



### Exercise 13A

Question 13:

Volume of a cuboid =  $1536 \text{ m}^3$

Length of the cuboid =  $16 \text{ m}$

Let the breadth and height of the cuboid be  $3x$  and  $2x$ .

$\therefore$  Volume of cuboid =  $l \times b \times h$

$$\Rightarrow 1536 = (16 \times 3x \times 2x)$$

$$\Rightarrow 1536 = 96x^2$$

$$\Rightarrow x^2 = \frac{1536}{96} = 16$$

$$\therefore x = \sqrt{16} = 4 \text{ m.}$$

$$\therefore \text{Breadth of the cuboid} = 3x = 3 \times 4 = 12 \text{ m}$$

$$\text{And height of the cuboid} = 2x = 2 \times 4 = 8 \text{ m}$$

Question 14:

Surface area of a cuboid =  $758 \text{ cm}^2$

Length =  $14 \text{ cm}$

Breadth =  $11 \text{ cm}$

Let the height of the cuboid =  $h \text{ cm}$

$\therefore$  Surface area of cuboid =  $2(lb + bh + lh)$

$$\Rightarrow 758 = 2(14 \times 11 + 11 \times h + 14 \times h)$$

$$\Rightarrow 758 = 2(154 + 11h + 14h)$$

$$\Rightarrow 758 = 2(154 + 25h)$$

$$\Rightarrow 758 = 308 + 50h$$

$$\Rightarrow 50h = 758 - 308$$

$$\therefore h = \frac{450}{50} = 9 \text{ cm.}$$

$\therefore$  The height of the cuboid =  $9 \text{ cm}$

\*\*\*\*\* END \*\*\*\*\*