



KEY STAGE 2
MATHEMATICS

SET C

PAPER 2 : REASONING



No Calculators



40 Minutes

First Name	
Last Name	

Total Marks	
	35

1. Below is part of a television programme guide:

Programme	Time
Days Of Our Life	17:45
News	18:30
Dance The Night Away	18:55
Hospital Emergency	20:05
Homes At Auction	21:05

How long in minutes does **Dance The Night Away** last?



minutes

/1

If **Homes At Auction** is 55 minutes long, at **what time** does it finish?

Give your answer in the **12 hour clock** and ensure you state whether it's **am** or **pm**.



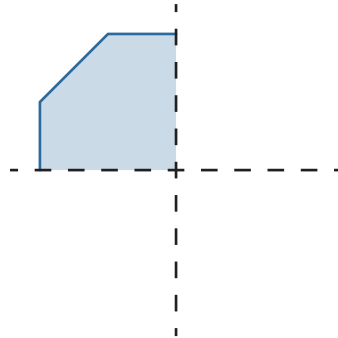
/1

Marks



2.

A **quarter** of a shape is shown below. **Two** lines of symmetry are also shown.



How many sides does the **whole** shape have?

 sides

/1

What is the **polygon name** for the **quarter shape** shown in blue above?



/1

What would be the **polygon name** for the **whole** shape?



/1

3.

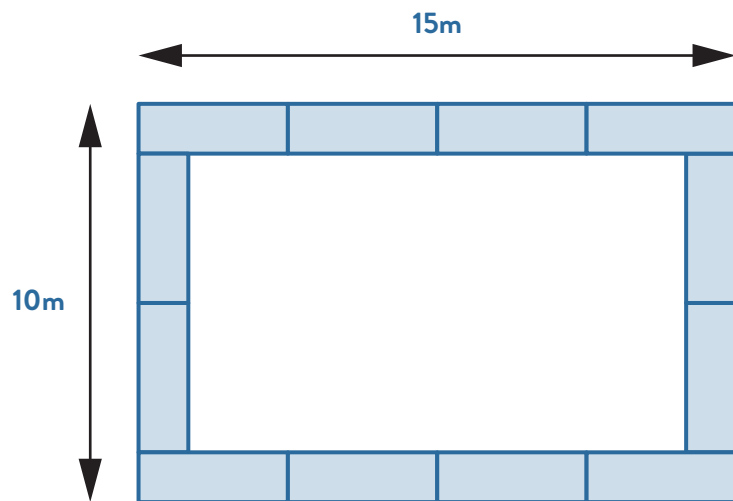
What is 6,789 seconds in hours, minutes and seconds?



/1

Marks

4. Here is a wall, viewed from above. The blocks are identical.



What is the inside **perimeter** of the wall?

 m

/1

What is the inside **area**?

 m²

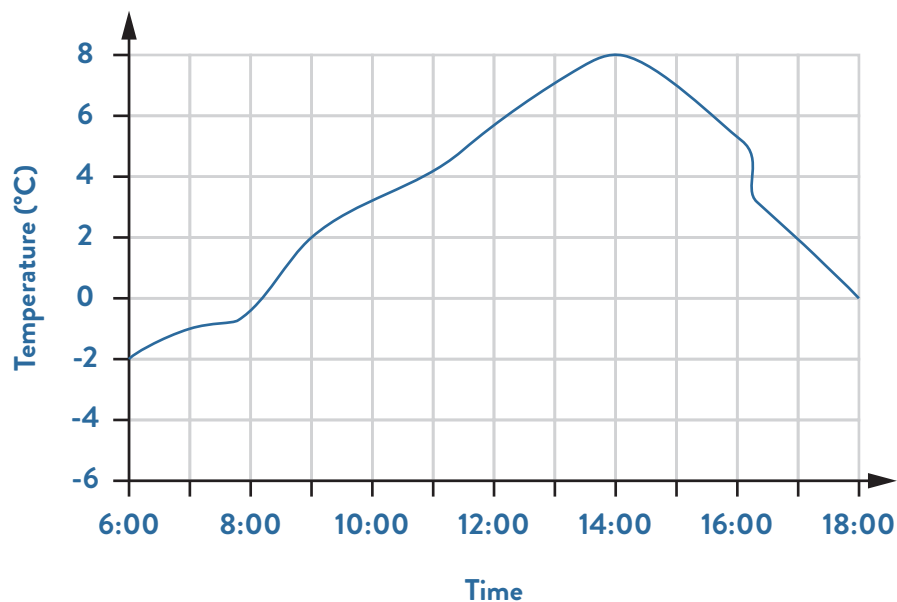
/1

Marks



No Calculators.

5. This graph shows the temperature recorded outside from six in the morning until six in the evening:



What was the **temperature** at 9:00 a.m.?



