

MATHEMATICS 6TH CLASS SHEET 3

1. Write down the value of each of the following.

(i) $7 + 11 =$ 18 (ii) $85 - 61 =$ 24 (iii) $6 \cdot 4 \times 5 =$ 32

2. (i) Write down the nearest whole number to $6 \cdot 1$. Answer = 6

(ii) Round each number to the nearest whole number to estimate the value of $3 \cdot 8 \times 8 \cdot 2$.

$3 \cdot 8 \times 8 \cdot 2 =$ 4 \times 8 $=$ 32

(iii) Find the exact value of $3 \cdot 8 \times 8 \cdot 2$ 31.16

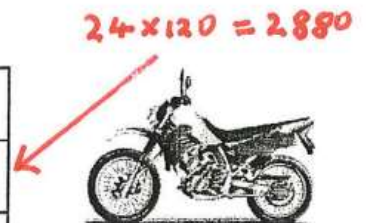
(iv) Find the difference between the exact value and the estimated value. 0.84

3. Wayne wants to buy a motorbike. He has two options to pay for it.

Option 1: Wayne can pay a deposit of €800, and then pay €120 a month for 24 months.

(a) Find the total cost of the motorbike, using **Option 1**.

Deposit =	€ 800
24 months @ €120 per month =	€ 2,880
Total Cost =	€ 3,680



Option 2: Wayne can make one payment of €3200 for the motorbike.

(b) How much money would Wayne save if he chose **Option 2** instead of **Option 1**? €480

4. Find the value of $3x + 2$ when $x = 5$. 17

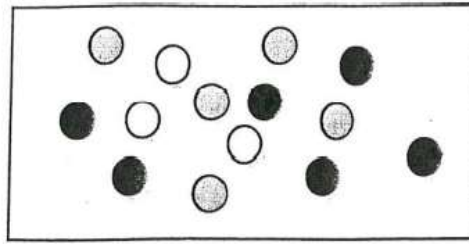
$3(5) + 2 = 15 + 2 = 17$

5. Solve the equation $3x - 1 = 11$. 4

$3x - 1 = 11$
 $3x = 12$
 $x = 4$

(check: $3(4) - 1 = 12 - 1 = 11 \checkmark$)

6. Shauna has a bag of marbles. The picture shows the number of marbles of each colour in the bag.



- (a) Fill in the table to show the number of marbles of each colour in Shauna's bag.

Colour	Black	White	Grey
Number of marbles	6	3	5

- (b) Find the **total** number of marbles in the bag.

14

One marble is picked at random from the bag.

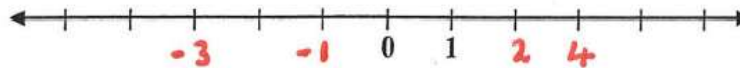
- (c) Find the **probability** that a **white** marble is picked.

$$\frac{3}{14}$$

- (d) Find the **probability** that a **black or grey** marble is picked.

$$\frac{11}{14}$$

7. On the number line below, mark in the integers 2, -1, 4, -3.



8. $\frac{1}{4} + \frac{1}{3}$ is written as a single fraction.

Which fraction from the following list is the correct answer?

$\frac{2}{7}$, $\frac{7}{12}$, $\frac{1}{12}$

$$\frac{1}{4} + \frac{1}{3} = \frac{3}{12} + \frac{4}{12} = \frac{7}{12}$$

MATHEMATICS 6TH CLASS SHEET 4

1. Find the value of each of the following.

(a) $542 + 419 =$ 961

(b) $3125 \div 5 =$ 625

(c) $2^3 =$ 8

(d) $2 \times (8 + 3) =$ 22

2. The clock shows the time Peadar's Maths class begins.

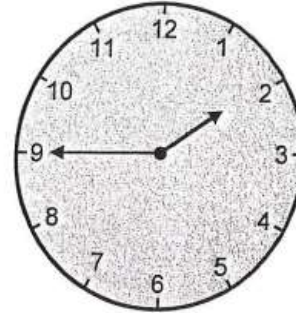
(i) At what time does Peadar's Maths class begin?

$13:45$

The class finishes 40 minutes later.

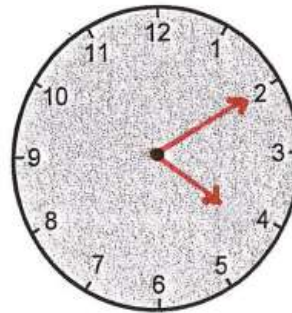
(ii) At what time does the class finish?

$14:25$

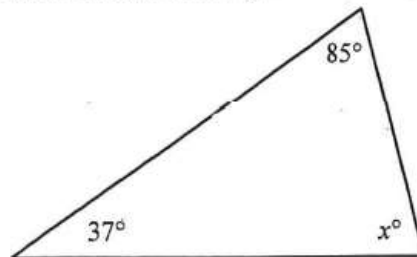


School finishes at 16:10.

(iii) Show this time on the clock.



3. Calculate the value of x in this triangle.



$x + 85 + 37 = 180$

$x + 122 = 180$

$x = 58$

check: $58 + 85 + 37 = 180 \checkmark$

4. Joe bought a car for €4000. He sold the car for €4880.

(a) Work out Joe's profit.

$4880 - 4000 = \text{€}880$

(b) Find Joe's profit as a percentage of the cost price.

