

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.

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

$$\begin{array}{l} 1200 \text{ pupils} \\ \swarrow \quad \searrow \\ 575 \text{ girls} \quad 1200 - 575 = 625 \text{ boys} \end{array}$$

$$\frac{2}{5} \times 575 = 230 \quad \frac{3}{5} \times 625 = 375$$

$$230 + 375 = 605$$

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

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

$$\begin{array}{r} 50 \text{ mins to } 1745 \\ + 120 \text{ mins to } 1945 \end{array}$$

$$\begin{array}{r} 170 \\ \hline \end{array}$$

(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

$$\begin{array}{r} 80 \\ \hline \end{array}$$

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

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

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

$$\begin{array}{r} 300 \\ \hline \end{array}$$

The rest of the 800 people are men.

- (iii) Work out the number of men on the train.

$$800 - 380$$

$$\begin{array}{r} 420 \\ \hline \end{array}$$

(4)

320 of the 800 people are under 21 years old.

- (c) Work out 320 out of 800 as a percentage.

$$\frac{320}{800} \times 100$$

$$\begin{array}{r} 40 \\ \hline \end{array} \%$$

(2)

(Total 9 marks)

3. Danny shares a bag of 20 sweets with his friends.

He gives Mary  $\frac{3}{5}$  of the sweets.  $\frac{1}{5} = 4$      $\frac{3}{5} = 12$

He gives Ann  $\frac{1}{10}$  of the sweets.    2

He keeps the rest for himself.

How many sweets does Danny keep for himself?

$$20 - 14 = 6$$

6

.....  
(Total 3 marks)

4. A class has 29 students.  
16 of the students are girls.

What fraction of the students are boys?

16 girls

$$29 - 16 = 13 \text{ boys}$$

13 out of 29

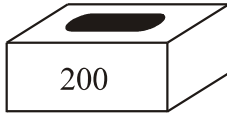
$\frac{13}{29}$

.....  
(Total 2 marks)

5. A box contains 200 tissues.

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

$$\frac{1}{5} = 40$$



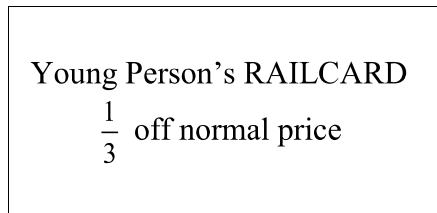
Work out how many tissues he takes.

$$\frac{3}{5} \times 200$$

120

.....  
(Total 2 marks)

6.



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.

$$\frac{1}{3} \times 24.90 = \cancel{8.30}$$

$$\begin{array}{r} 24.90 \\ - 8.30 \\ \hline 16.60 \end{array}$$

£ .....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

$$\frac{1}{4} = \pounds 15$$
$$\frac{3}{4} = \pounds 45$$

$$\pounds 45$$

(2)

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

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

$$1 \div 8 = 0.125$$

$$0.125$$

(2)

(Total 4 marks)

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

£6  
.....  
(1)

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

40 kg  
.....  
(1)

(Total 3 marks)

10. There are 24 men in a room.

$\frac{1}{2}$  of the men are wearing a red shirt. 12

$\frac{1}{3}$  of the men are wearing a green shirt. 8

The rest of the men are wearing a blue shirt.

Work out the number of men wearing a blue shirt.

$$24 - 20$$

4  
.....  
(Total 3 marks)