°C

/1

What was the **temperature difference** between 7:00 a.m. and 2:00 p.m.?



°C

/1

At what **time** in the **morning** did the temperature reach 3°C?



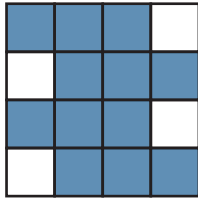
a.m.

/1

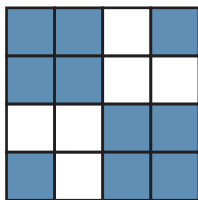
Marks

6. **Connect** each shape with its **equivalent** fraction.

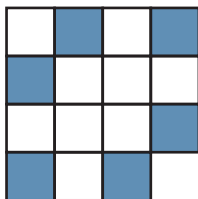
One has been done for you.



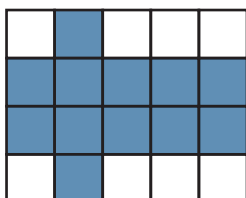
$$\frac{3}{4}$$



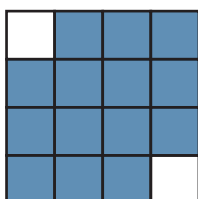
$$\frac{2}{5}$$



$$\frac{7}{8}$$



$$\frac{5}{8}$$



$$\frac{3}{5}$$

Marks

/ 2



Marks

7. Write the missing values in the sum below to make the long multiplication correct.



$$\begin{array}{r} \square 2 \\ \times 2 \square \\ \hline 644 \\ \hline 1840 \\ \hline 2484 \end{array}$$

/ 2

8. What fraction is exactly **halfway** between $\frac{1}{3}$ and $\frac{1}{2}$?



/ 1

9. A footballer put **three** packets of sausages and **two** sachets of instant mash potato into her shopping basket. The cost was shared between her and her **four** teammates.

Each packet of sausages cost £3.74 and a sachet of instant mash potato cost £1.99.

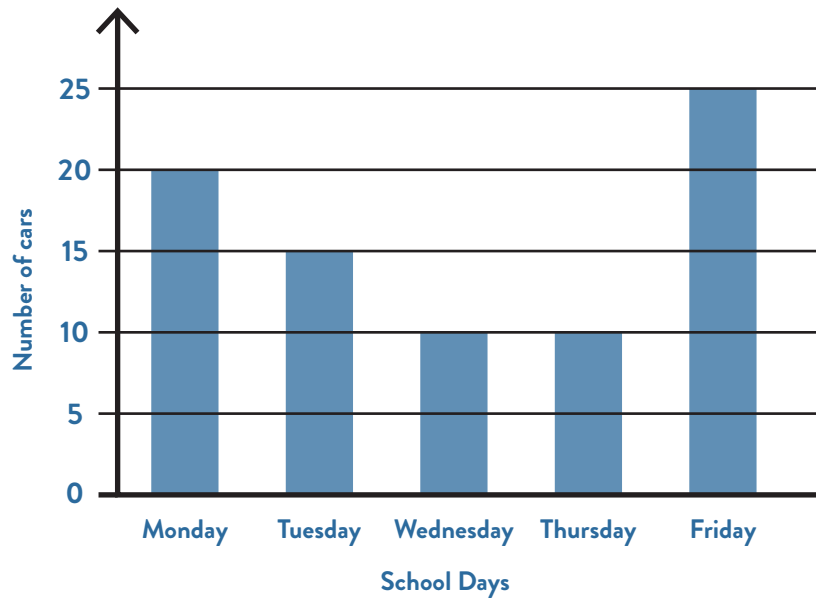
How much did **each** footballer have to pay for their meal?

Show your working.

£

/ 2

10. Lizzy recorded how many cars passed her school's gates between 8:30 a.m. and 9:30 a.m. for five school days. She produced this bar graph:



