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Private tuition and small online Study Pods

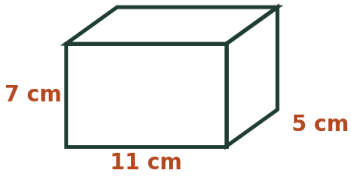
Surface Area

Grade 4 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (56 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 79 marks.

Warm-up

1 Work out the surface area of the cuboid. **[3 marks]**

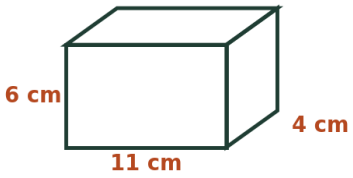


Answer _____

2 A cube has side 7 cm. Work out its surface area. **[2 marks]**

Answer _____

3 Work out the total surface area of the cuboid. **[3 marks]**



Answer _____

4 A cuboid is 8 cm by 5 cm by 2 cm. Work out its surface area. **[3 marks]**

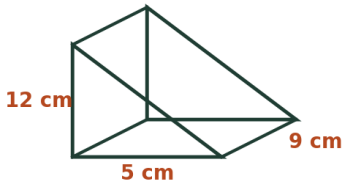
Answer _____

5 The surface area of a cube is 150 cm². Work out the side length of the cube. **[3 marks]**

Answer _____

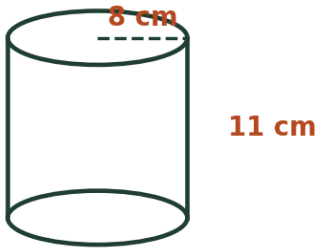
Core

6 The diagram shows a triangular prism. Work out its total surface area. **[5 marks]**



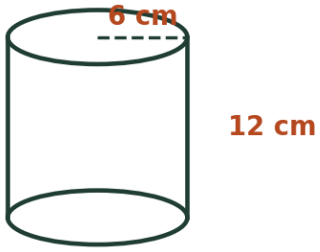
Answer _____

7 A cylinder has radius 8 cm and height 11 cm. Work out its curved surface area. Give your answer in terms of π. **[3 marks]**



Answer _____

8 A cylinder has radius 6 cm and height 12 cm. Work out its total surface area in terms of π. **[4 marks]**



Answer _____

9 A closed cylinder has radius 8 cm and height 11 cm. Work out its total surface area to 3 significant figures. **[4 marks]**

Answer _____

10 Work out the surface area of a sphere of radius 6 cm to 3 significant figures. **[3 marks]**

Answer _____

Stretch

11 An open box (no lid) is 10 cm by 6 cm by 3 cm. Work out the area of cardboard needed. **[4 marks]**

Answer _____

12 A cylinder has no top. Radius 4 cm and height 6 cm. Work out the surface area to 3 s.f. **[4 marks]**

Answer _____

13 A cube of side 3 cm is painted on all faces and cut into 1 cm cubes. How many small cubes have exactly 3 painted faces? **[5 marks]**

Answer _____

14 A cylinder has surface area 266π cm² and radius 7 cm. Work out its height. **[5 marks]**

Answer _____

15 A solid hemisphere has radius 3 cm. Work out its total surface area to 3 s.f. **[5 marks]**

Answer _____

Challenge

16 Two cubes of side 3 cm are joined face to face to make a cuboid. Work out the surface area of the cuboid. **[4 marks]**

Answer _____

17 A cuboid has volume 126 cm^3. Its dimensions are 3 cm, 6 cm and h cm. Work out its surface area. **[5 marks]**

Answer _____

18 A cylinder has the same height as its diameter, 8 cm. Work out the ratio of its curved surface area to the area of one circular end, in simplest form. **[5 marks]**

Answer _____

19 A cube has surface area 150 cm². The cube's side length is doubled. Work out the new surface area. **[4 marks]**

Answer _____

20 A cone has radius 5 cm and slant height 13 cm. Work out its total surface area in terms of π. **[5 marks]**

Answer _____