



KEY STAGE 2  
**MATHEMATICS**

**SET A**

**PAPER 2 : REASONING**



No Calculators



40 Minutes


<b>First Name</b>	
<b>Last Name</b>	


<b>Total Marks</b>	
	<b>35</b>

1. Put the correct numbers in the boxes provided.

One has been done for you.

$$170 \xrightarrow{\text{is 50 more than}} 120$$


$$\boxed{\phantom{000}} \xleftarrow{\text{is 50 more than}} 190$$


$$212 \xrightarrow{\text{is 50 more than}} \boxed{\phantom{000}}$$

Marks

/1

2. A pack of paper contains 300 sheets.

8 children take 7 sheets **each**.

**How many** sheets are left in the pack?

Show your working.

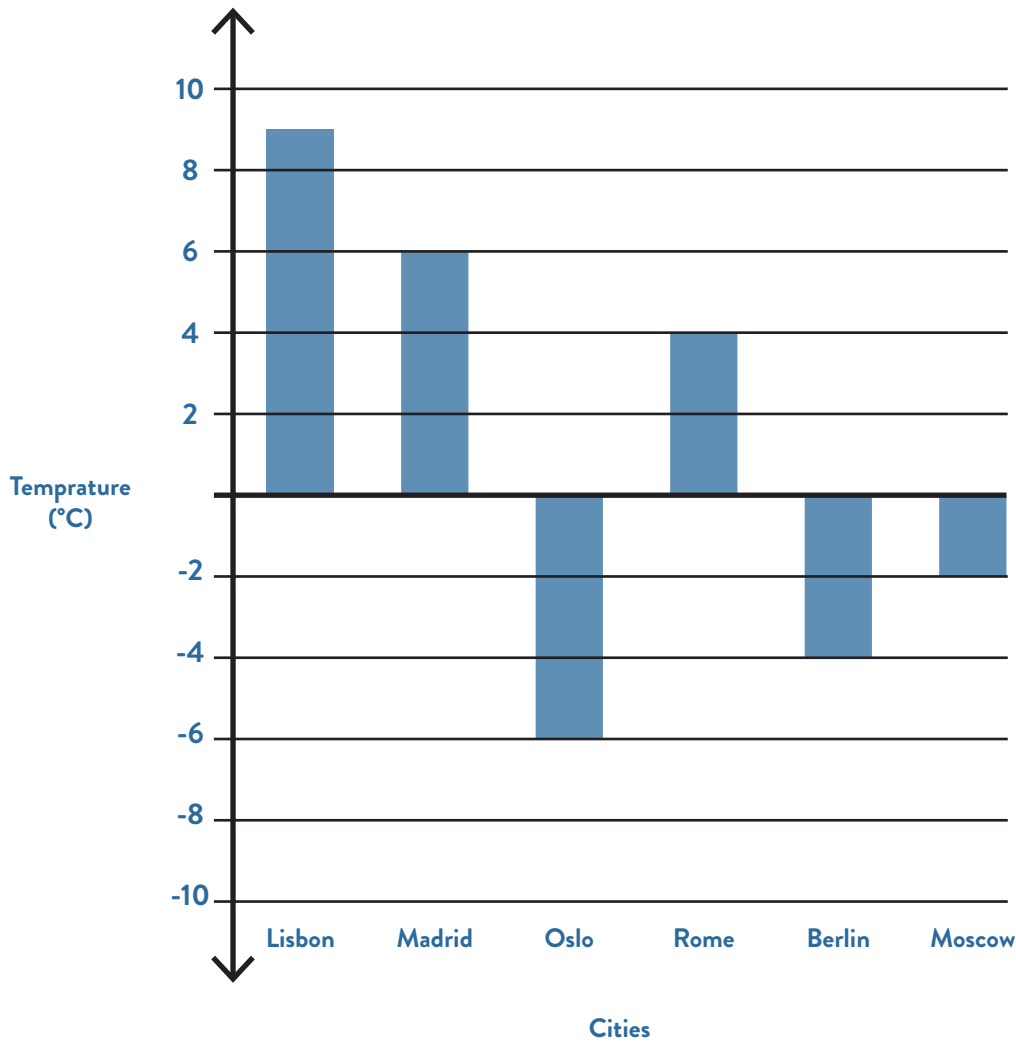


sheets

/2

3. This graph shows the temperature in six cities on one day.

Marks



Which city was 6 °C **warmer** than Moscow?



/1

What was the **difference** in temperature between Moscow and Berlin?

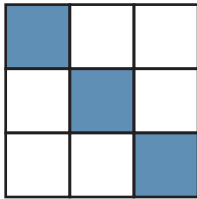
 °C

/1

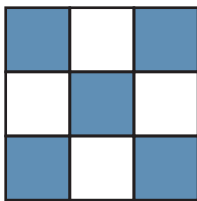
4. Connect each shape with its **equivalent** fraction.

