



Exercise 12A

Question 8:

Depth of the river = 2 m

Breadth of the river = 45 m

Length of the river = $3 \text{ K M /h} = \left(\frac{3 \times 1000}{60} \right) \text{ m/min}$
 $= 50 \text{ m /min.}$

\therefore Volume of water running into the sea per minute = $(50 \times 45 \times 2) \text{ m}^3$
 $= 4500 \text{ m}^3$

Question 9:

Total cost of sheet = Rs. 1620

Cost of metal sheet per square meter = Rs.30

\therefore Area of the sheet required = $\left(\frac{\text{Total cost}}{\text{rate /m}^2} \right) \text{ sq.m.}$
 $= \left(\frac{1620}{30} \right) \text{ sq.m} = 54 \text{ sq.m.}$

Length of box = 5m

Breadth of box = 3m

Now, Let the height of the box be x meters.

\therefore Area of the sheet = Total surface area of the box.
 $= 2(lb + bh + lh)$
 $54 = 2(5 \times 3 + 3 \times x + 5 \times x)$
 $54 = 2(15 + 3x + 5x)$
 $54 = 2(15 + 8x)$

\therefore $2(15 + 8x) = 54$

\Rightarrow $30 + 16x = 54$

\Rightarrow $16x = 54 - 30$

\Rightarrow $x = \frac{24}{16} = 1.5 \text{ m}$

\therefore The height of the box = 1.5 m.

***** END *****