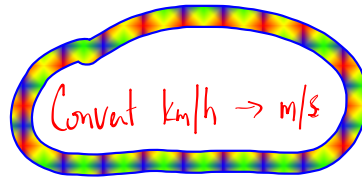


FOP - Velocity Review



10. $v = 100 \text{ km/h} (27.8 \text{ m/s})$

$\Delta t = 1.0 \text{ s}$

$\Delta d = ? \text{ (m)}$

$x \frac{\text{m}}{\text{s}} = 100 \frac{\text{km}}{\text{h}} \left(\frac{1000 \text{ m}}{1 \text{ km}} \right) \left(\frac{1 \text{ h}}{3600 \text{ s}} \right)$

$v = \frac{\Delta d}{\Delta t}$

$\left(\frac{100 \times 1000}{3600} \right)$ ← calculator

$\Delta d = v \Delta t$

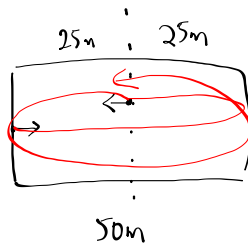
$\Delta d = (27.8 \text{ m/s})(1.0 \text{ s})$

$x \frac{\text{m}}{\text{s}} = 27.8 \text{ m/s}$

$\Delta d = 28 \text{ m}$

PP/46

3.



a) $\vec{v}_{\text{ave}} = \frac{25 \text{ m}}{86 \text{ s}}$ [away from start]

$\vec{v}_{\text{ave}} = 0.29 \frac{\text{m}}{\text{s}}$ [away from start]

b) $v_{\text{ave}} = \frac{\Delta d}{\Delta t}$ (if you went 75m)

$v_{\text{ave}} = \frac{75 \text{ m}}{86 \text{ s}}$

$v_{\text{ave}} = 0.87 \text{ m/s}$

$v_{\text{ave}} = \frac{175 \text{ m}}{86 \text{ s}}$ (if you went 175m)

$v_{\text{ave}} = 2.0 \text{ m/s}$