

Ex-6.4

- 5) A dog is walking at a speed of 6 km/hr.
- (i) How much distance does it cover in 5 min.
- (ii) How much time would it take to cover 200 m.

$$6 \text{ km/hr} = 6 \times \frac{5}{18} = \frac{5}{3} \text{ m/sec}$$

$$5 \text{ min} = 5 \times 60 = 300 \text{ sec.}$$

distance travelled in 300 sec

$$d = t \times s = \frac{5}{3} \times 300 = 500 \text{ m}$$
$$= \frac{1}{2} \text{ km.}$$

Ans - - -

- (ii) ~~much~~ time required to cover 200 m

$$T = \frac{d}{s} \text{ sec}$$

$$= \frac{200}{5/3} = 200 \times \frac{3}{5} = 120 \text{ sec}$$
$$= 2 \text{ min.}$$

Ans: - - - = 2 min.

6) A swimming pool is 50 m long.

A boy can swim across the length and then return to his starting position in 5 min. What is his swimming speed in km/hr

$$5 \text{ min} = 5 \times 60 = 300 \text{ sec}$$

$$S = \frac{d}{t} = \frac{50 \times 2 \text{ m}}{300}$$

$$= \frac{2 \times 5}{30} \text{ m/sec}$$

$$= \frac{2 \times 5}{30} \times \frac{18}{5} \text{ km/hr}$$

$$= \frac{6}{5} \text{ km/hr}$$

$$= 1.2 \text{ km/hr}$$

7. A bus takes 48 min to cover a certain distance when travelling at speed of 50 km/hr. How much time will it take to cover the same distance when travelling at speed of 30 km/hr.

Ans of QN: - 7 (Ex-6.4)

distance travelled in 48 min

$$48 \text{ min} = 48 \times \frac{1}{60} \text{ hr}$$

$$= \frac{4}{5} \text{ hr}$$

$$d = T \times S$$

$$\text{distance} = \frac{4}{5} \times 50 = 40 \text{ km.}$$

time required to cover 40 km with
speed of 30 km/hr. is

$$T = \frac{40}{30} \text{ hr}$$

$$= \frac{4}{3} \text{ hr}$$

$$= 1 \text{ hr. } 20 \text{ min}$$

$$\begin{array}{r} \frac{4}{3} \text{ hr} \\ 3 \overline{) 4} \text{ (1 hr} \\ \underline{3} \\ 1 \\ \times 60 \\ \hline 3 \overline{) 60} \text{ (20 min} \\ \underline{60} \\ \hline \end{array}$$

Ans Required time 1 hr 20 min.