

Surface Area of Prisms and Cylinders

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **26**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. Diagrams are not drawn accurately.

- 1** A cube has edges of length 3 cm.
Circle the total surface area of the cube.

[1 mark]

9 cm²

27 cm²

36 cm²

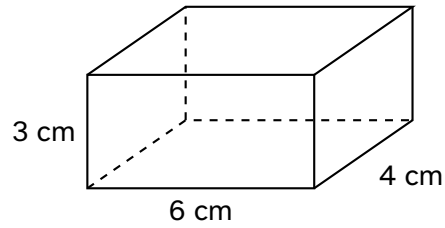
54 cm²

- 2** Leah covers every face of a wooden cube with paper.
She uses exactly 216 cm² of paper, with no gaps and no overlaps.
Work out the length of one edge of the cube.

[2 marks]

Answer _____ cm

- 3** Here is a cuboid.



Not drawn accurately

Work out the total surface area of the cuboid.

[3 marks]

Answer _____ cm^2

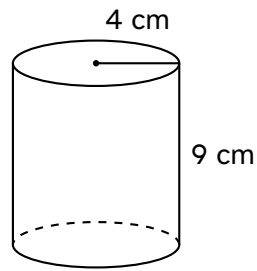
- 4** An open box (no lid) is a cuboid 20 cm long, 15 cm wide and 10 cm high.

Work out the area of cardboard needed to make the box.

[3 marks]

Answer _____ cm^2

- 5 A solid cylinder has radius 4 cm and height 9 cm.



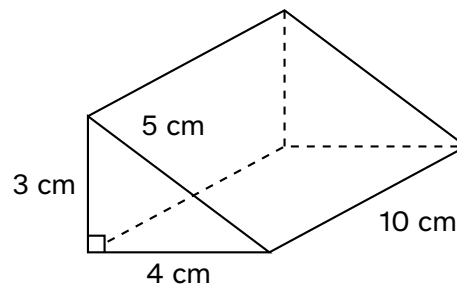
Not drawn accurately

Work out the total surface area of the cylinder.
Give your answer in terms of π .

[3 marks]

Answer _____ cm^2

- 6 The cross-section of this prism is a right-angled triangle with sides 3 cm, 4 cm and 5 cm.



Not drawn accurately

Work out the total surface area of the prism.

[4 marks]

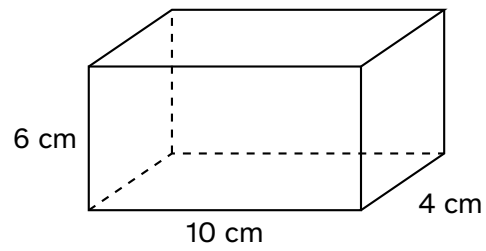
Answer _____ cm^2

- 7 A wooden toy box is a closed cuboid 80 cm long, 60 cm wide and 50 cm high.
Rosa paints all six outside faces of the box.
Work out the total area she paints.
Give your answer in square metres.

[3 marks]

Answer _____ m^2

8 Here is a cuboid.



Not drawn accurately

Sam says,

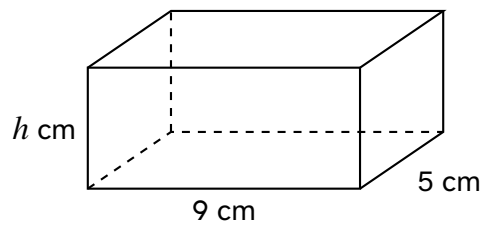
‘If I double every length of this cuboid, its total surface area will double.’

Is Sam correct?

You must show your working.

[3 marks]

- 9 Here is a cuboid.
It is 9 cm long, 5 cm wide and h cm high.



Not drawn accurately

- (a) The total surface area of the cuboid is 230 cm^2
Work out the value of h .

[3 marks]

Answer $h =$ _____

- (b) Work out the volume of the cuboid.

[1 mark]

Answer _____ cm^3