



KEY STAGE 2
MATHEMATICS

SET C

PAPER 3 : REASONING



No Calculators



40 Minutes

First Name	
Last Name	

Total Marks	
	35

Marks

1. Helen makes 250g of a snack mixture.
14% of the weight is sultanas, 26% is chocolate chips and the rest is peanuts.

How many grams of peanuts does Helen use?

 g

/1

Helen makes 500g of the same snack mixture a week later.

What percentage of the weight will be sultanas?

 %

/1

-
2. m stands for any even number greater than 10 but less than 20.

n stands for any odd number greater than 2 but less than 10.

What is the smallest number that $m \times n$ could be?



/1

What is the largest number that $m \times n$ could be?



/1



No Calculators.

3. $32,560 \times 80 = 2,604,800$.

What is $3,256 \times 8,000$?



Marks

/1

What is 325.6×0.08 ?



/1

4. Mr Khan buys stone slabs to go round his flowerbed.

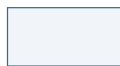
Stone Slabs

50cm by 50cm

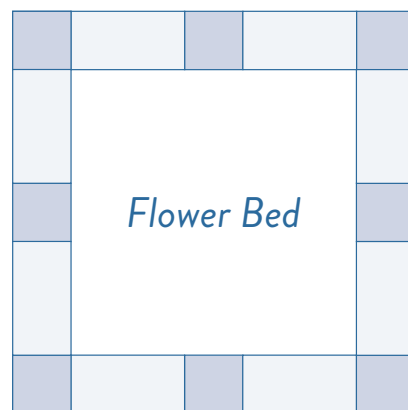


£1.65 each

50cm by 100cm



£3.35 each



Flower Bed

He buys 8 of each type of slab.

What is the **total cost** of the slabs he buys?

Show your working.



£

/2

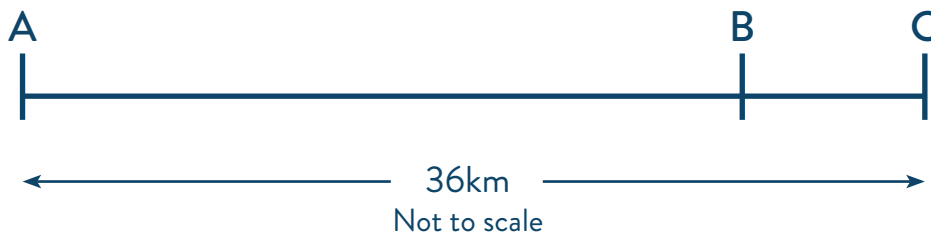
How much would Mr Khan save by using only square slabs?



£

/1

5. Below is a representation of the distances between three towns called A, B and C:



The distance from A to B is three times longer than from B to C.

Calculate the distance from A to B.

Show your working.

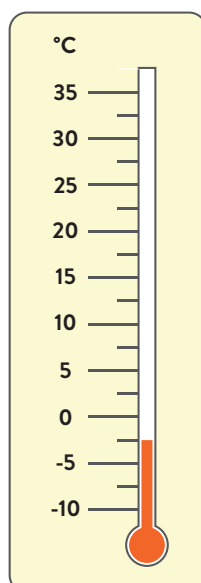


km

/ 2

6. The thermometer below shows the temperature outside at 6:00 a.m. By midday, the temperature has **risen** by 15°C .

Draw an arrow to indicate the temperature that the thermometer will show.



/ 1



No Calculators.

7. Put these weights in order of size, smallest to largest.

450g

0.3kg

500g

$\frac{1}{3}$ kg

0.4g



smallest

largest

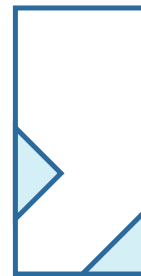
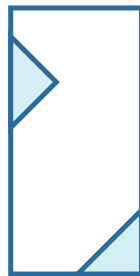
Marks

/1

8. The tile below is **rotated**.



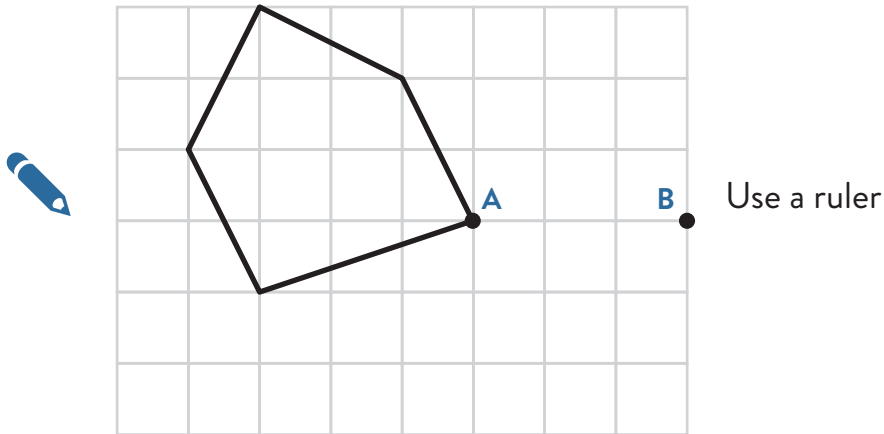
Tick the diagram that correctly shows the tile after its rotation.



