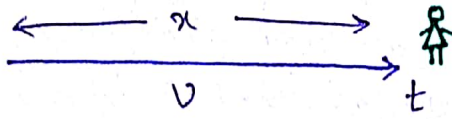


Section A : (Formula Based) :→ Important Formulas :

1.



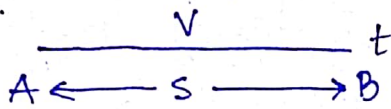
A train  $x$  m long crosses a person in  $t$  sec.

When a train crosses a person, the distance cover

by the train is the length of the train. If speed of train is  $V$ ,

$$\therefore V = \frac{x}{t} \quad \text{or } t = \frac{x}{V} \quad \text{or } x = Vt.$$

2.



A to B a terminal, distance is  $S$ . A car cover  $S$  distance in  $t$  time, the speed of the car is  $V$ ,

$$\therefore V = \frac{S}{t} \quad \text{or } S = Vt, \quad \text{or } t = \frac{S}{V}.$$

3.

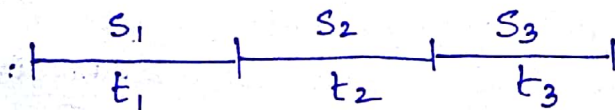


A train  $x$  m long moving with a speed  $V$  crosses another train or bridge or

platform <sup>not having length</sup>  $y$ , the distance cover by the train is (length of the train + length of the platform) / time.

$$\therefore V = \frac{x + y}{t}.$$

## 4. Average Speed :



A car covers  $S_1$  dist in  $t_1$ ,  $S_2$  dist in  $t_2$  times and  $S_3$  dist in  $t_3$  times. So, average

$$\text{speed} = \frac{\text{Total Distance}}{\text{Total Time}}$$

$$\text{Avg} = \frac{S_1 + S_2 + S_3}{t_1 + t_2 + t_3}$$