Year 9

Mathematics

Foundation: No calculator allowed
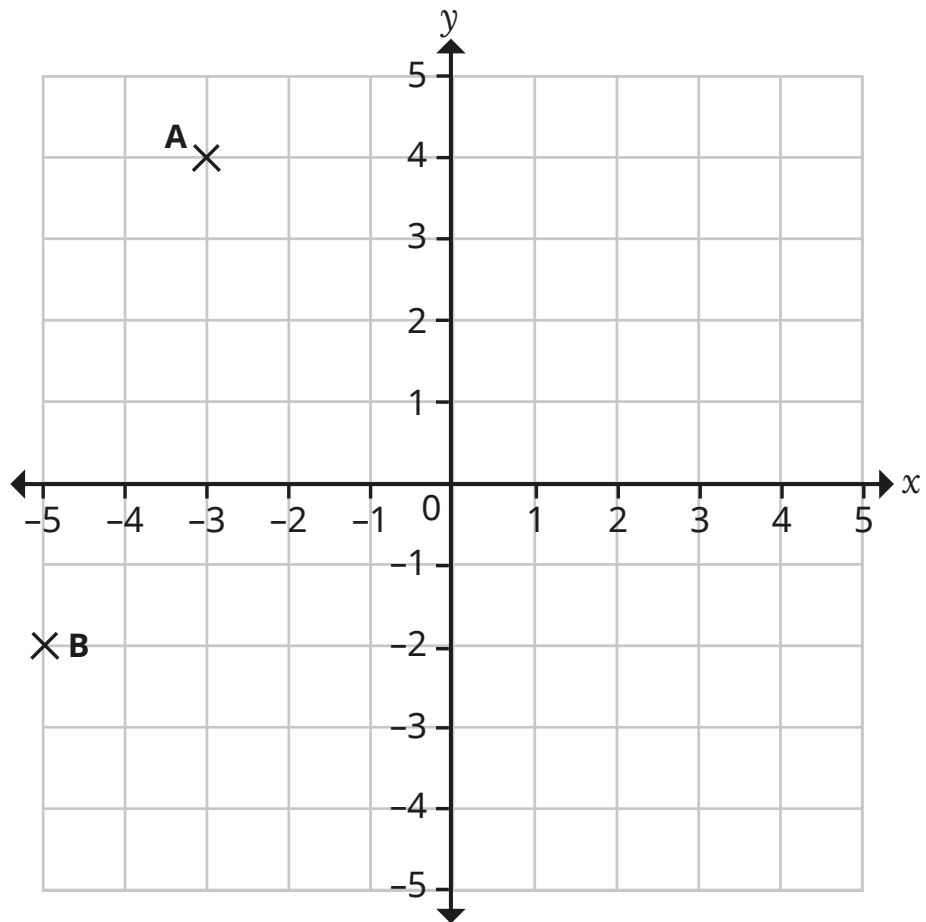
Time allowed: 45 minutes

First name	
Middle name	
Last name	
Date of birth	Day Month Year
Teacher	

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White Rose Maths
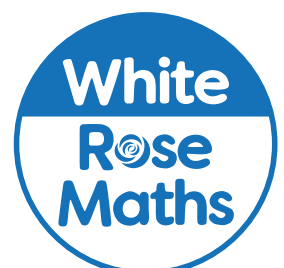
1

Write the coordinates of point A.

(,   )

1 mark

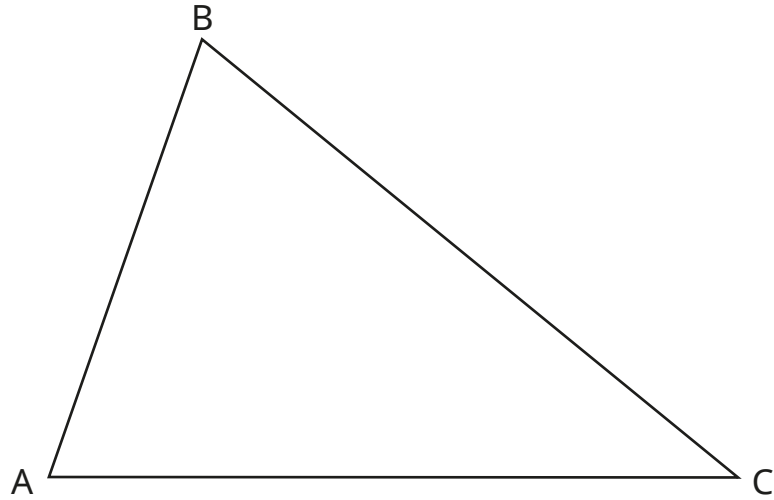Write the coordinates of point B.

