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:

Marks

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

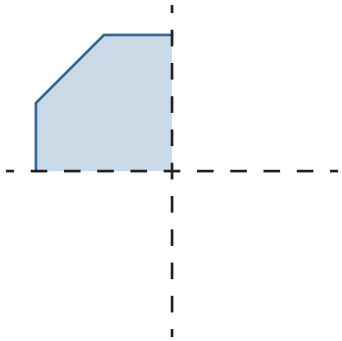
If **Homes At Auction** is 55 minutes long, at **what time** does it finish?

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

/ 1

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

Marks



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

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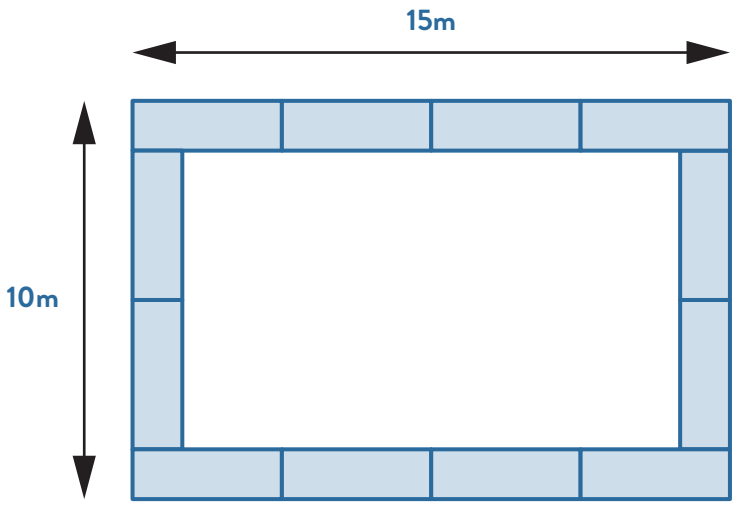
3. What is 6,789 seconds in hours, minutes and seconds?

hour(s) minute(s) second(s) / 1

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

Marks



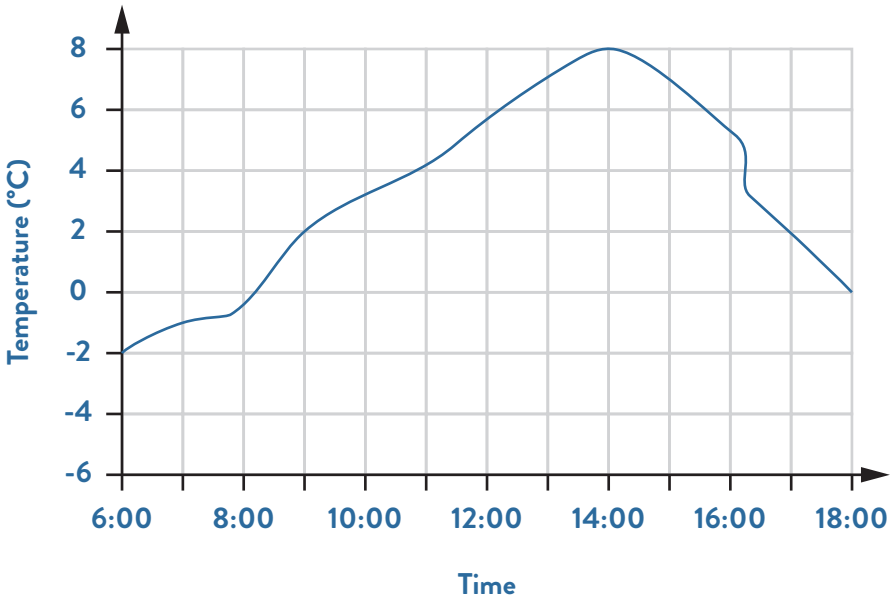
What is the inside **perimeter** of the wall?

m / 1

What is the inside **area**?

m^2 / 1

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



Marks

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

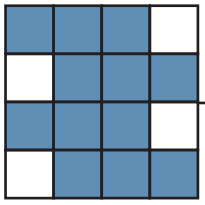
At what **time** in the **morning** did the temperature reach 3°C?

a.m. / 1

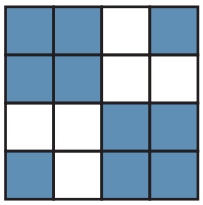
6. **Connect** each shape with its **equivalent** fraction.

