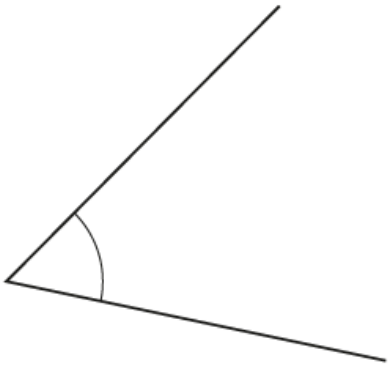
Basic Geometry – 2021/20 GCSE Mathematics Foundation

1. Nov/2021/Paper_J560/01/No.1

(a) Measure the length of this line.

(a) .....cm **[1]**

(b) The diagram shows an angle.



(i) Measure the angle.

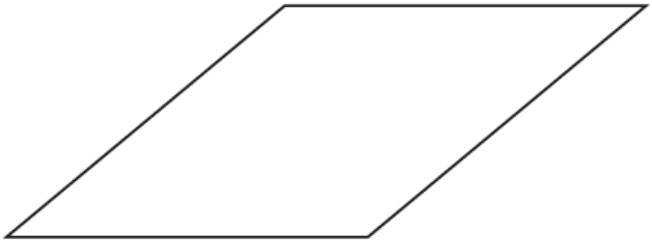
(b)(i) .....° **[1]**

(ii) Write down the mathematical name of this type of angle.

(ii) ..... **[1]**

2. Nov/2021/Paper_J560/01/No.3

Here is a rhombus.



(a) On the diagram, draw **all** of the lines of symmetry. **[2]**

(b) Write down the order of rotation symmetry of the rhombus.

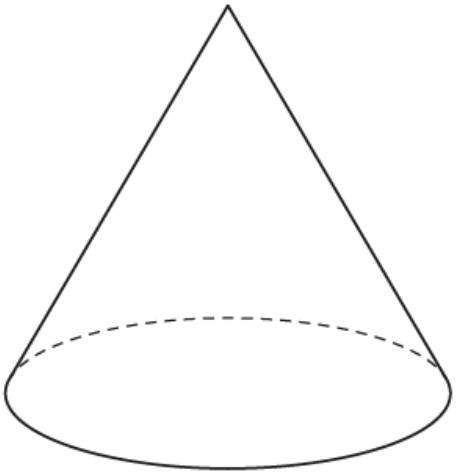
(b) ..... **[1]**

3. Nov/2021/Paper_J560/02/No.1

(a) How many sides does a pentagon have?

(a) ..... **[1]**

(b) Write down the mathematical name of this solid.



(b) ..... **[1]**

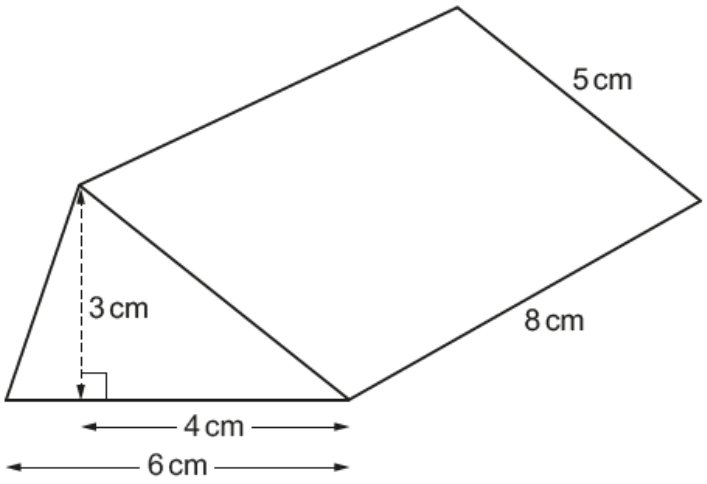
(c) The angles in a triangle are 40°, 50° and 90°.

Write down the mathematical name for this type of triangle.