(,   )

1 mark

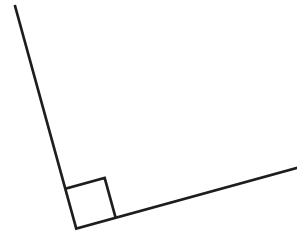Plot the point (0, –4) on the grid and label it C.

1 mark

2 Measure the angle at C.

°

1 mark

Write the mathematical name for each type of angle.
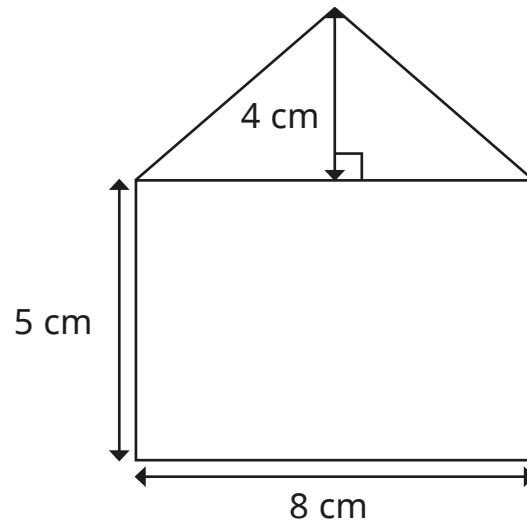

_____   _____

2 marks

3 A rectangle and a triangle are put together to form a pentagon.

Work out the area of the pentagon.
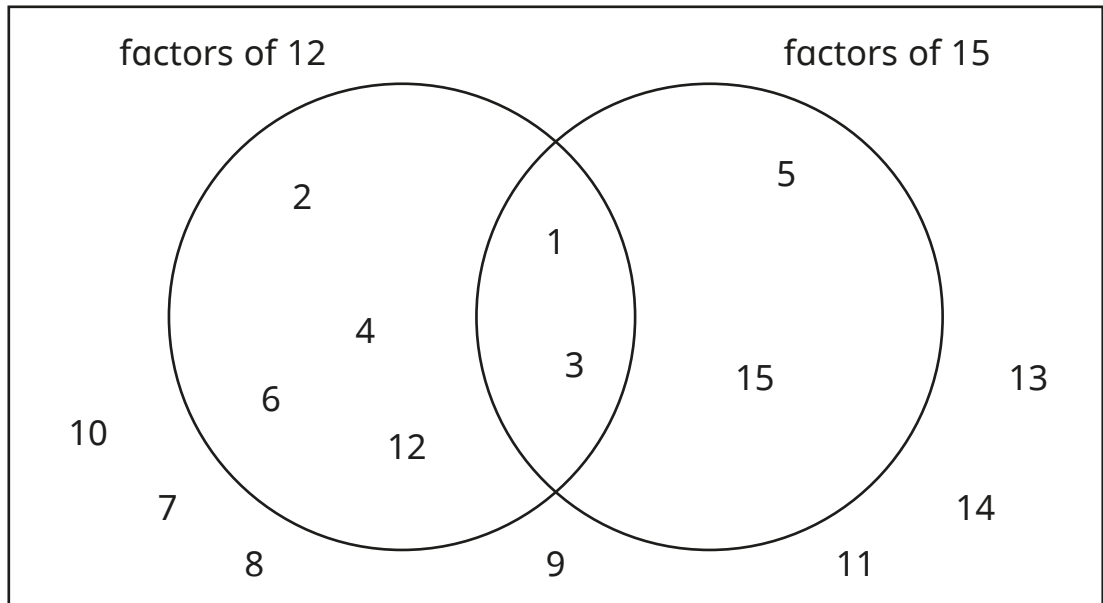
Include units with your answer.