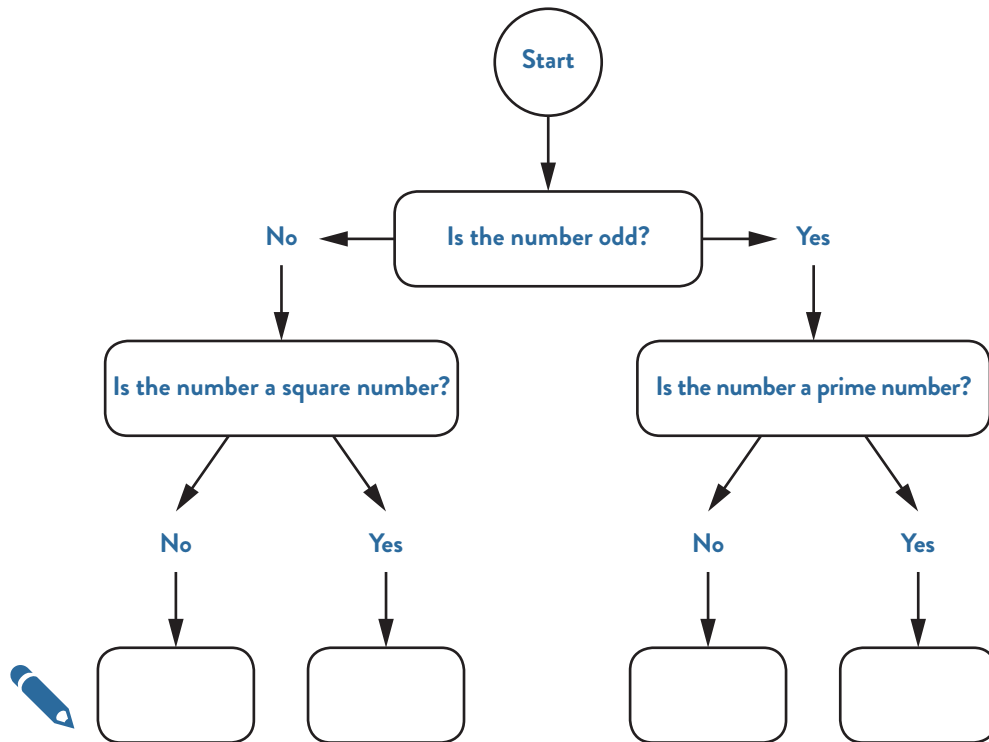
What is the **median** number of cars that passed the school gates between 8:30 a.m. and 9:30 a.m. during those five days?



Marks

11. Place **all** of the numbers in the correct boxes using the sorting diagram.

2 5 9 13 16



Marks

/ 1

12. $\frac{2}{3}$ of the girls in Helen's class go to hockey practice. $\frac{3}{8}$ of these girls were chosen for the school team.

If the number chosen for the team was 9, **how many** girls are there in Helen's class?

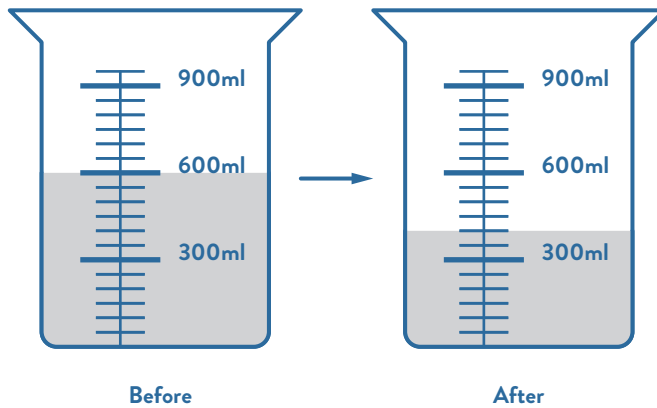
Show your working.



girls

/ 2

13. Leanne has 600ml of water. She pours some of it out.

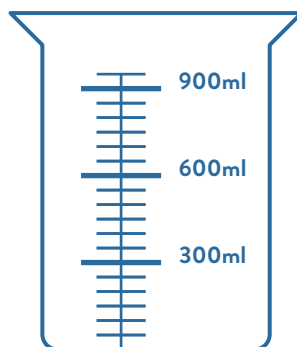


How much water has Leanne poured out?

 ml

/1

Leanne now pours in **another** 150 ml.
Draw the new water level.



Use a ruler

/1

Marks

14. Look carefully at this equation:

$$\frac{b}{5} = \frac{c + 2}{20}$$

Tick the correct expression.



$c = 2b - 2$ ☐

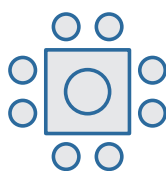
$c = b - 2$ ☐

$c = 4b - 2$ ☐

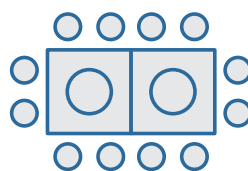
$c = 4b$ ☐

/1

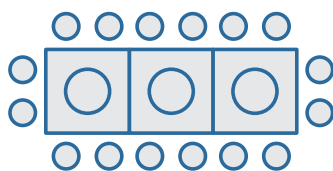
15. Look at the sequence of patterns below:



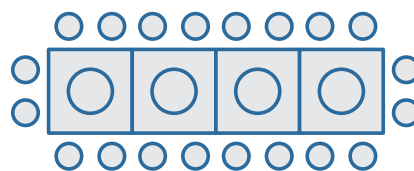
Pattern 1



Pattern 2



Pattern 3



Pattern 4

Study the patterns and **complete** the table below:

