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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 $\boxed{4800\ \text{cm}^2}$ and total surface area of it is $\boxed{11200\ \text{cm}^2}$.

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 $\boxed{400\,\text{cm}^2}$ and its total surface area is $\boxed{600\,\text{cm}^2}$.

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,

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

Lateral surface area of the cube,

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

The desired ratio,

$$= \frac{S_1}{S_2}$$

$$= \frac{6 \times l^2}{4 \times l^2}$$

$$= \frac{3}{2}$$

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

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