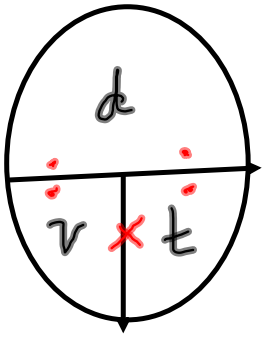
$v = \frac{d}{t} = \frac{\text{TOTAL DIS}}{\text{TOTAL TIME}}$



$t = \frac{d}{v}$ $\quad d = vt$

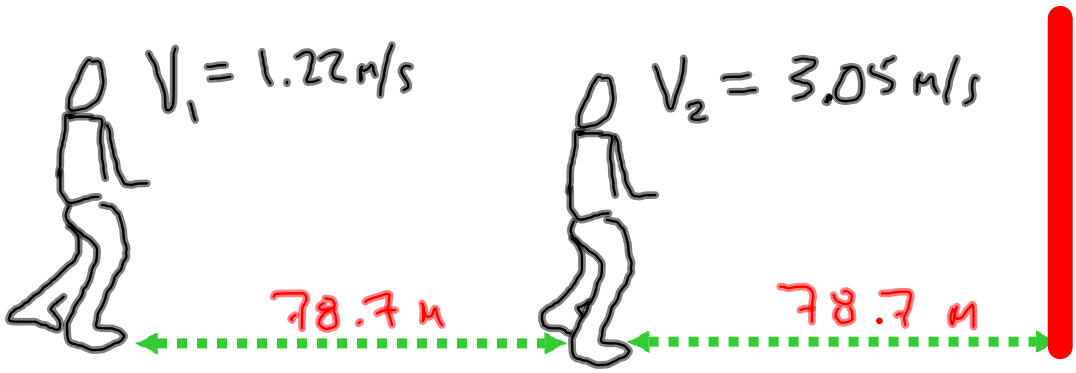
$V_i = 2.2\ m/s$

$V_f = 3.2\ m/s$

$\Delta V = (3.2 - 2.2)\ m/s = 1.0\ m/s$

$(V_f - V_i)$

$a = \frac{\Delta V}{\Delta t} = \frac{1.0\ m/s}{3.7\ s} = 0.27\ m/s^2$



$$V_{AVG} = \frac{\text{TOTAL DIST}}{\text{TOTAL TIME}} = \frac{d_1 + d_2}{t_1 + t_2}$$

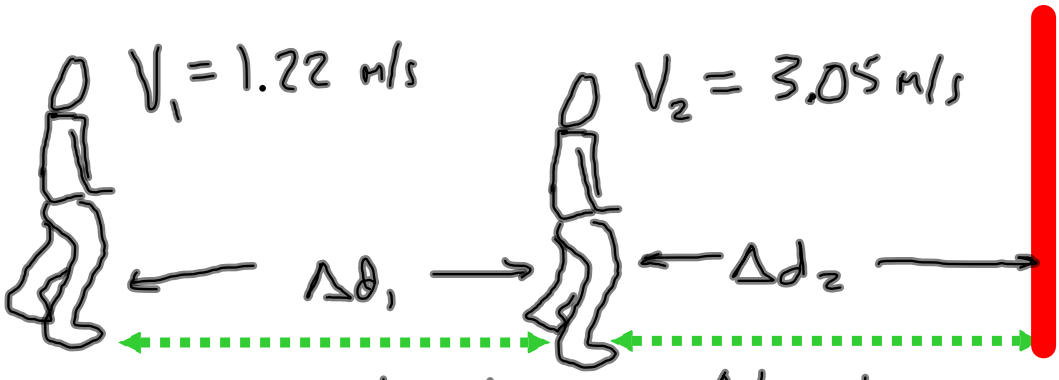
$$V_{AVG} = \frac{78.7\ m + 78.7\ m}{t_1 + t_2} = \frac{157.4\ m}{90.3\ m} = 1.74\ m/s$$

$$t_1 = \frac{d_1}{v_1} = \frac{78.7\ m}{1.22\ m/s} = 64.5\ s$$

$$t_2 = \frac{d_2}{v_2} = \frac{78.7\ m}{3.05\ m/s} = 25.8\ s$$

$V_{AVG} = \frac{V_i + V_f}{2}$ Only when a = Constant

Oct 6-1:04 PM



$\Delta t = 1.2$ min $= 72$ s

$\Delta t = 1.2$ min $= 72$ s

$$V_{AVG} = \frac{\text{TOTAL DISTANCE}}{\text{TOTAL TIME}} = \frac{[\text{TOTAL DISTANCE}]}{[\ 144\ s\ ]}$$

$$\text{TOTAL DISTANCE} = d_1 + d_2 = 307.4\ m$$

$$d_1 = v_1 \Delta t_1$$

$$(1.22\ m/s)(72\ s) = 87.84$$

$$d_2 = v_2 \Delta t_2$$

$$= (3.05\ m/s)(72\ s) = 219.6\ m$$

$$\boxed{V_{AVG} = 2.135\ m/s = 2.14\ m/s}$$

V ✓ $= 28$ MPH

d ✓ $= 44$ miles

$$t = \frac{d}{v} = \frac{44 \text{ miles}}{28 \frac{\text{miles}}{\text{hr}}} = 1.6 \text{ hrs}$$