4 marks

4 The Venn diagram shows all the integers from 1 to 15

The factors of 12 and 15 are shown.

factors of 12   factors of 15

2
1
5
4
3
6   15
12   13
10
7   14
8   9   11

What is the highest common factor of 12 and 15?

Explain why some numbers are outside both circles.

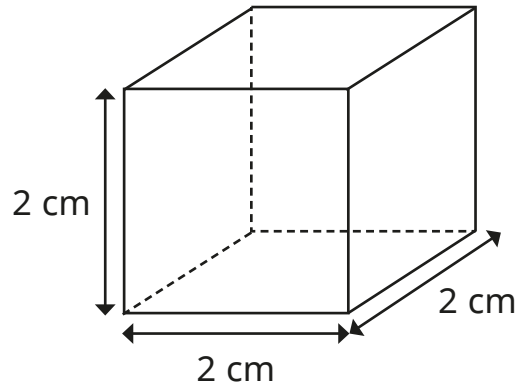**5** A circle has a diameter of 7 cm.

What is the radius of the circle?

	cm

1 mark

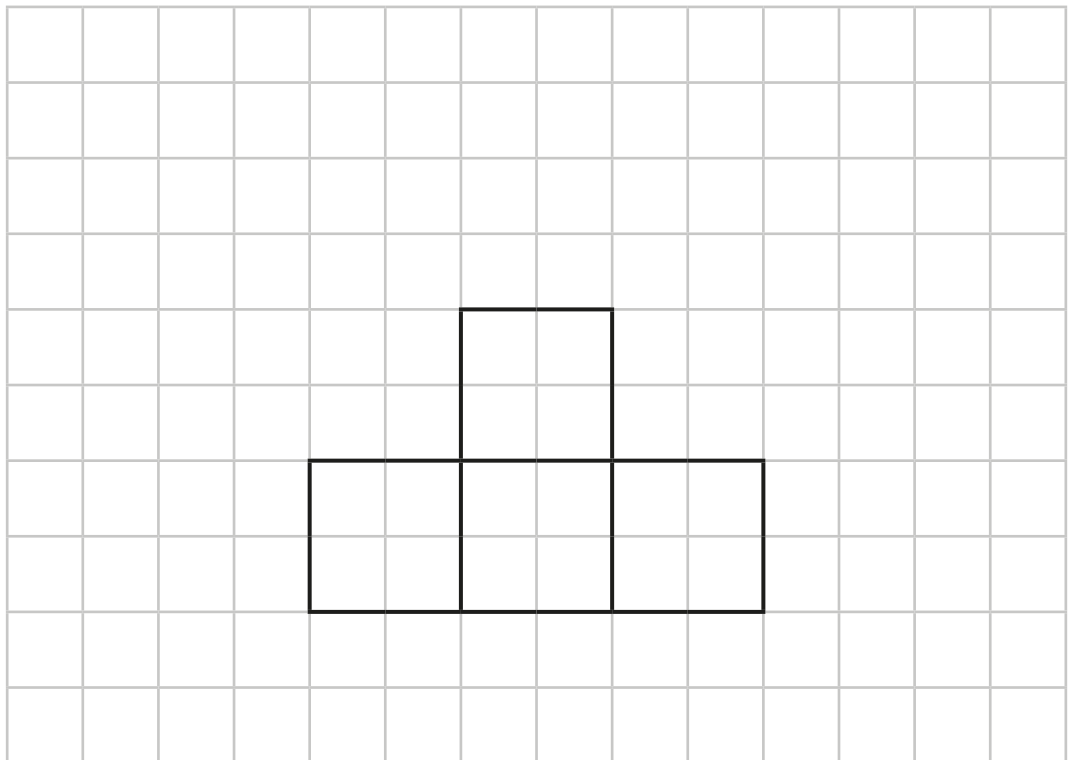Draw a circle with a diameter of 7 cm.