One has been done for you.

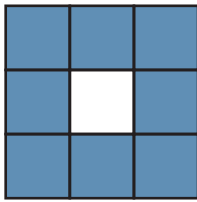
Marks



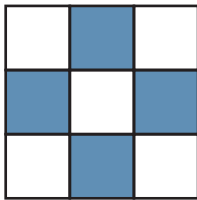
$$\frac{8}{9}$$



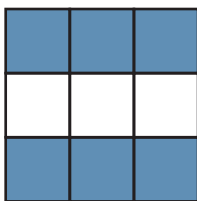
$$\frac{5}{9}$$



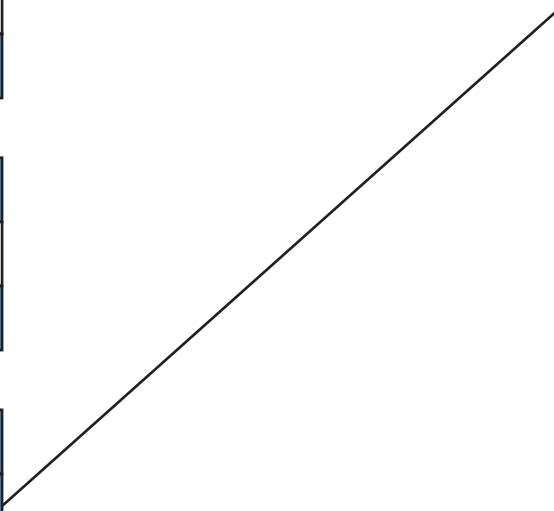
$$\frac{2}{3}$$



$$\frac{1}{3}$$



$$\frac{4}{9}$$



/ 2

5. What is 567 minutes in hours and minutes?



hours minutes

Marks

/1

6. John arrives for a meeting at eight minutes past ten.  
He is 13 minutes **late**.

**What time** was the meeting due to **start**?



/1

7. In the circles below, write a value that **belongs** to each set.

One has been done for you.



numbers from 7 to 49 a factor of 24



numbers from 51 to 99 a multiple of 25

numbers from 5 to 10 a factor of 12



numbers from 101 to 200 a multiple of 50

/2

Marks

8. A gardener sells his apples in bags.  
He uses this formula to work out how much to charge:

$$\text{Cost} = \text{number of apples} \times 30\text{p} + 5\text{p for the bag}$$

**How much** will a bag of 12 apples cost?



£

/1

Helen buys a bag of the apples for £4.55

Use the formula to work out **how many** apples Helen bought.

Show your working.



apples

/2

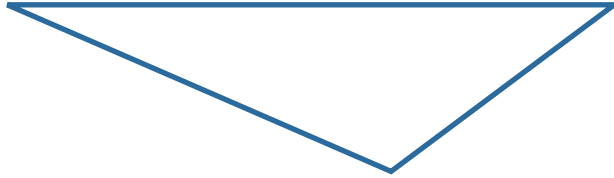
9. Write the missing values in the sum below to make the long multiplication correct.



$$\begin{array}{r}
 \phantom{\times} \phantom{00} 6 \square \\
 \times \phantom{00} \square 8 \\
 \hline
 \phantom{\times} \phantom{00} 536 \\
 \hline
 \phantom{\times} 2680 \\
 \hline
 \phantom{\times} 3216 \\
 \hline
 \hline
 \end{array}$$

/2

10. A triangle is drawn below:



Measure the **longest** side and give your answer in centimetres.

 cm

Measure the **largest** angle.

 °

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11. Write whole numbers in the boxes so that the equation is correct.  
The numbers do not have to be the same.



$$5 \times \square = \square - 5$$

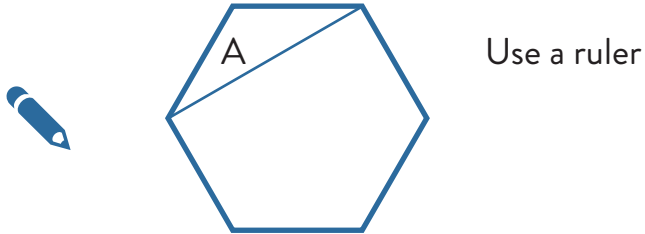
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12. What number is exactly **halfway** between 1.4 and 1.7?



13. Line A joins two vertices of a regular hexagon.

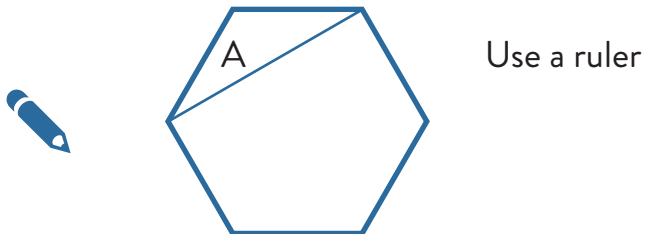
Draw a line that connects two vertices and is **parallel** with line A.