/1

9. The pentagon on the grid below is **translated** so that point A moves to point B.

Draw the pentagon in its new position.



Marks

/1

10. If $A=4$, $B=3$ and $C=2$, **calculate**:

$$A \times (B + C^2) =$$



/1

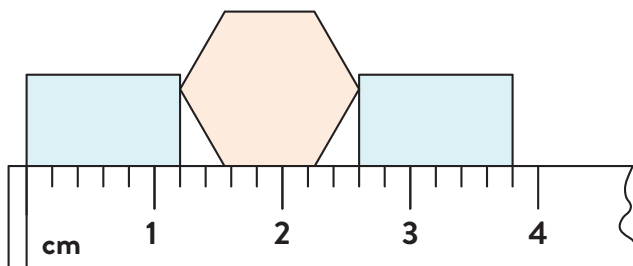
$$A \times B \times C^2 =$$



/1

11. Jim has three plastic shapes: two rectangles and one hexagon.

He uses a ruler to measure the width of the three shapes as shown below:



What is the **total** width of **all three** items?


 cm

/1

What is the width of the **hexagon**?


 cm

/1



12. Write the missing digits in the boxes to make this addition sum correct.



$$\begin{array}{r} 2 \square 6 3 \\ + \square 4 \square \square \\ \hline 3 9 4 2 \end{array}$$

Marks

/ 2

13. Two decimal numbers are **multiplied** together. The result is 0.3.

One of the decimal numbers is 0.5.

What is the other decimal number?



/ 1

14. Connect each fraction with its **equivalent** decimal and percentage.

One has been done for you.



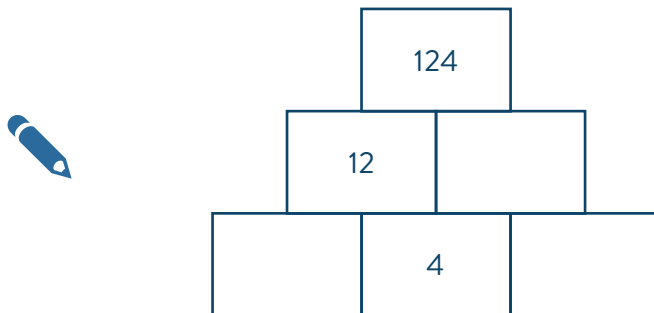
$\frac{3}{5}$	0.3	35%
$\frac{3}{10}$	0.35	30%
$\frac{7}{10}$	0.7	60%
$\frac{7}{20}$	0.6	70%

/ 2

15. A number pyramid is shown below.

The number in each box is the **sum** of the two numbers below it.

Complete the number pyramid.



Marks

/1

16. Angela is drawing a right-angled triangle on the **square** grid below.

Complete the right angled triangle.