(c) ..... **[1]**

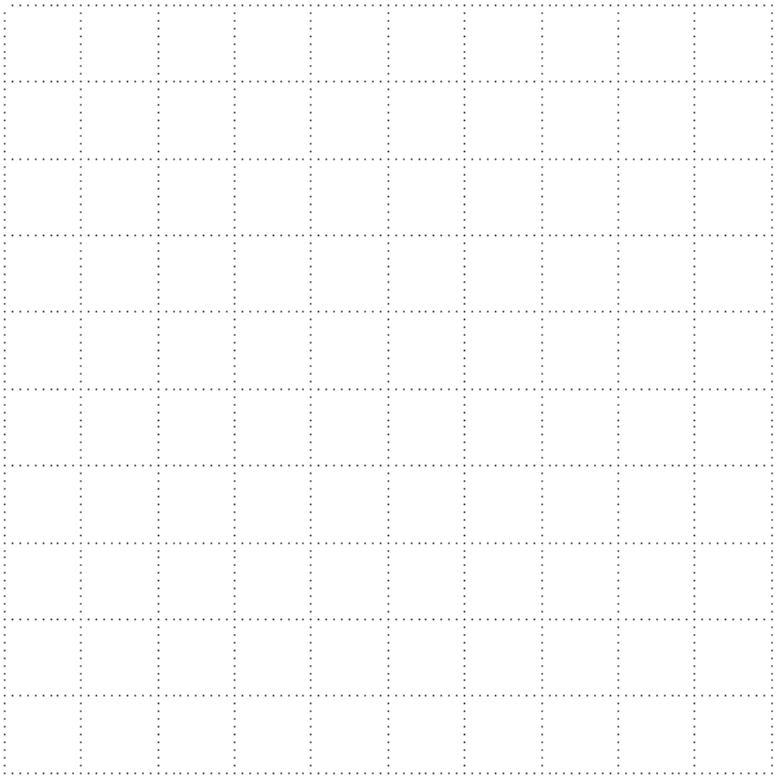
4. Nov/2021/Paper_J560/02/No.17

The diagram shows a prism.



Not to scale

(a) Draw an accurate plan view of the prism on the one-centimetre square grid below.



[3]

(b) Show that the volume of the prism is $72\,cm^3$. **[2]**

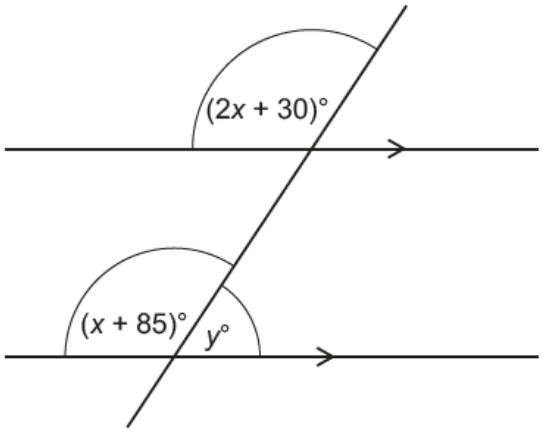
(c) A cuboid with a square base also has a volume of $72\,cm^3$.
The height of the cuboid is 2 cm.

Work out the length of one side of the square base.

(c) ..... cm **[3]**

5. Nov/2021/Paper_J560/02/No.23

The diagram shows a straight line crossing two parallel lines.



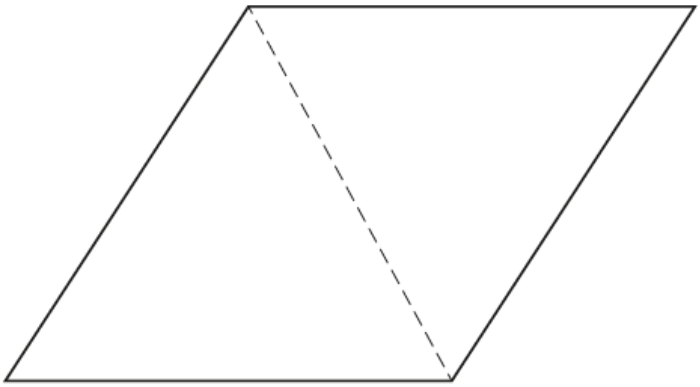
Not to scale

Find the value of y.
You must show your working.

$y =$ ..... **[6]**

6. Nov/2021/Paper_J560/03/No.6

The diagram shows how a rhombus is made by joining two **equilateral** triangles.



Not to scale

(a) Find the size of each interior angle of the rhombus.

