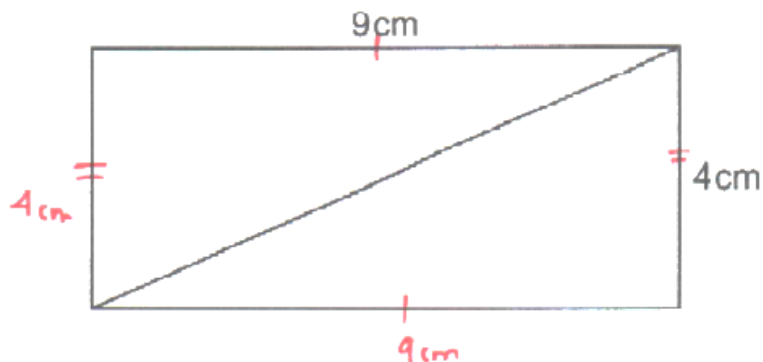


Measurement – 2024 Checkpoint Primary Math**1. 2024/Paper 1_stage 6/No.4**

Here is a rectangle made with two triangles.



Not drawn to scale

Work out the area of one of the triangles.

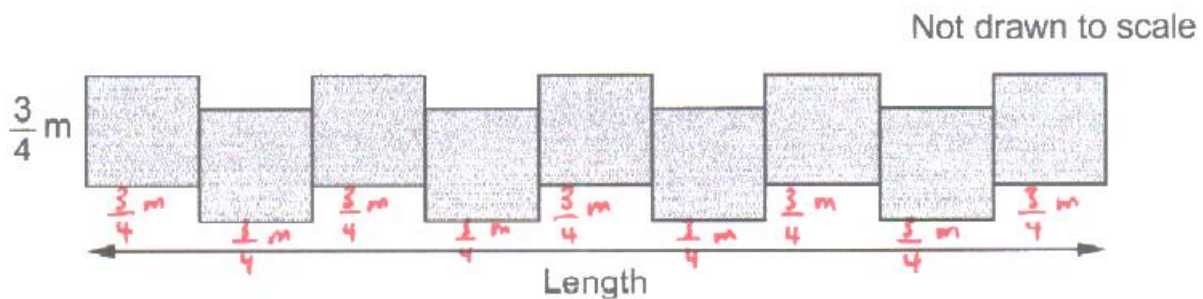
$$\begin{aligned}
 \text{Area of a triangle} &= \frac{1}{2} \times b \times h \\
 &= \frac{1}{2} \times 9 \times 4 \\
 &= 9 \times 2 \\
 &= 18 \text{ cm}^2
 \end{aligned}$$

..... 18 cm² [1]

2. 2024/Paper 1_stage 6/No.9

Lily joins 9 square tiles to make a path.

The length of each tile is $\frac{3}{4}$ metre.



Calculate the length of the path.

All lengths of a square are equal.

$$\text{Length of the path} = \left(\frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} \right)$$

or

$$\dots\dots\dots \frac{27}{4} \dots\dots\dots \text{metres [1]}$$

$$= \frac{3}{4} \times 9$$

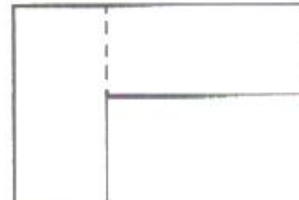
$$= \frac{27}{4} \text{ m}$$

3. 2024/Paper 1_stage 6/No.11

Jamila has some identical rectangles.



She joins two rectangles to make these new shapes.



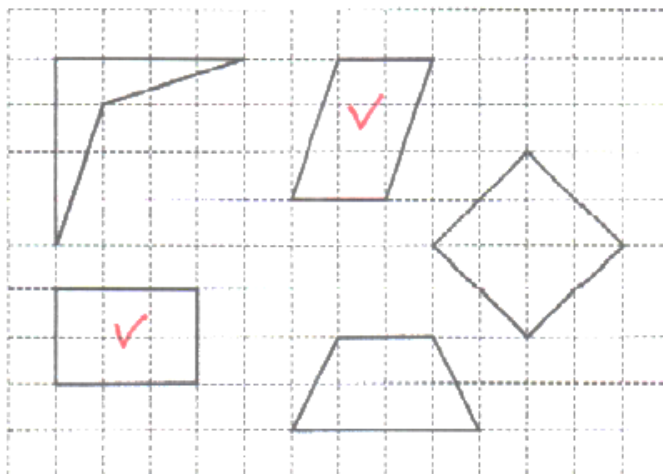
Tick (✓) to show if each statement about Jamila's new shapes is always true, sometimes true or never true.

Statement	Always true	Sometimes true	Never true
The perimeter of each new shape is double the perimeter of one rectangle.			✓
The area of each new shape is double the area of one rectangle.	✓		

[1]

4. 2024/Paper 1_stage 6/No.18

Here are some shapes drawn on a grid of squares.

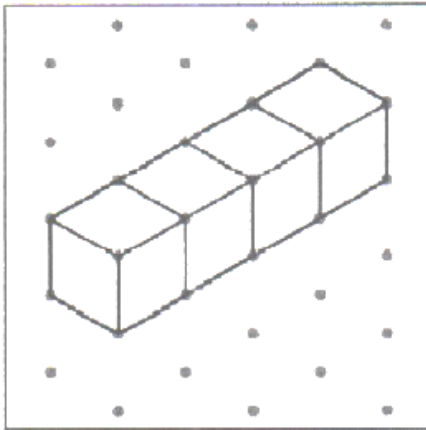


Tick (✓) **two** shapes with the same order of rotational symmetry.

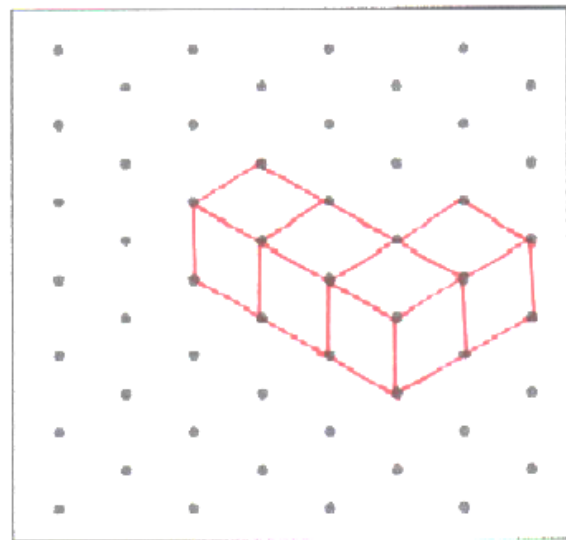
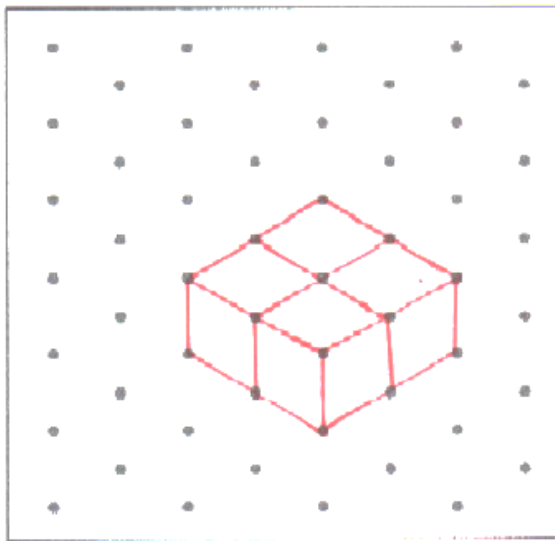
[1]

5. 2024/Paper 1_stage 6/No.27

Mia uses four cubes to make a model.
Here is a sketch of her model.



Sketch two **different** ways to join the four cubes to make a model.
Draw your sketches on the isometric grids.



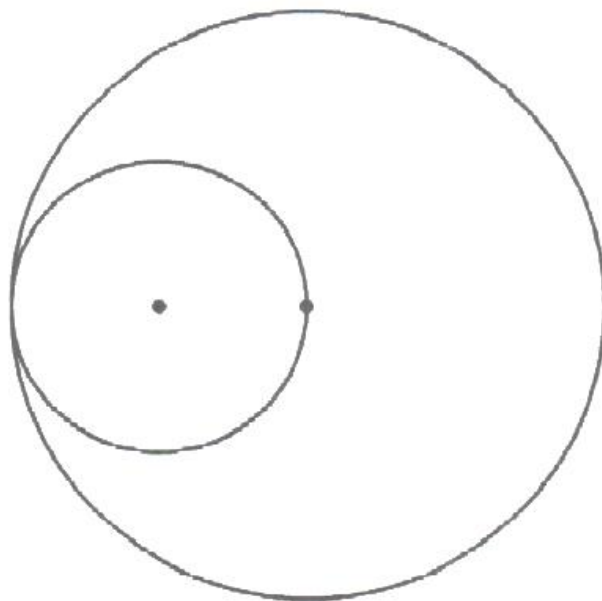
[2]

6. 2024/Paper 1_stage 6/No.30

Here are two circles.

The small circle touches the large circle.

The centre of each circle is marked with a dot.



Not drawn to scale

The length of the diameter of the large circle is 20 centimetres.

Write down the length of the radius of the small circle.

Radius of the large circle = Diameter of the small circle
 Radius of the large circle = $\frac{20}{2} = 10\text{cm}$ (Diameter of the small circle)

Radius of the small circle = $\frac{10}{2} = 5\text{cm}$ 5 centimetres [1]

7. 2024/Paper 1_stage 6/No.31

Yuri is making a model of his garden.

The fence in his garden is 16 metres long.

The fence in his model is 80 centimetres long.

The height of the tallest tree in his garden is 6 metres.

Write the height of the tallest tree in his model.

$$\frac{16}{80} = \frac{1}{5}$$

$$1 : 5$$

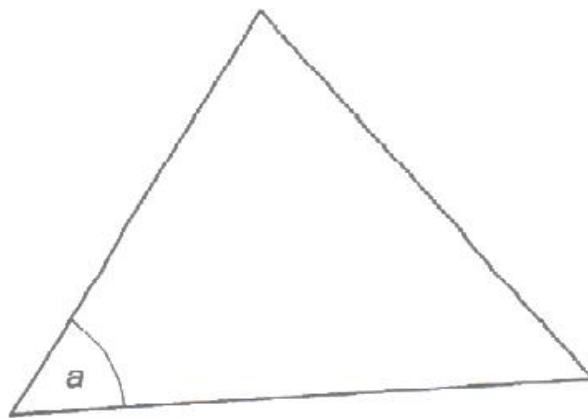
1m represents 5cm

$$\begin{aligned} \text{Height of the model} &= 5 \times 6 \\ &= 30 \text{ cm} \end{aligned}$$

..... 30 centimetres [1]

8. 2024/Paper 2_stage 6/No.3

Here is a triangle with an angle marked a.