Marks

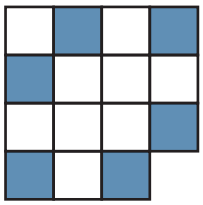
One has been done for you.



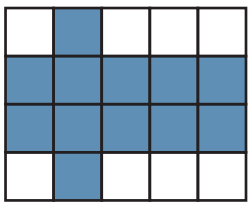
$\frac{3}{4}$



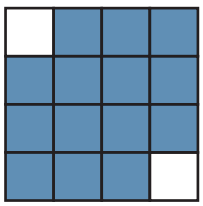
$\frac{2}{5}$



$\frac{7}{8}$



$\frac{5}{8}$



$\frac{3}{5}$

/ 2

Marks

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

			□	2
×			2	□
		6	4	4
	1	8	4	0
	2	4	8	4

/ 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.

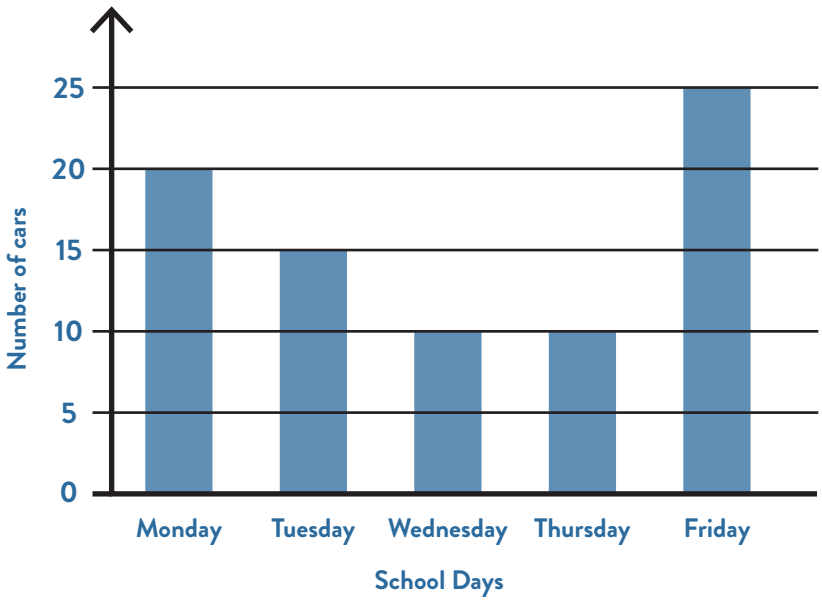
How much did **each** footballer have to pay for their meal?

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?