(a) .....°, ...°, ...°, ...° **[1]**

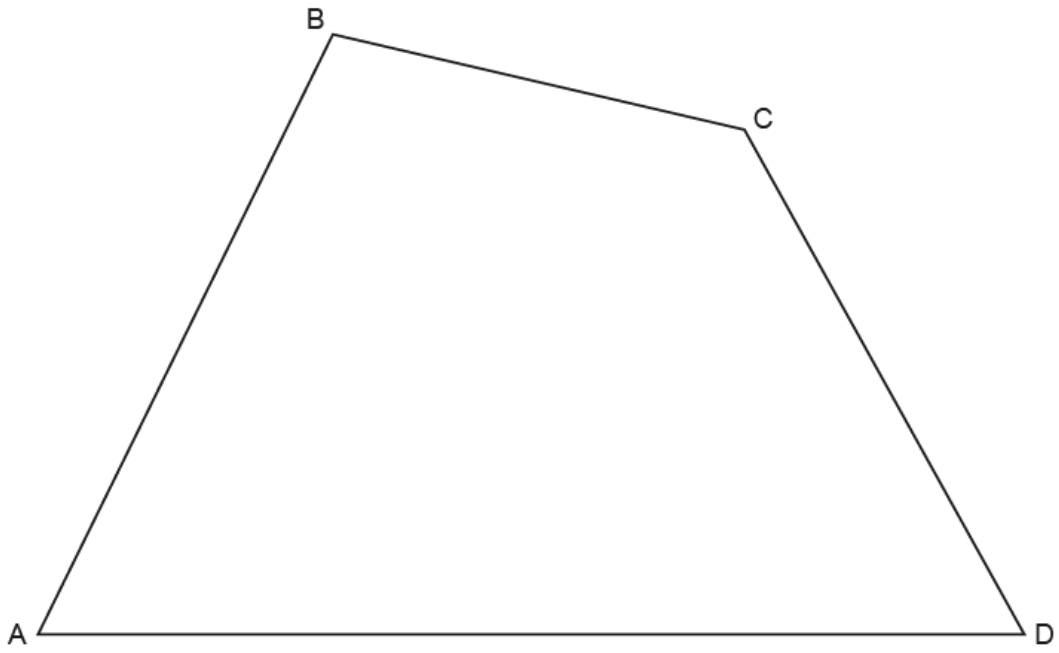
(b) The same rhombus can be made by joining two copies of an **isosceles** triangle.

Find the size of each angle of the isosceles triangle.

(b) .....°, ...°, ...° **[2]**

7. Nov/2020/Paper_J560/01/No.23

ABCD is a quadrilateral.



(a) Construct the bisector of angle ABC.
Show all your construction lines. **[2]**

(b) Construct the perpendicular bisector of BC.
Show all your construction lines. **[2]**

(c) Shade the region which is

- nearer to BC than to AB

and

- nearer to B than to C.

[1]

8. Nov/2020/Paper_J560/02/No.5

(a) Write down the mathematical name of each of these shapes.

(i) A triangle with 3 equal sides.

(a)(i) ..... triangle **[1]**

(ii) A quadrilateral with 4 equal sides and no right angles.

(ii) ..... **[1]**

(b) Here is a rectangle.

(i) On the diagram, draw the rectangle's two lines of symmetry. **[1]**

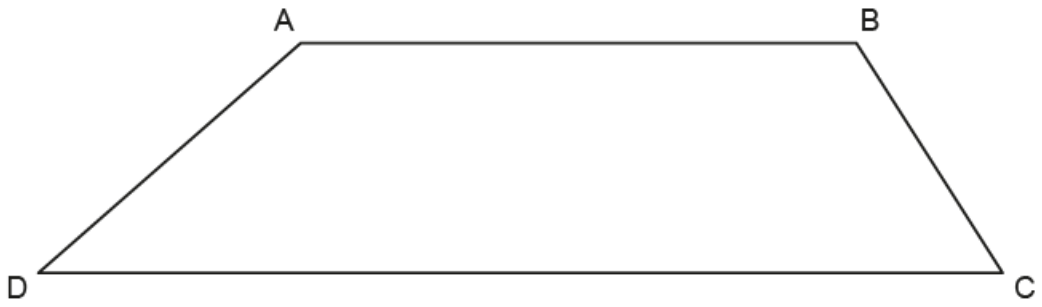
(ii) The rectangle has rotation symmetry of order 2.

Amaya says

A rectangle is the only quadrilateral that has rotation symmetry of order 2.

Is she correct?
Show how you decide.

(c) Add the correct symbols to this diagram to show that line AB is parallel to line DC.



[1]

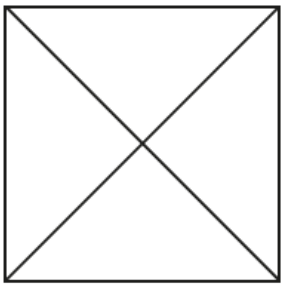
9. Nov/2020/Paper_J560/03/No.5

(a) The curved surface of a solid is made from this flat shape.

Write down the mathematical name of the solid.

(a) ..... **[1]**

(b) This is the plan view of a different solid.



Write down the mathematical name of the solid.

(b) ..... **[1]**

10. Nov/2020/Paper_J560/03/No.19

(a) Work out the size of the exterior angle of a regular 12-sided polygon.

(a) ..... ° **[2]**

(b) Use your answer to part **(a)** to write down the size of the interior angle of a regular 12-sided polygon.

(b) ..... ° **[1]**