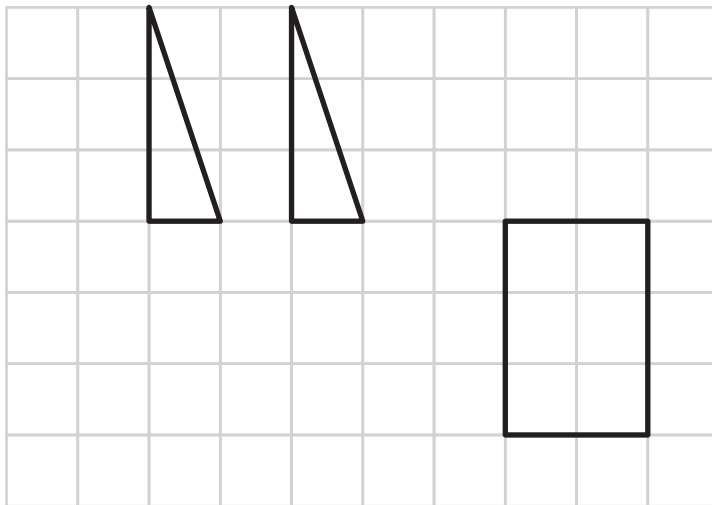


Use a ruler

/1



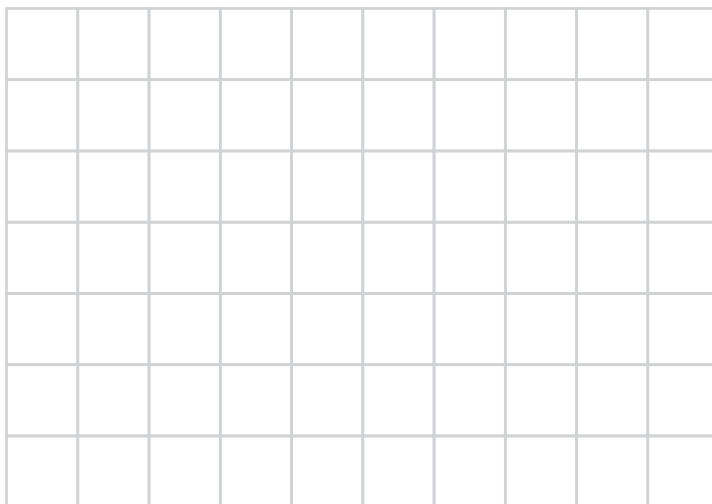
17. Sean has two triangles and one rectangle as shown on the square grid below:



Sean can use **all** of the shapes to make a **trapezium**.
Using the same shapes again, he can also make a **parallelogram**.

Draw both a parallelogram and a trapezium on the grid below.

Ensure you **label** each shape.
You may need to **rotate**, **translate** or **reflect** the shapes.



Use a ruler

Marks

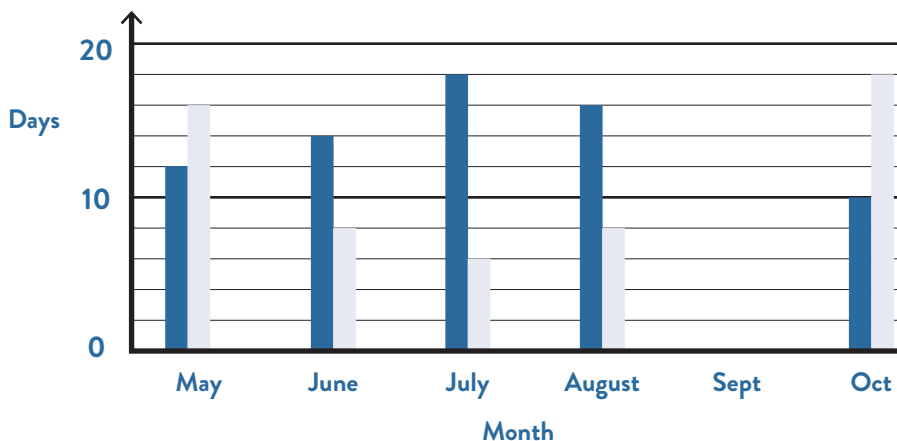
/ 2

18. The table and chart below show the number of sunny days and the number of wet days over six months of the year. Both are **incomplete**.

Marks

Complete the table **and** the chart.

Month	Sunny Days	Wet Days
May	12	16
June		
July	18	6
August		
September	14	10
October	10	18



How many **more** sunny days than wet days were there in July?

/ 2



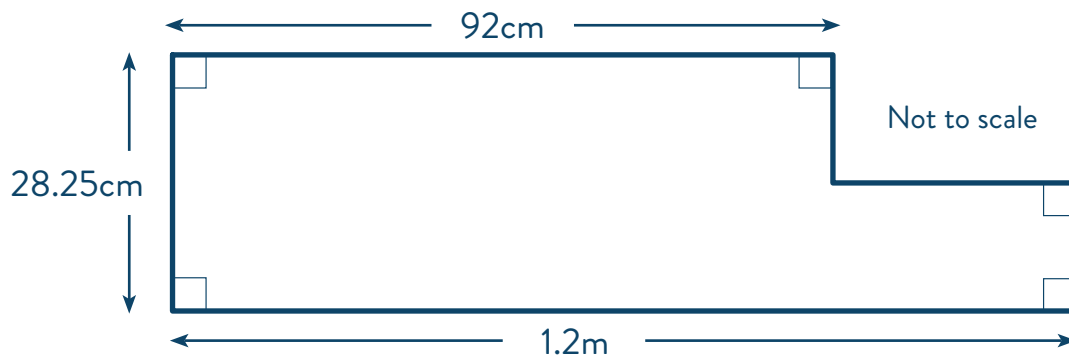
/ 1



No Calculators.

19. Calculate the **perimeter** of the shape below:

Marks



Show your working.



m

/ 2

20. This table has information about four 3D shapes.

Complete the table. One shape has been done for you.



	Number of flat surfaces	Number of curved surfaces
Sphere		
Cone		
Cylinder		
Cube	6	0

/ 2

END OF TEST

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