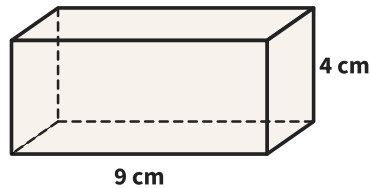


Surface Area of Cuboids

1



Both ends of this cuboid are squares.
Work out its surface area.



Not drawn accurately

the edges are 9, 4 and 4: $2 \times 16 + 4 \times 36$

$$32 + 144$$

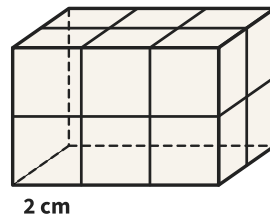
$$176 \text{ cm}^2$$

Answer

2



Twelve cubes with edges of 2 cm are stacked to make this cuboid.
Work out the surface area of the cuboid.



Not drawn accurately

the cuboid is 6 cm by 4 cm by 4 cm

$$2 \times (24 + 24 + 16)$$

$$128 \text{ cm}^2$$

Answer

3



A cuboid has two square ends with sides of 5 cm. The total length of all twelve of its edges is 76 cm. Work out its surface area.

8 short edges = 40, so 4 long edges = 36

each long edge is 9 cm

$$2 \times 25 + 4 \times 45 = 50 + 180$$

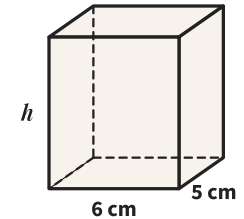
$$230 \text{ cm}^2$$

Answer

4



The surface area of this cuboid is 214 cm^2 . Work out its height h .



Not drawn accurately

half of it: $107 = 30 + 6h + 5h$

$$11h = 77$$

$$h = 7 \text{ cm}$$

Answer

5



A storage chest is a cuboid. Work out its surface area in cm^2 .



Not drawn accurately

$$1.2 \text{ m} = 120 \text{ cm}$$

$$2 \times (6000 + 3600 + 1500)$$

$$22\,200 \text{ cm}^2$$

Answer

6



A cuboid has a square base and is 5 cm tall. Its volume is 180 cm^3 .
Work out its surface area.

$$\text{base} = 180 \div 5 = 36 \text{ cm}^2$$

each side of the base is 6 cm

$$2 \times 36 + 4 \times 30 = 72 + 120$$

$$192 \text{ cm}^2$$

Answer

7



A block of modelling clay is a cuboid 2 cm by 4 cm by 8 cm. It is squashed into a cube with the same volume.
How much less surface area does the cube have?

volume 64 cm^3 , so the cube's edges are 4 cm

$$\text{cuboid: } 2 \times (8 + 16 + 32) = 112$$

$$\text{cube: } 6 \times 16 = 96, \text{ and } 112 - 96$$

$$16 \text{ cm}^2 \text{ less}$$

Answer

8



A cube is cut into 8 equal smaller cubes. The total surface area of the 8 small cubes is 768 cm^2 . How long is an edge of the original cube?

$$\text{one small cube: } 768 \div 8 = 96 \text{ cm}^2$$

$$96 \div 6 = 16, \text{ so a small edge is 4 cm}$$

$$\text{edge of the cube} = 2 \times 4$$

$$8 \text{ cm}$$

Answer