

Volume and Surface Area

GCSE Mathematics • **Foundation Tier** • Grades 4–5 • Non-calculator

Name:

Class:

Total: / 58

Show all your working. Marks are given for correct method as well as the final answer.

1. Work out the volume of a cuboid 5 cm by 4 cm by 3 cm. [2 marks]

Answer: cm^3

2. Work out the volume of a cube of side 6 cm. [2 marks]

Answer: cm^3

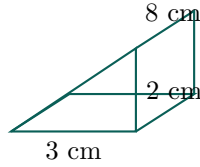
3. Work out the surface area of a cuboid 5 cm by 4 cm by 3 cm. [3 marks]

Answer: cm^2

4. Work out the surface area of a cube of side 4 cm. [2 marks]

Answer: cm^2

5. Work out the volume of this triangular prism. [3 marks]



Answer: cm^3

6. A prism has cross-sectional area 15 cm^2 and length 9 cm. Work out its volume. [2 marks]

Answer: cm^3

7. Work out the volume of a cylinder with radius 3 cm and height 10 cm, in terms of π . [3 marks]

Answer: cm^3

8. Work out the volume of a cylinder with radius 5 cm and height 8 cm, to 1 decimal place. [3 marks]

Answer: cm^3

9. Work out the curved surface area of a cylinder with radius 4 cm and height 7 cm, in terms of π . [3 marks]

Answer: cm^2

10. Work out the total surface area of a cylinder with radius 3 cm and height 5 cm, in terms of π . [4 marks]

Answer: cm^2

11. Work out the volume of a sphere of radius 3 cm, in terms of π . [3 marks]

Answer: cm^3

12. Work out the volume of a cone with radius 6 cm and height 10 cm, in terms of π . [3 marks]

Answer: cm^3

13. Work out the volume of a square-based pyramid with base side 6 cm and height 7 cm. [3 marks]

Answer: cm^3

14. A cuboid has volume 120 cm^3 , length 6 cm and width 4 cm. Work out its height. [3 marks]

Answer: cm

15. A cube has volume 343 cm^3 . Work out its side length.

[2 marks]

Answer: cm

16. A cylinder has volume $100\pi \text{ cm}^3$ and radius 5 cm. Work out its height.

[3 marks]

Answer: cm

17. Convert 3000 cm^3 into litres.

[2 marks]

Answer:

18. Convert 2 m^3 into cm^3 .

[2 marks]

Answer:

19. A water tank is a cuboid 80 cm by 50 cm by 40 cm.

(a) Work out its volume in cm^3 .

[2 marks]

(b) Work out its capacity in litres.

[2 marks]

Answer:

20. A cylindrical can has radius 4 cm and height 12 cm.

(a) Work out its volume to the nearest cm^3 .

[3 marks]

(b) Work out how many full cans fill a 5 litre jug.

[3 marks]

Answer: