

Motion Answers

① $\frac{100}{10} = 10 \text{ m/s}$

② $\frac{2000}{100} = 20 \text{ m/s} \stackrel{\div 1000}{=} 0.02 \text{ km/s} \stackrel{\times 3600}{=} 72 \text{ kmph} \stackrel{\times \frac{5}{8}}{=} 45 \text{ mph}$ so yes

③ $13.4 \times 2 = 26.8 \text{ m}$

④ $\frac{50}{13.4} = 3.7 \text{ s}$

⑤ (i) It travels 6m in 3 seconds so
 $\text{speed} = \frac{6\text{m}}{3\text{s}} = 2 \text{ m/s}$

(ii) It travels 7m in 8 seconds so
 $\text{speed} = \frac{7\text{m}}{8\text{s}} = 0.875 \text{ m/s}$

(iii) It travels 1m in 2 seconds so
 $\text{Speed} = \frac{1\text{m}}{2\text{s}} = 0.5 \text{ m/s}$

⑥ $80 - 25 = 5 \text{ m/s}$. The red car is catching up with the blue car.

⑦ $52 - 30 = 22 \text{ m/s}$. The train moves away from the car.

⑧ $30 + 25 = 55 \text{ m/s}$.