Surface area

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Find surface area of a cube with side 5 cm. [2 marks]

$6 \times 5^2 = 150$.

Answer: 150 cm^2.

2. Find surface area of a closed 8 cm by 3 cm by 2 cm cuboid. [2 marks]

$2(24 + 16 + 6) = 92$.

Answer: 92 cm^2.

3. An open rectangular box has base 10 cm by 6 cm and height 4 cm. Find its material area. [2 marks]

$60 + 2(40) + 2(24) = 188$.

Answer: 188 cm^2.

4. Find curved surface area of a cylinder with radius 3 cm and height 7 cm. Give an exact answer. [2 marks]

$2\pi(3)(7) = 42\pi$.

Answer: 42π cm^2.

5. Find total surface area of a closed cylinder with radius 3 cm and height 7 cm. [2 marks]

$2\pi(3)^2 + 2\pi(3)(7) = 18\pi + 42\pi = 60\pi$.

Answer: 60π cm^2.

6. Two cubes, each of side 2 cm, are joined face-to-face. Find exposed area. [2 marks]

Separate area $= 2 \times 6 \times 2^2 = 48$.

Two hidden joining faces total $2 \times 2^2 = 8$.

Exposed area $= 48 - 8 = 40$ cm^2.

Answer: 40 cm^2.