1 mark

6 Here is a cube.

2 cm

2 cm

2 cm

Part of the net of the cube is drawn on the centimetre squared grid.

Complete the net.
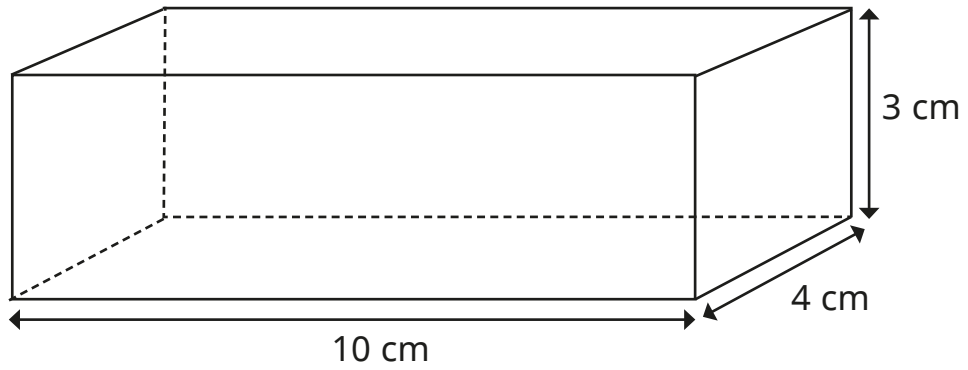

2 marks

Work out the surface area of the cube.

cm²

1 mark

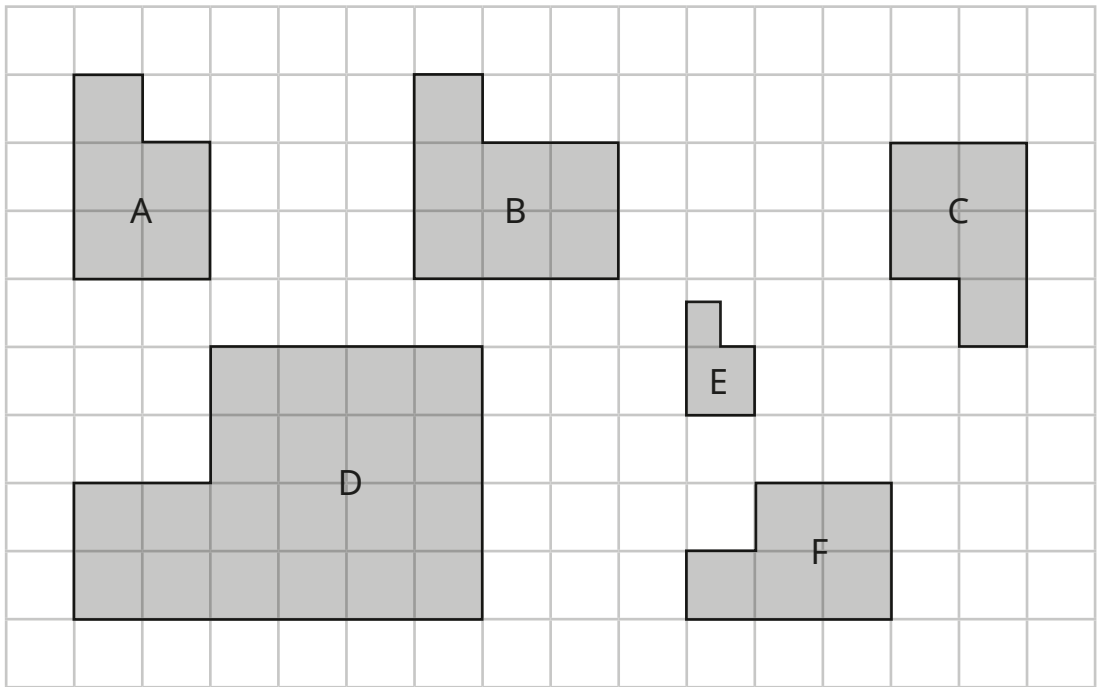**7** Work out the volume of the cuboid.