cars

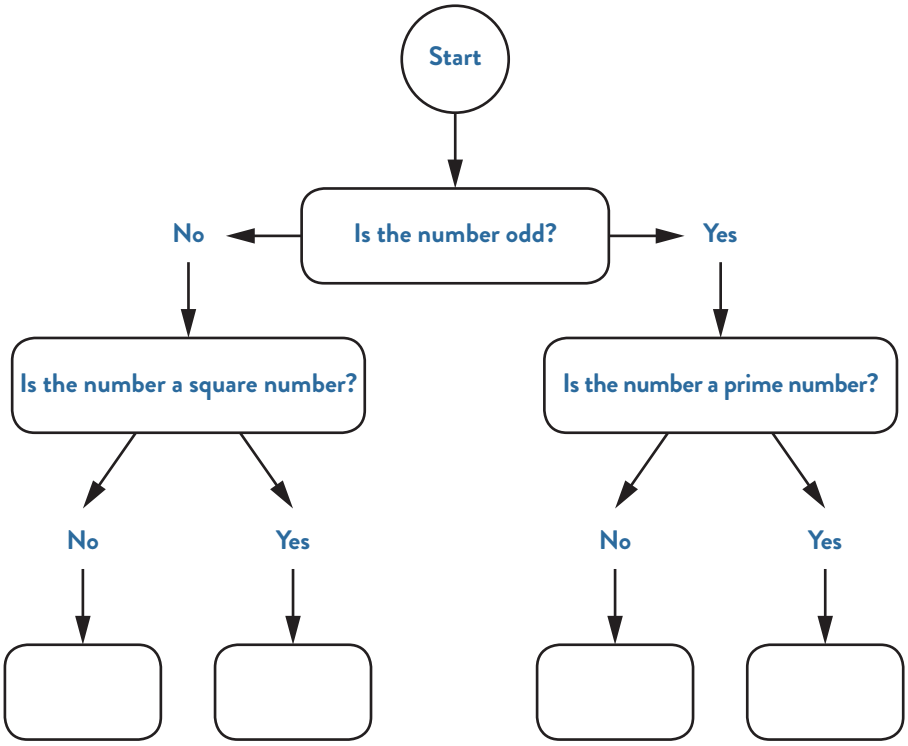
Marks

/ 1

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

Marks

2 5 9 13 16



/ 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?

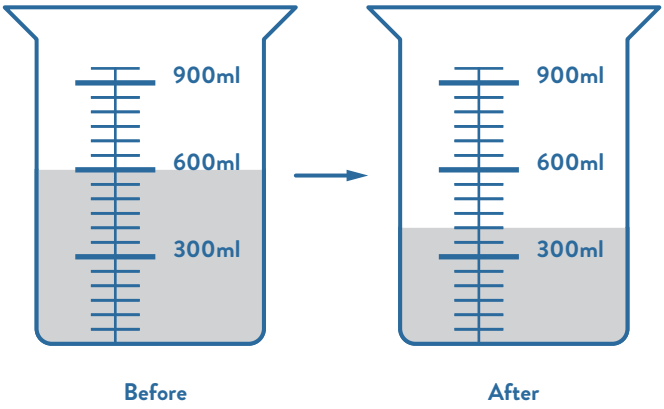
Show your working.

girls

/ 2

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

Marks

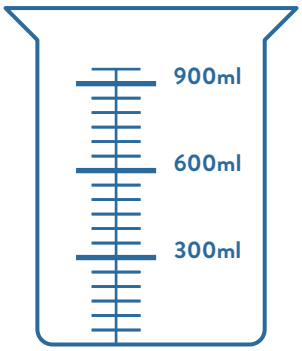


How much water has Leanne poured out?

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:

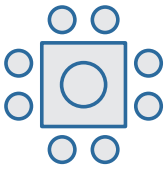
$$\frac{b}{5} = \frac{c + 2}{20}$$

Tick the correct expression.

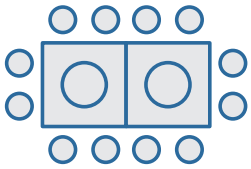
$c = 2b - 2$	☐	$c = b - 2$	☐
$c = 4b - 2$	☐	$c = 4b$	☐

/ 1

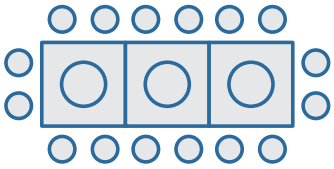
15. Look at the sequence of patterns below:



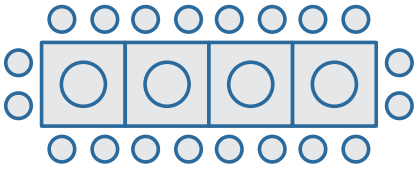
Pattern 1



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

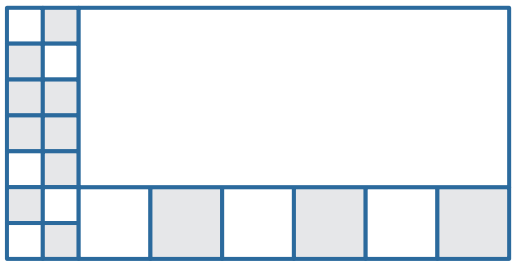
How many circles would there be in pattern number 30?

