Properties of 2D and 3D shapes

Year 7 | Key Stage 3 | 12 questions, 31 marks

KS3 Maths topic practice

Scan for the solutions

Name: _____ **Date:** _____ **Score:** _____ **/ 31**

1 Write down the mathematical name of a polygon with exactly five sides. (1 mark)

Answer _____

2 The diagram shows a circle with centre O.

a. Write down the mathematical name of each of the lines a, b and c.

b. What is the name for the distance all the way round a circle?

c. The radius of this circle is 3 cm. Write down the length of the diameter.

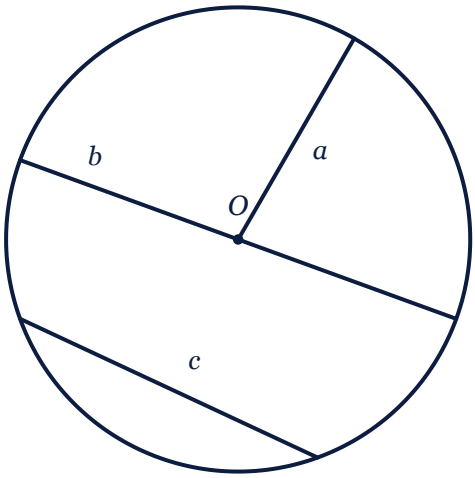

Diagram NOT accurately drawn

(4 marks)

Answer _____

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3 The diagram shows the quadrilateral $ABCD$.

a. Write down the side that is parallel to AB.

b. Write down a side that is perpendicular to AB.

c. Write down the mathematical name of quadrilateral $ABCD$.

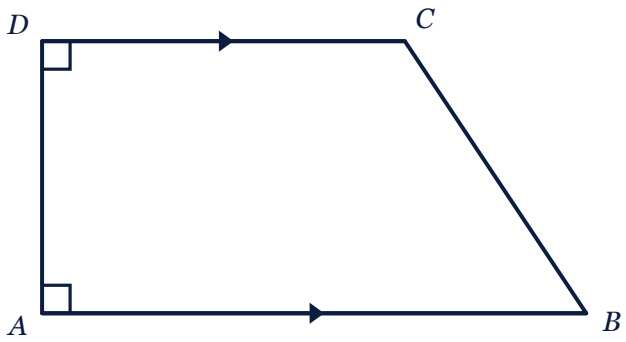

Diagram NOT accurately drawn

(3 marks)

Answer _____

4 a. A quadrilateral has exactly one pair of parallel sides. Write down the mathematical name of this quadrilateral.

b. A different quadrilateral has two pairs of parallel sides. All four of its sides are equal in length but none of its angles are right angles. Write down the mathematical name of this quadrilateral.

(2 marks)

Answer _____

5 Write down the mathematical name of each triangle.

a. All three sides are the same length.

b. None of the sides are the same length and none of the angles are the same size.

c. Two sides are the same length and one angle is 90°.

(3 marks)

Answer _____

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6 a. Write down the order of rotational symmetry of a regular hexagon.

b. Write down the number of lines of symmetry of a regular hexagon.

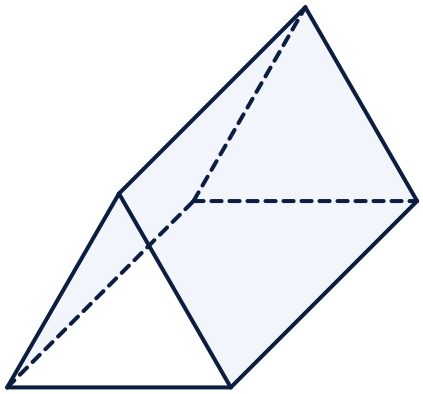
(2 marks)

Answer _____

7 Here is a triangular prism.

a. Write down the number of faces of a triangular prism.

b. Write down the number of edges of a triangular prism.



(2 marks)

Answer _____

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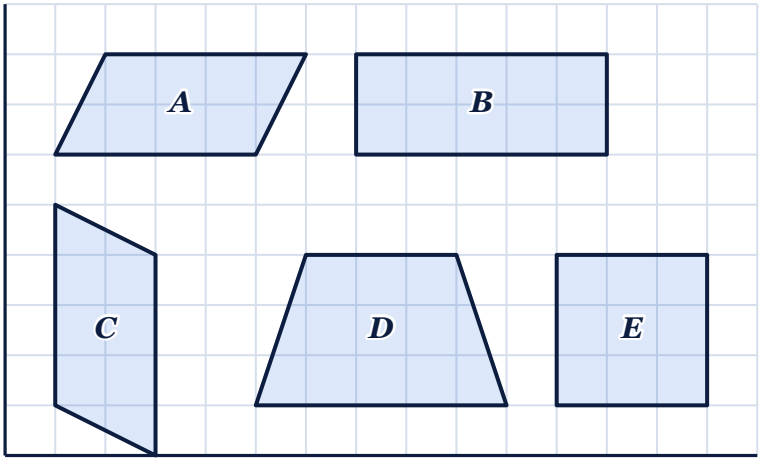
8 The diagram shows five quadrilaterals, labelled A, B, C, D and E, drawn on a centimetre grid.

a. Write down the letters of the pair of congruent quadrilaterals.

b. Write down the mathematical name of quadrilateral A.



