KEY STAGE 2

MATHEMATICS

SET C

PAPER 3 : REASONING

No Calculators 40 Minutes

First Name	
Last Name	

Total Marks	
	35

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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

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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*** × ***n*** could be?

/ 1

What is the **largest** number that ***m*** × ***n*** could be?

/ 1

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Marks

3. 32,560 × 80 = 2,604,800.

What is 3,256 × 8,000?

/ 1

What is 325.6 × 0.08?

/ 1

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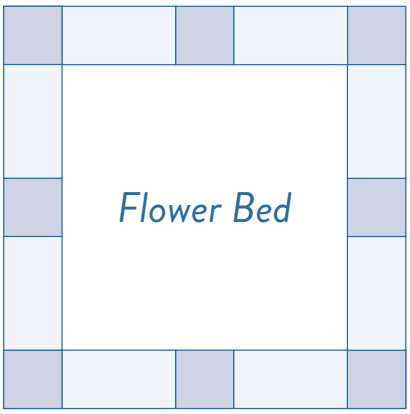
4. Mr Khan buys stone slabs to go round his flowerbed.

Stone Slabs

50cm by 50cm	50cm by 100cm
£1.65 each	£3.35 each



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

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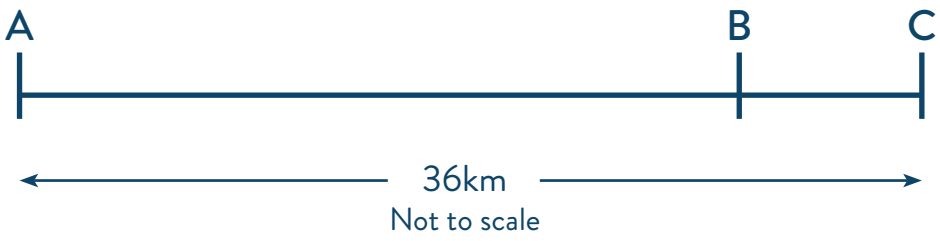
Marks

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.

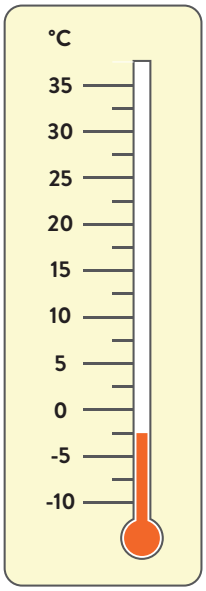
Show your working.

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

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

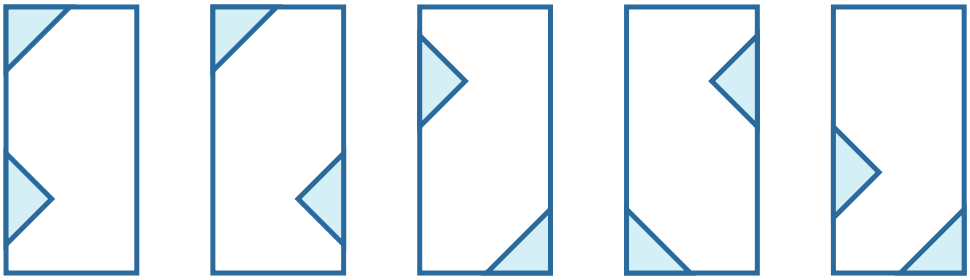
Marks

450g	0.3kg	500g	$\frac{1}{3}$ kg	0.4g
smallest				largest

/ 1

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

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



/ 1

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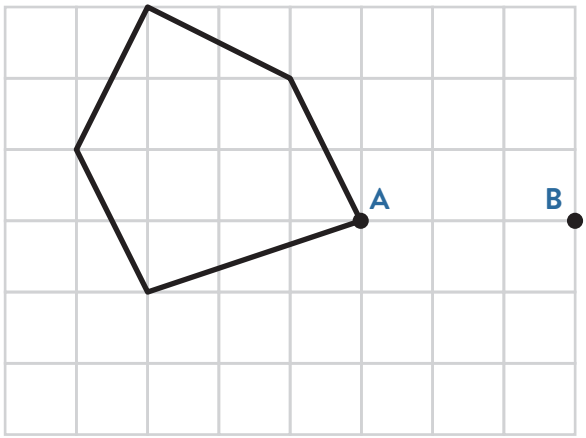
Marks

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

Draw the pentagon in its new position.



Use a ruler

/ 1

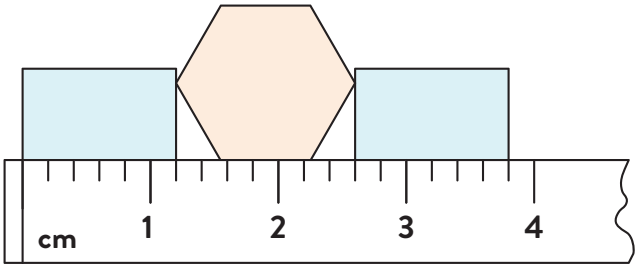
10. If A=4, B=3 and C=2, **calculate**:

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

Marks

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

/ 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

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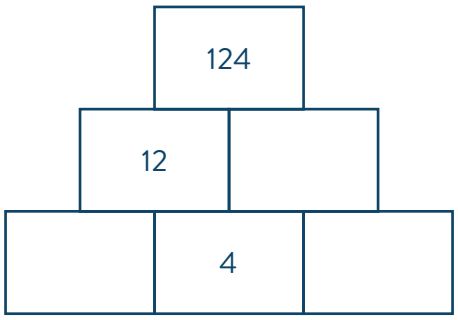
Marks

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.



/ 1

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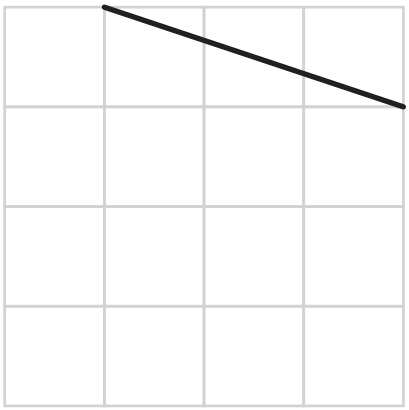
16. Angela is drawing a right-angled triangle on the **square** grid below.

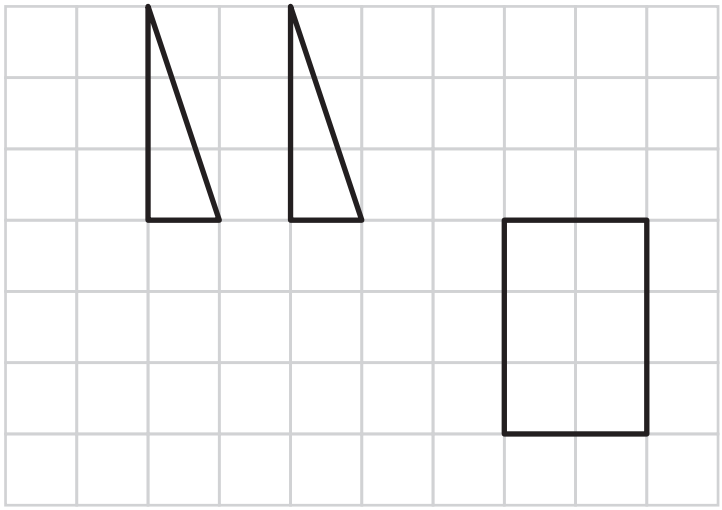
Complete the right angled triangle.



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

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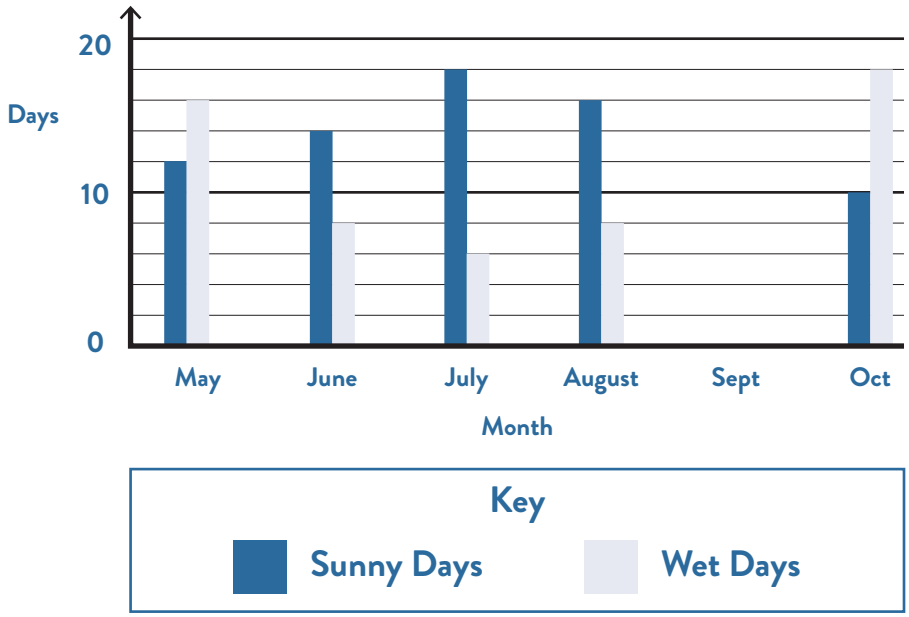
18. The table and chart below show the number of sunny days and the number of wet days over six months of the year.
Both are **incomplete**.

Complete the table **and** the chart.

Marks

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



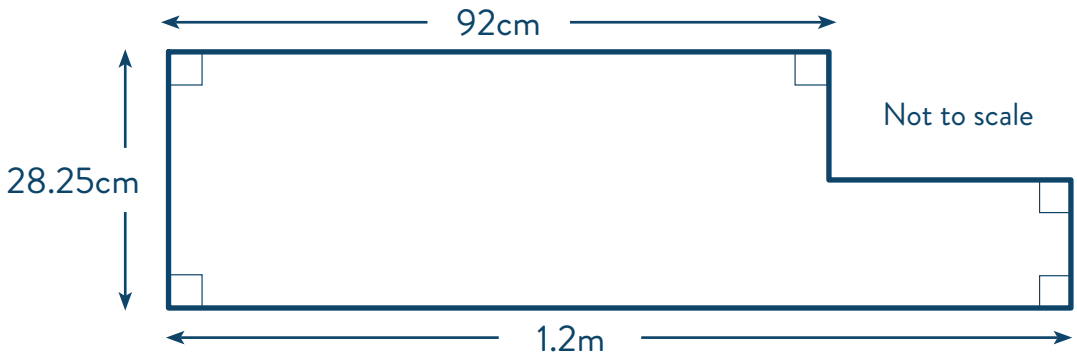
/ 2

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

/ 1

Marks

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



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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