Include units with your answer.

3 cm

4 cm

10 cm

3 marks

Hexagons A, B, C, D, E and F are drawn on the grid.

Write the letters of the hexagons that are congruent to hexagon A.

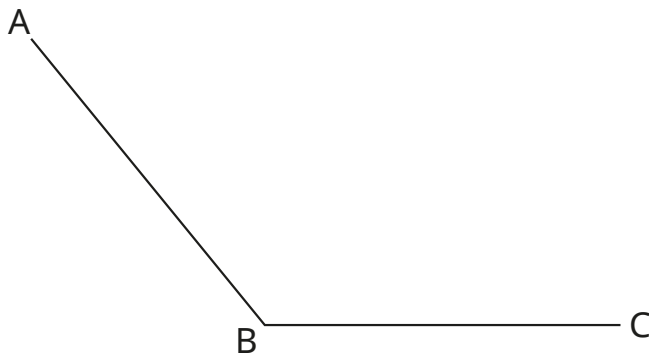_____

2 marks

Work out the perimeter of hexagon D.

units

1 mark

9 Using a ruler and pair of compasses, construct the bisector of angle ABC.

You must show your construction lines.

A

B   C

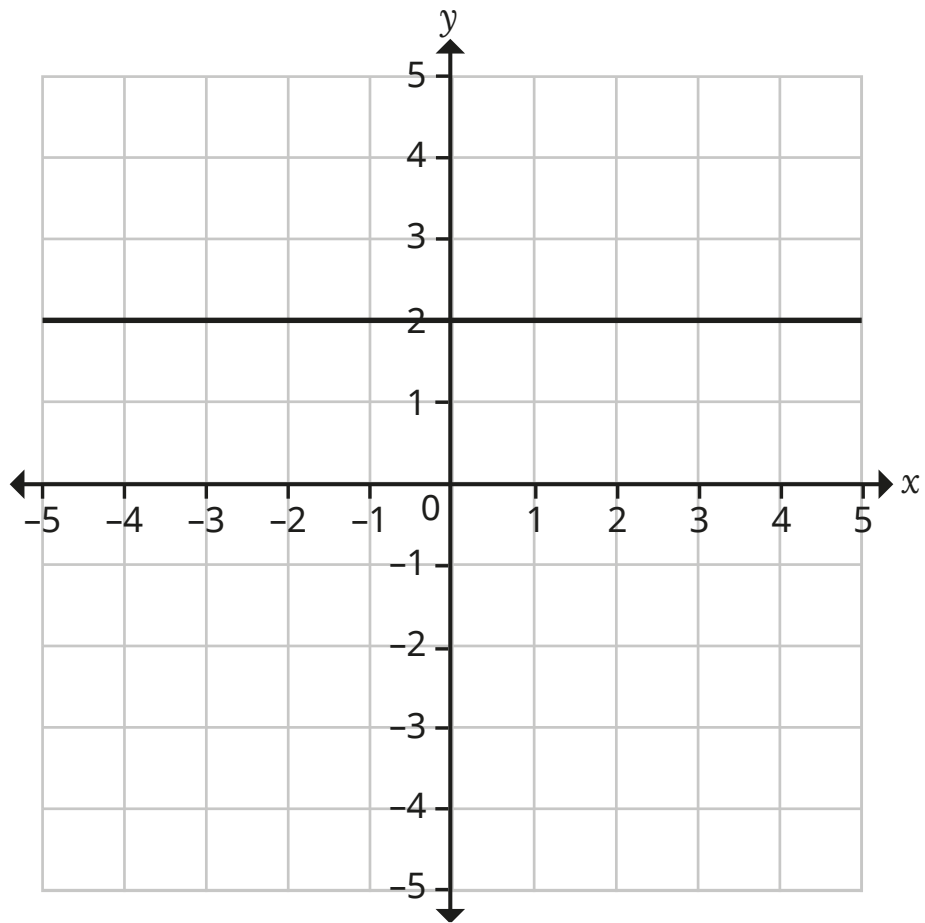2 marks

10 Show that the statements are true.

$$2^3 \neq 3^2$$

$$50\% \text{ of } 60 = \frac{1}{4} \text{ of } 120$$

11 A straight line has been drawn on the grid.
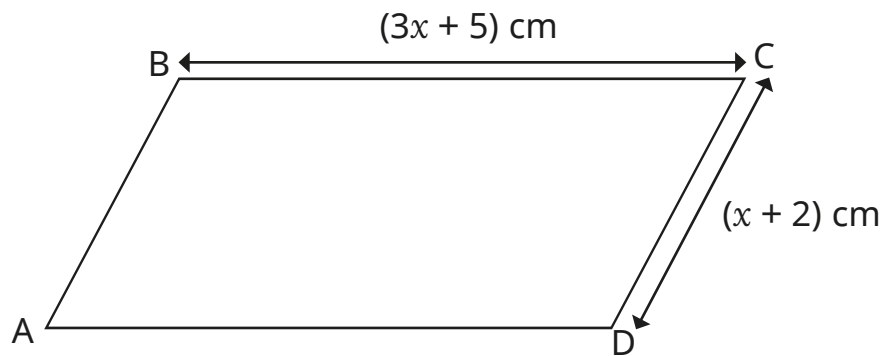

What is the equation of the line?