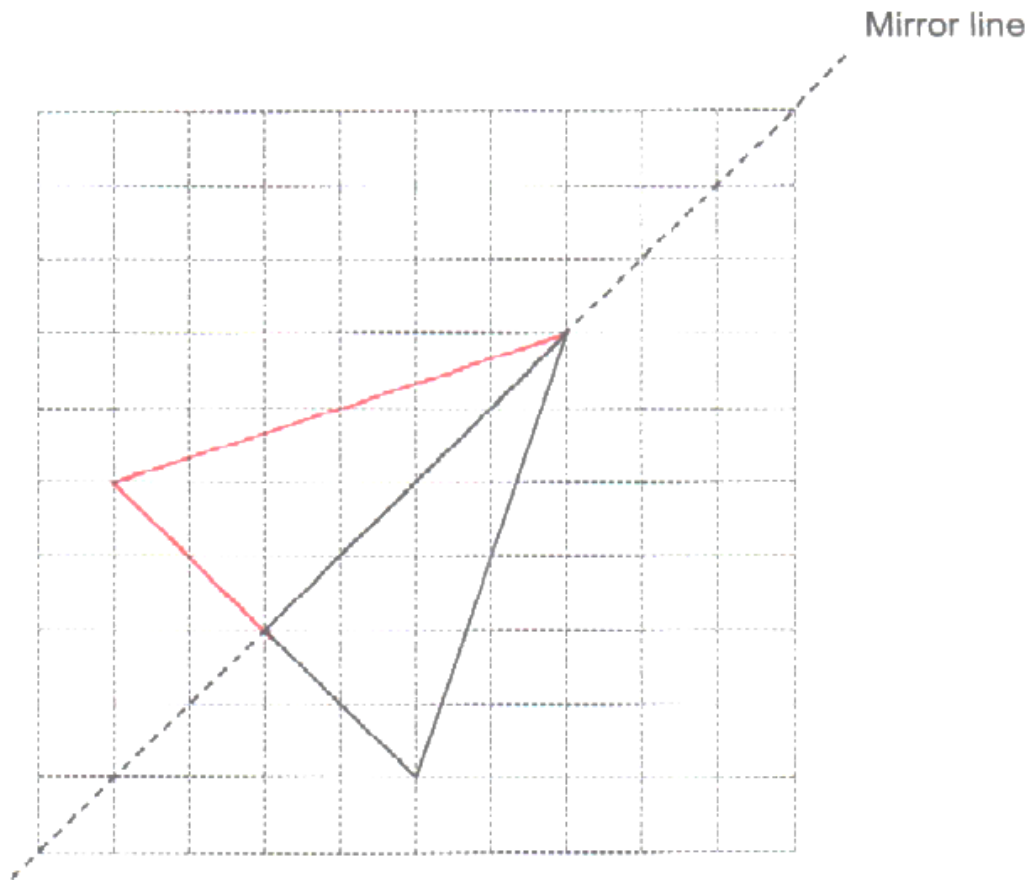
Measure the size of angle a.

Use a protractor.

..... 55 degrees [1]

9. 2024/Paper 2_stage 6/No.9

Here is a triangle drawn on a grid of squares.



Draw the reflection of the triangle in the mirror line.

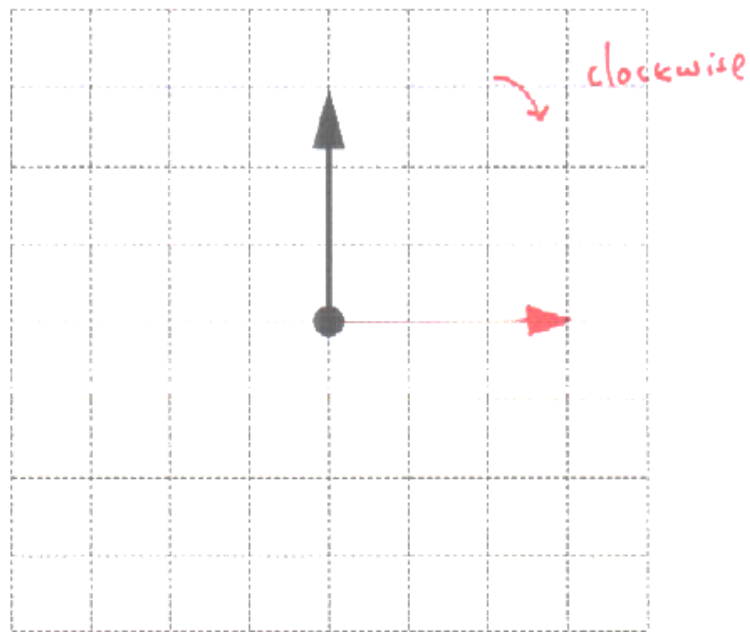
Distance from the object to the mirror line = Distance from the image to the mirror line

[1]

10. 2024/Paper 2_stage 6/No.12

An arrow is drawn on a grid of squares.

The arrow is rotated 90 degrees clockwise around the point marked with a dot.

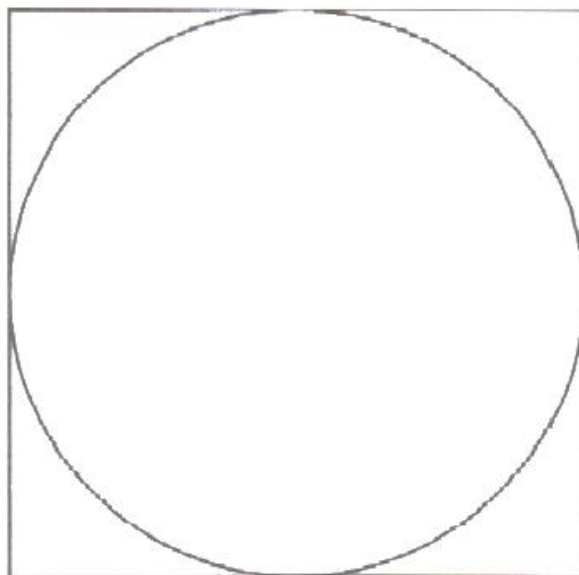


Draw the new position of the arrow after the rotation.