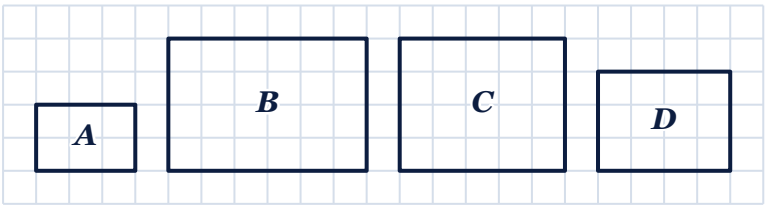
(2 marks)

Answer _____

9 The diagram shows four rectangles, A, B, C and D, drawn on a centimetre grid.

a. Which rectangle is mathematically similar to rectangle A?

b. Explain why rectangle D is not similar to rectangle A.



(3 marks)

Answer _____

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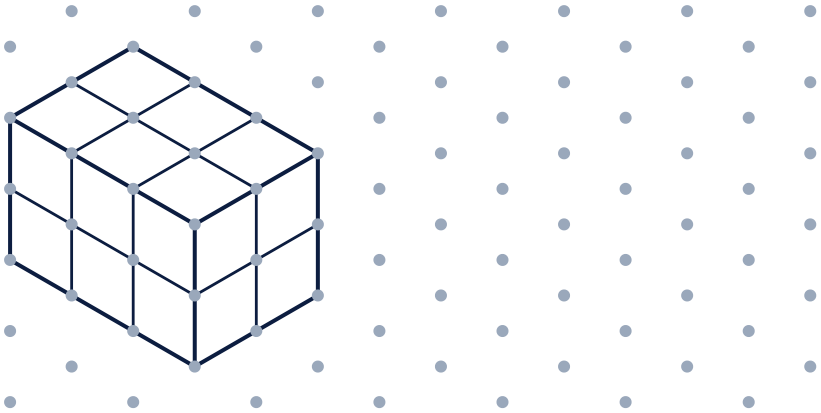
10 On the left of the isometric grid is a cuboid made from centimetre cubes.

a. Write down the length, width and height of the cuboid.

b. How many centimetre cubes make the cuboid?

c. On the right of the grid, draw a cuboid 2 cm long, 2 cm wide and 1 cm high.



(3 marks)

Answer _____

11 The diagram shows a net. The faces are labelled A to F.

a. Write down the name of the 3D solid the net folds to make.

b. When the net is folded, which face is opposite face A?

c. Which face is opposite face C?

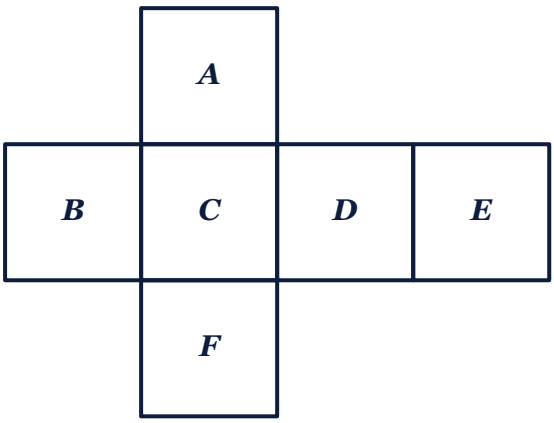


Diagram NOT accurately drawn

(3 marks)

Answer _____

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12 The diagram shows the net of a 3D solid. It is made from three rectangles and two equilateral triangles.

a. Write down the name of the solid.

b. Write down the number of edges the solid has.

c. Ravi says, "The solid has 6 faces." Is Ravi correct? Give a reason.

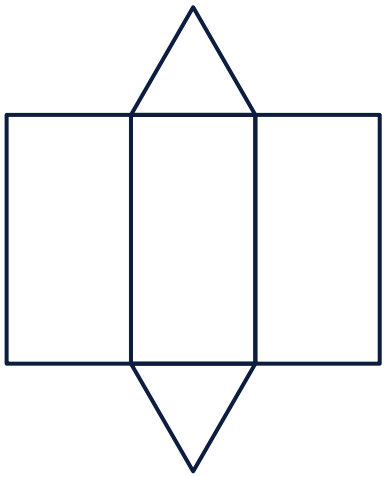

Diagram NOT accurately drawn

(3 marks)

Answer _____

End of questions | Total 31 marks