.

$$800 - 300 - 80 = 420$$

$$420$$

(4)

320 of the 800 people are under 21 years old.

(b) Work out 320 out of 800 as a percentage.

$$\frac{320}{800} = \frac{32}{80} = \frac{16}{40}$$

$$40$$

%

(2)

(Total 9 marks)

$$= \frac{8}{20} = \frac{4}{10} = \frac{40}{100} = 40\%$$

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3.

Danny shares a bag of 20 sweets with his friends.

He gives Mary  $\frac{3}{5}$  of the sweets.

He gives Ann  $\frac{1}{10}$  of the sweets.

He keeps the rest for himself.

How many sweets does Danny keep for himself?

$$\frac{3}{5} \times \frac{20}{1} = \frac{60}{5} = 12$$

$$\frac{1}{10} \times \frac{20}{1} = \frac{20}{10} = \frac{2}{1} = 2$$

$$12 + 2 = 14$$

$$20 - 14 = 6$$

6

(Total 3 marks)

4. A class has 29 students.  
16 of the students are girls.  
What fraction of the students are boys?

$$29 - 16 = 13$$

$$\frac{13}{29} = \text{Boys}$$

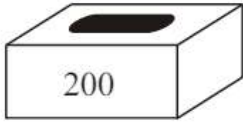
$\frac{13}{29}$

(Total 2 marks)

5.

A box contains 200 tissues.

Toby takes  $\frac{3}{5}$  of these tissues.



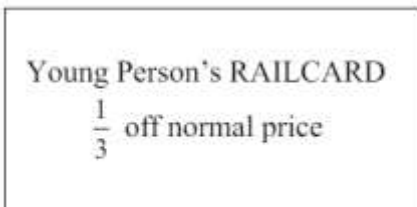
Work out how many tissues he takes.

$$\frac{3}{5} \times \frac{200}{1} = \frac{600}{5} = 120$$

.....120

(Total 2 marks)

6.



£24.90

$$24 \div 3 = 8$$

$$90 \div 3 = 30$$

$$\therefore \frac{1}{3} \text{ of } £24.90 = £8.30$$

Lisa uses her railcard to buy a ticket.

She gets  $\frac{1}{3}$  off the normal price of the ticket.

The normal price of the ticket is £24.90

Work out how much Lisa pays for the ticket.

$$24.90 - 8.30$$

$$= 16.60$$

£ .....16.60

(Total 3 marks)

7. There are 30 students in a class. 20 of these students are female.

Find the fraction of the class that is female.

Give your answer in its simplest form.

$$\frac{20}{30} = \frac{2}{3}$$

$$\frac{2}{3}$$

(Total 2 marks)

8.

In a shop the normal price of a jacket is £60

The cost of the jacket in a sale is  $\frac{3}{4}$  of the normal price.

- (a) Work out  $\frac{3}{4}$  of £60

$$\frac{3}{4} \times \frac{60}{1} = \frac{180}{4}$$

$$= \frac{90}{2} = 45$$

£45.....

(2)

Darren has to travel  $\frac{1}{8}$  mile to the shop.

- (b) Write  $\frac{1}{8}$  as a decimal.

$$\frac{1}{8} \times \frac{100}{1} = \frac{100}{8}$$

$$= \frac{50}{4} = \frac{25}{2} = 12.5$$

0.125.....

(2)

(Total 4 marks)

$$= 0.125$$

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9. (a) Work out  $\frac{1}{4}$  of £24

$$\frac{1}{4} \times \frac{24}{1} = \frac{24}{4} = \frac{12}{2} = 6 \quad \dots\dots\dots 6 \quad (1)$$

- (b) Work out 10% of 400 kg.



$$\dots\dots\dots 40 \quad \text{kg} \quad (1)$$

(Total 3 marks)

10.

There are 24 men in a room.

$\frac{1}{2}$  of the men are wearing a red shirt.

$\frac{1}{3}$  of the men are wearing a green shirt.

The rest of the men are wearing a blue shirt.

Work out the number of men wearing a blue shirt.

$$\frac{1}{2} \text{ of } 24 = 12$$

$$\frac{1}{3} \times \frac{24}{1} = \frac{24}{3} = 8$$

$$12 + 8 = 20$$

$$24 - 20 = 4$$

4

(Total 3 marks)