circles

/ 1

Marks

16. Study the shape below:

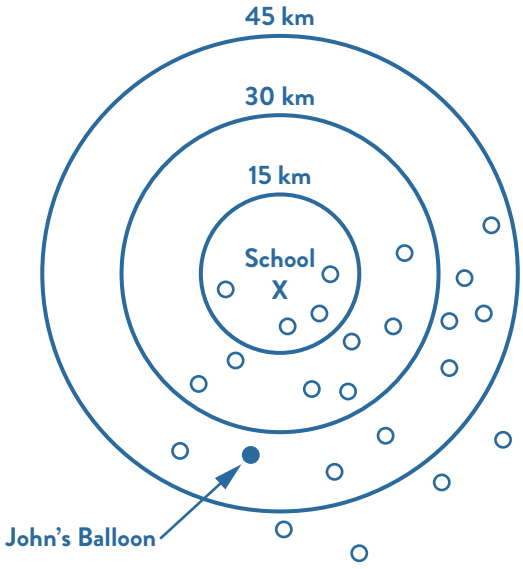


What fraction of the shape has been **shaded**?
Circle your answer below.

$\frac{3}{10}$ $\frac{3}{11}$ $\frac{3}{13}$ $\frac{3}{14}$ $\frac{3}{17}$

/ 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?

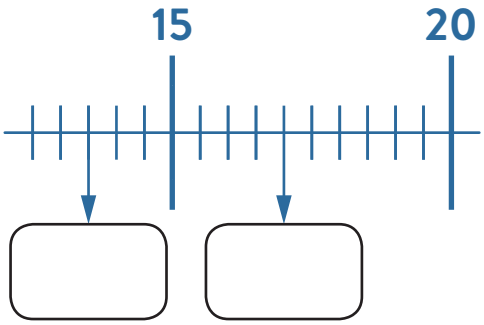
balloons / 1

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

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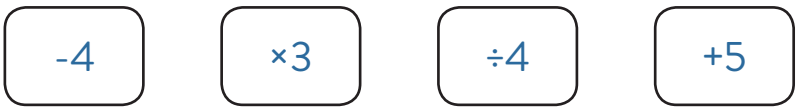
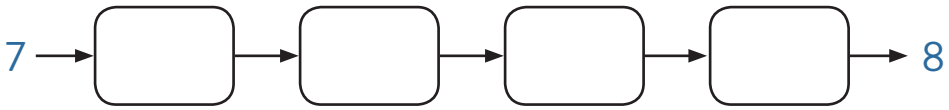
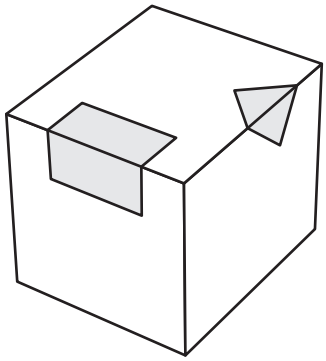
19. **Arrange** the labels below to show the correct order:



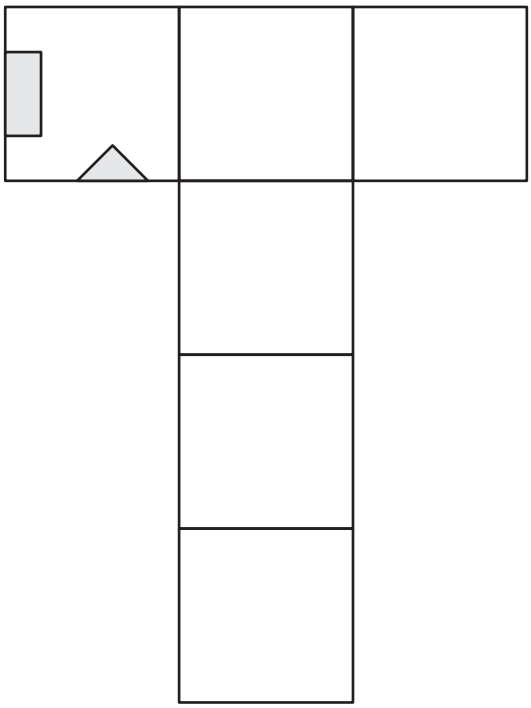


/ 1

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.



Marks

/ 2

END OF TEST