1 mark

On the same grid, draw the line $y = x$.

1 mark

12 ABCD is a parallelogram.

B ⟵ (3*x* + 5) cm ⟶ C

(*x* + 2) cm

A _____ D

The perimeter of the parallelogram is 31 cm.

Use this information to form an equation in terms of x.

2 marks

Solve your equation.

$x =$

2 marks

13 Jack thinks of a number.
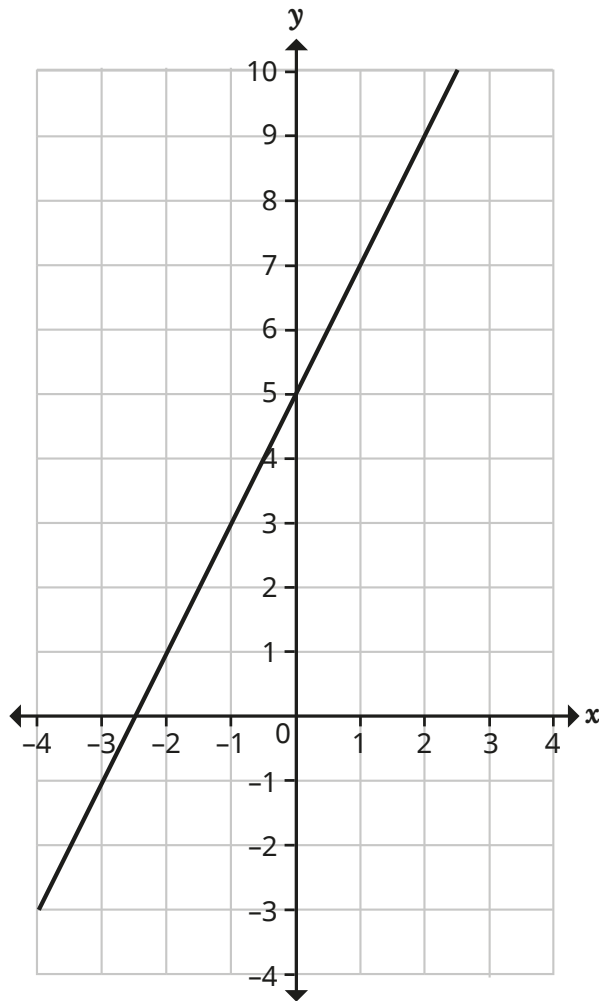
He multiplies the number by 4 and then adds 17

His result is 89

What number did Jack start with?

2 marks

14 A straight line has been drawn on the grid.

Complete the coordinates of the y-intercept of the line.

(0,   )

Work out the gradient of the line.

END OF TEST

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