$\frac{880}{4000} \times 100\% = 22\%$



5. Gerry carried out a survey on the hair colour of the 12 students in his class. The colour of each person's hair is shown in this table:

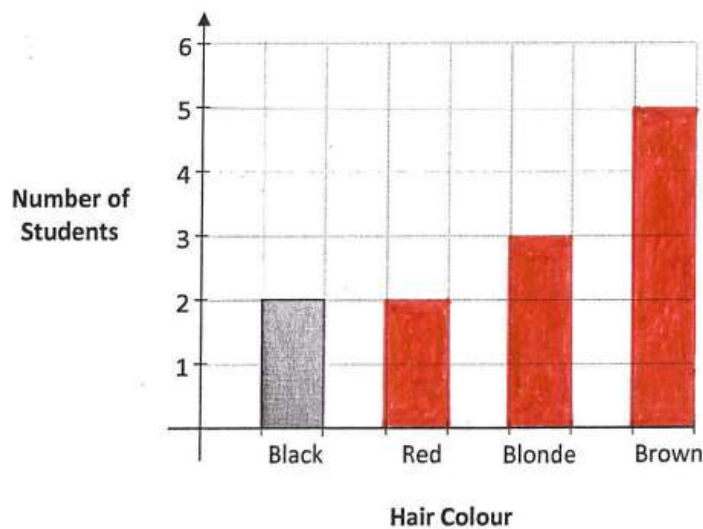
Black	Red	Blonde	Brown
Brown	Blonde	Brown	Brown
Black	Brown	Blonde	Red

- (a) Complete the following table by writing in the number of students with each hair colour.

Hair Colour	Black	Red	Blonde	Brown
Number of Students	2	2	3	5

Check:
 $2 + 2 + 3 + 5 = 12$

- (b) Complete the bar chart on the axes below to show this information.



- (c) Eoghan was one of the 12 students surveyed. What is the probability that he has black hair?

$P(\text{Black Hair}) = \frac{2}{12}$ OR $\frac{1}{6}$

- (d) What percentage of the students surveyed had blonde hair?

$\frac{3}{12} \times 100\% = 25\%$

6. A lawnmower costs €200 excluding VAT. If the VAT rate is 23%, find the total cost of the lawnmower.



Cost of Lawnmower	=	€ 200
VAT @ 23%	=	€ 46
Total Cost	=	€ 246

$100\% = €200$
 $1\% = €2$
 $23\% = €46$

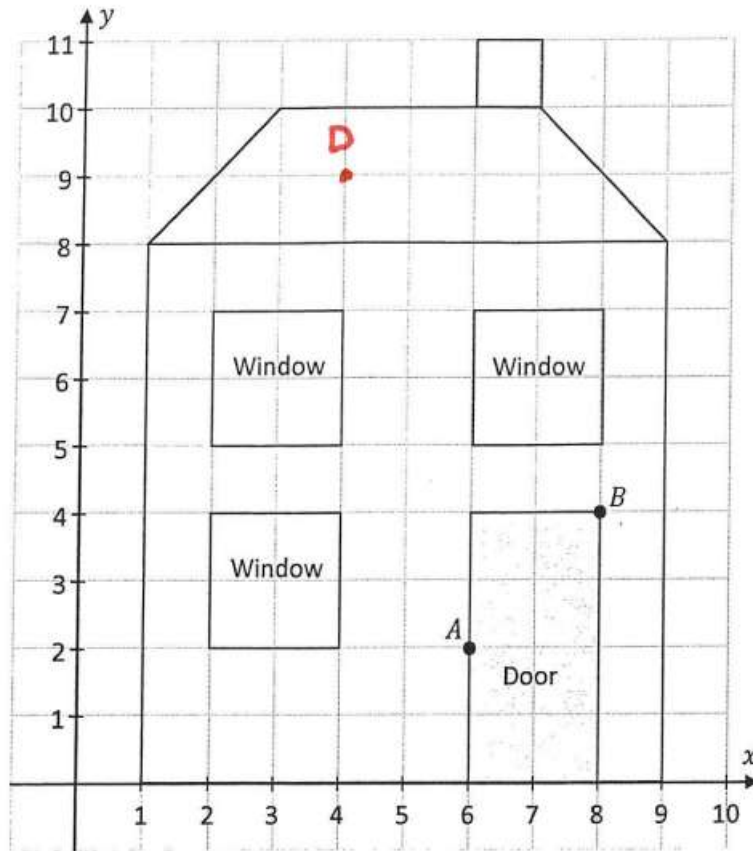
OR

$€200 \times 0.23 = €46$

OR

$€200 \times \frac{23}{100} = €46$

7. The diagram shows a sketch of Joan's house on a co-ordinate grid. Each small square on the grid has a side of length 1 cm. The points A and B are also shown.



- (a) There is a cracked tile on the roof at $D(4, 9)$.
Plot the point $D(4, 9)$ on the co-ordinate diagram. Label the point D .
- (b) Write down the co-ordinates of A and B .

$$A = (6, 2)$$

$$B = (8, 4)$$

- (c) There is a knocker half way between A and B .
Find the co-ordinates of the midpoint of $[AB]$.

$$\text{Midpoint} = (7, 3)$$

- (d) Write down the height and the width of the door in the sketch. Give each answer in cm.

$$\text{Height} = 4 \text{ cm}$$

$$\text{Width} = 2 \text{ cm}$$

- (e) Work out the area of the door in the sketch, in cm^2 . $4 \times 2 = 8 \text{ cm}^2$
- (f) The sketch is to a scale of $1 \text{ cm} = 0.5 \text{ m}$.
Work out the actual height and actual width of the door, in metres.

$$\text{Actual height} = 2 \text{ m}$$

$$\text{Actual width} = 1 \text{ m}$$