



Surface Areas and Volume of a Cuboid and Cube Ex 18.1 Q1

Answer :

Dimensions are given as

Length (l) = 80 cm

Breadth (b) = 40 cm

Height (h) = 20 cm

We have to find lateral surface area and total area

Hence its, lateral surface area,

$$= 2(l + b)h \text{ cm}^2$$

$$= 2(80 + 40)20 \text{ cm}^2$$

$$= 4800 \text{ cm}^2$$

Total surface area,

$$= 2(lb + bh + hl)$$

$$= 2(80 \times 40 + 40 \times 20 + 20 \times 80)$$

$$= 2(3200 + 800 + 1600)$$

$$= 11200 \text{ cm}^2$$

The lateral surface area of the cuboids is 4800 cm^2 and total surface area of it is 11200 cm^2 .

Surface Areas and Volume of a Cuboid and Cube Ex 18.1 Q2

Answer :

Edge of the given cube, $l = 10 \text{ cm}$

We have to find lateral and total surface area

Lateral surface area,

$$= (4l^2)$$

$$= (4 \times 10^2)$$

$$= 400 \text{ cm}^2$$

Total surface area,

$$= (6l^2)$$

$$= (6 \times 10^2)$$

$$= 600 \text{ cm}^2$$

The lateral surface area of the cube is 400 cm^2 and its total surface area is 600 cm^2 .

Surface Areas and Volume of a Cuboid and Cube Ex 18.1 Q3

Answer :

Let the length of the edge of the cube be " l " units

We have to find the ratio of total surface area and lateral surface area

Total surface area of the cube,

$$S_1 = (6 \times l^2) \text{sq. units}$$

Lateral surface area of the cube,

$$S_2 = (4 \times l^2) \text{sq. units}$$

The desired ratio,

$$\begin{aligned} &= \frac{S_1}{S_2} \\ &= \frac{6 \times l^2}{4 \times l^2} \\ &= \frac{3}{2} \end{aligned}$$

The ratio of the total surface area and the lateral surface area of a cube is $\boxed{3:2}$.

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