[1]

11. 2024/Paper 2_stage 6/No.13

Here is a circle drawn inside a square.



Here are some words.

centre

radius

diameter

Use **two** of the words to complete these sentences.

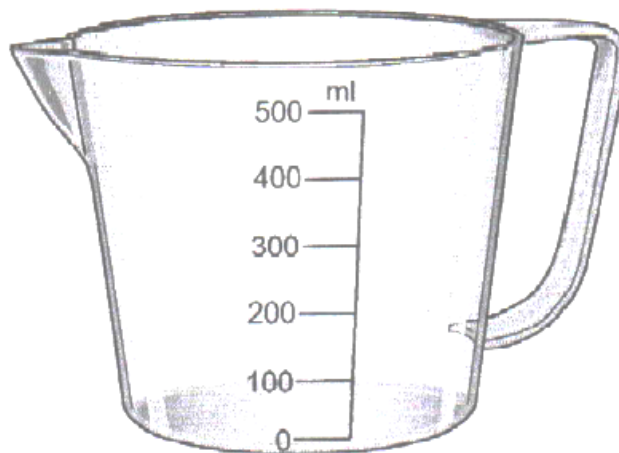
The diameter of the circle is the same length as the side of the square.

The centre of the square and the circle are the same.

[1]

12. 2024/Paper 2_stage 6/No.26

Here is a jug.



Safia wants to pour 1000 ml of water into the jug.

Explain why this is **not** possible.

Use the words **volume** and **capacity** in your answer.

Volume of water = 1000ml
Capacity of the jug = 500ml

The volume of the water is greater than the capacity of the jug. [1]

13. 2024/Paper 2_stage 6/No.30

Here is a right-angled triangle.



Not drawn to scale

The triangle is cut into two smaller right-angled triangles.



Not drawn to scale

Calculate the size of angle a .
Show your working.

$$90^\circ - 15^\circ = 75^\circ$$

Angles in a triangle add up to 180°

$$75^\circ + 90^\circ + a^\circ = 180^\circ$$

$$165^\circ + a^\circ = 180^\circ$$

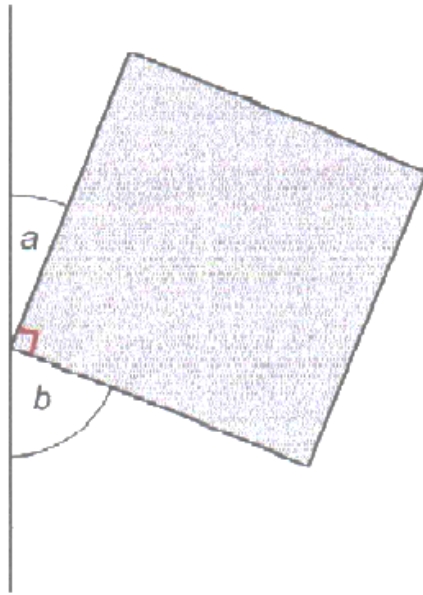
$$a^\circ = 180^\circ - 165^\circ$$

$$a^\circ = 15^\circ$$

..... 15° [2]

14. 2024/Paper 2_stage 6/No.32

A square is touching a straight line.

Write a pair of possible values for a and b .

A square has four right angles
equal to 90° .

Angles in a straight line add
up to 180°

$$a + b + 90^\circ = 180^\circ$$

$$a + b = 180^\circ - 90^\circ$$

$$a + b = 90^\circ, \text{ where } a < b$$

Possible values, $a = 30^\circ$, $b = 60^\circ$

$$\text{or } a = 40^\circ, b = 50^\circ$$

$$a = 30^\circ$$

$$b = 60^\circ$$

[1]