

Stage 1 Physics - Homework Wk 4 solutions

9. a) $s = 10\text{cm} = 0.1\text{m}$
 $v = \frac{s}{t} = \frac{0.1}{0.1} = \underline{1\text{m/s}}$ $t = 0.1\text{s}$

b) $v = 2\text{m/s}$ $t = ?$
 $t \times v = \frac{s}{t} \times t \rightarrow vt = \frac{s}{\div v} \Rightarrow t = \frac{s}{v}$

$$t = \frac{0.1}{2} = \underline{0.05\text{s}}$$

13.

a. $s = 0\text{m}$ in 1st 2 seconds $v = 0\text{m/s}$

b. $\Delta s = 30\text{m}$ $t = 2\text{sec}$ $v = \frac{s}{t} = \frac{30}{2} = \underline{15\text{m/s}}$

c. $v_{\text{av}} = \frac{s_T}{t_T}$ $s_T = 60\text{m}$, $t_T = 6\text{sec}$

$$v_{\text{av}} = \frac{60}{6} = \underline{10\text{m/s}}$$

d. Stationary for 2 seconds, then uniform velocity of 15m/s towards recorder.

14.

