

Exercise \rightarrow 11G7

Sol 1. Distance = 425 km

Time = 8 h 30 min = $8\frac{1}{2} = \frac{17}{2}$ hr

$$\text{Speed} = \frac{D}{T}$$

$$= \frac{425}{\frac{17}{2}} = \frac{425 \times 2}{17} = 50 \text{ km/hr}$$

Sol 2. Time = 8 min = $\frac{8}{60} = \frac{2}{15}$ hr

Distance = 800 m = $\frac{800}{1000} = \frac{4}{5}$ km

$$\text{Speed} = \frac{D}{T}$$

$$= \frac{\frac{4}{5}}{\frac{2}{15}}$$

$$= \frac{4}{5} \times \frac{15}{2} = 6 \text{ km/hr}$$

Sol 3. Distance = 60 km

Time = 45 min = $\frac{45}{60} = \frac{3}{4}$ hr

$$\text{Speed} = \frac{D}{T}$$

$$= \frac{60}{\frac{3}{4}} = \frac{60 \times 4}{3}$$

$$= 80 \text{ km/hr}$$

Sol 4.

$$\text{Distance} = 420 \text{ km}$$

$$\text{Speed} = 60 \text{ km/hr}$$

$$\text{Time} = \frac{D}{S} = \frac{420}{60}$$

$$\boxed{\text{Time} = 7 \text{ hrs}}$$

Sol 5.

7 am Latit starts his journey

$$\text{Distance} = 285 \text{ km}$$

$$\text{Speed} = 30 \text{ km/hr}$$

$$\text{Time} = \frac{285}{30} = 9.5 \text{ hr}$$

$$9.5 \text{ hr} + 7 = 9 \text{ hours } 30 \text{ min} + 7 = 16 \text{ hrs } 30 \text{ min}$$

$$= 4:30 \text{ pm}$$

Sol 6.

Distance	540	330
Time/hr	9	x

This is a case of direct variation

$$\frac{540}{9} = \frac{330}{x}$$

$$540x = 330 \times 9$$

$$x = \frac{330 \times 9}{540} = \frac{11}{2} = 5 \frac{1}{2} \text{ hrs}$$

Sol 7.

$$\text{Speed} = 45 \text{ km/hr} \quad \text{Distance} = 400 \text{ m} = \frac{400}{1000} = \frac{2}{5} \text{ km}$$

$$\text{Time} = \frac{D}{S} = \frac{\frac{2}{5}}{45} = \frac{2}{5 \times 45} \times 3600 = 32 \text{ seconds}$$

$$= 32 \text{ seconds.}$$