Pattern number	Number of squares	Number of circles
1	1	9
2	2	14
3	3	19
4	4	24
5		



/1

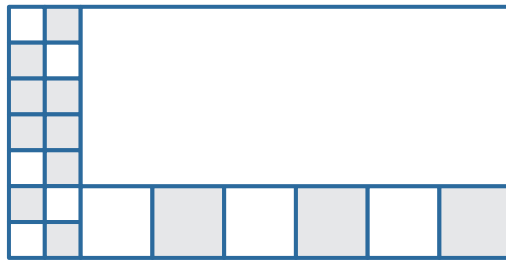
How many circles would there be in pattern number 30?



circles

/1

16. Study the shape below:



What fraction of the shape has been **shaded**?
Circle your answer below.



$$\frac{3}{10}$$

$$\frac{3}{11}$$

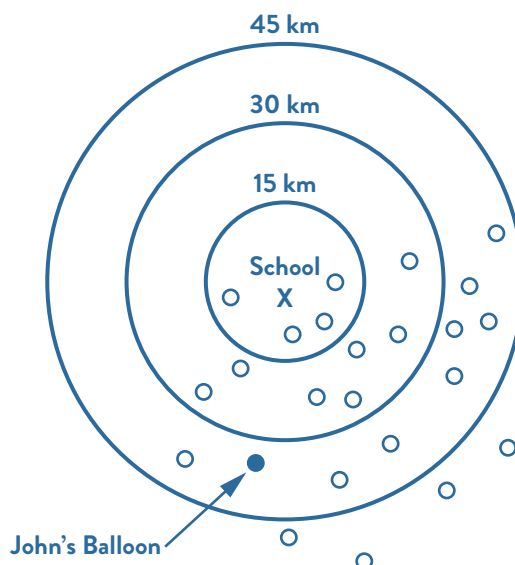
$$\frac{3}{13}$$

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

$$\frac{3}{17}$$

/ 1

17. John's class released some balloons at their school summer fete.
 The diagram below shows how far the balloons travelled in one hour:



How many of the balloons have travelled between 15km and 30 km?



balloons

/ 1

Estimate how far John's balloon travelled.



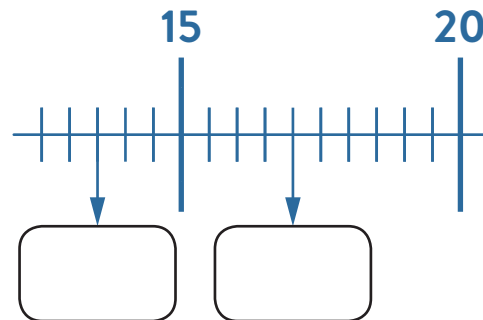
km

/ 1



18. Part of a number line is shown below.

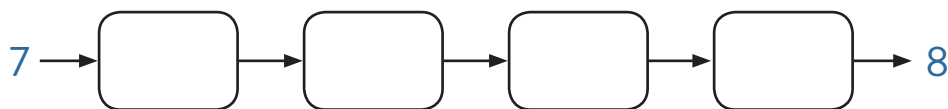
Write the missing numbers in the boxes.



Marks

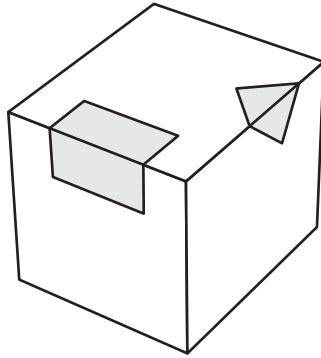
/2

19. Arrange the labels below to show the correct order:



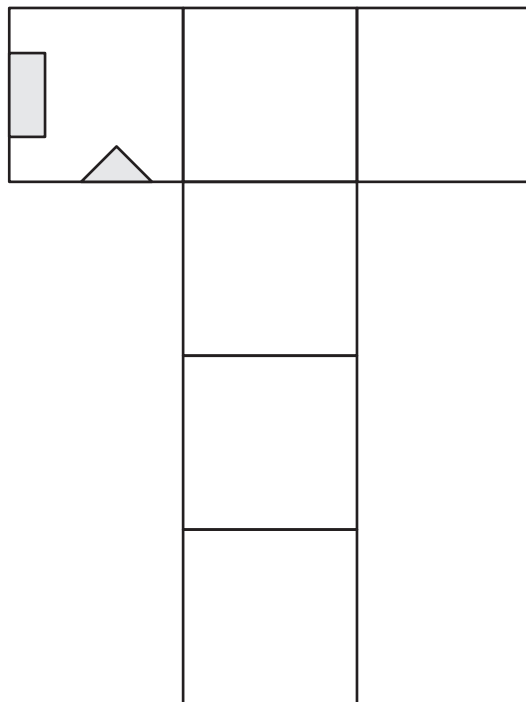
/1

20. A cube has shapes shaded over three of its faces.



Below is a net of the cube.

Draw in the missing parts of the shapes to complete the net.



/ 2

END OF TEST