Marks

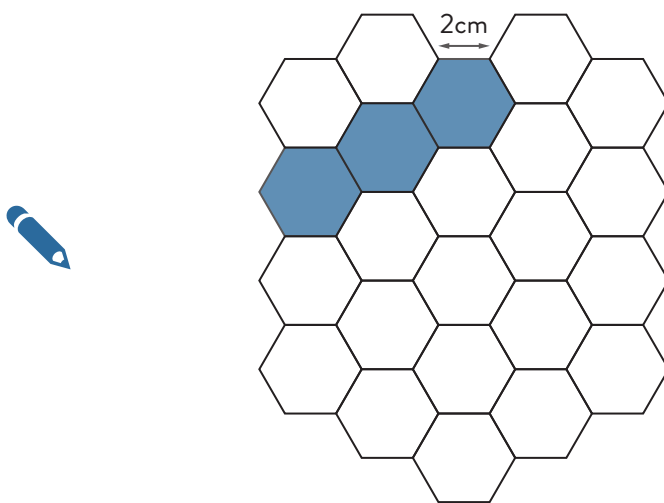
/1

Draw a line that connects two vertices and is **perpendicular** to line A.



/1

14. Below is a grid of regular hexagons. The shaded section has an area of 3 hexagons and a perimeter of 28cm.

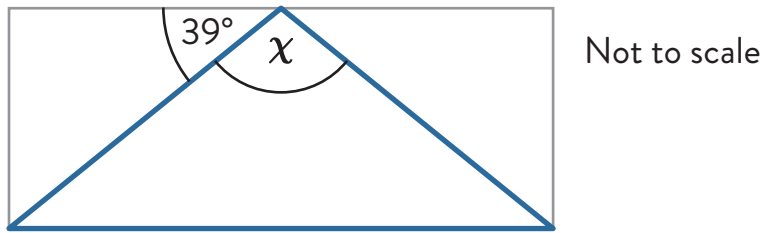


Shade another section of the grid which has an **area** of 4 hexagons and a **perimeter** of 28cm.

/1



15. A shaded **isosceles** triangle is shown below inside a rectangle.



**Calculate** the size of angle  $X$ .

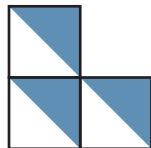
Show your working.



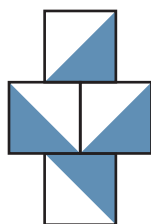
$X =$    $^{\circ}$

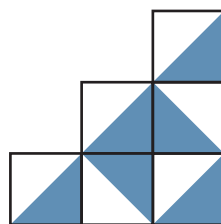
/ 2

16. Tick all the patterns below that have at least **one** line of symmetry.










/ 1

17. Raymond recorded how long he spent on his computer each day for seven days.

Day	Time (in minutes)
Monday	120
Tuesday	35
Wednesday	10
Thursday	22
Friday	50
Saturday	190
Sunday	210

What is the **mean** time per day that Raymond spent on his computer during that week?

Show your working.



minutes

/ 2

18. 5 grams of silver costs £28.90.

What is the cost of **one kilogram** of silver?

Show your working.

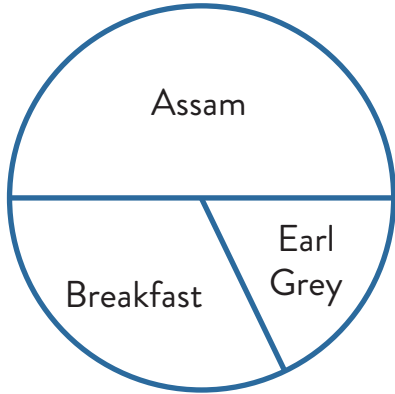


£

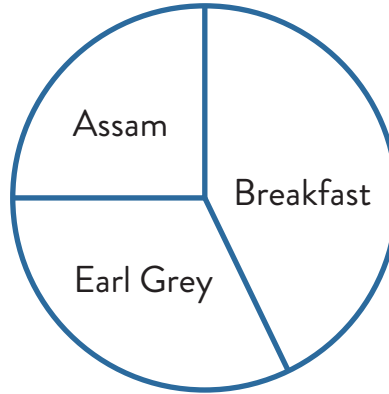
/ 2

19. 50 men and 200 women were asked which variety of tea they preferred.

The pie charts below show the results.



Men



Women

Elsie said that the pie charts showed that **more** women preferred Assam tea than men.

Is Elsie correct? **Explain** your answer.

Marks

/1

20. Rob read  $\frac{3}{7}$  of his new detective book on Friday night. He read the remaining 100 pages the next day to **finish** the book. **How many** pages are there in Rob's book?

Show your working.



pages

/ 2

21. Round 87,436:



to the nearest 50



to the nearest 100



to the nearest 1000



to the nearest 10,000

/ 2

END OF TEST