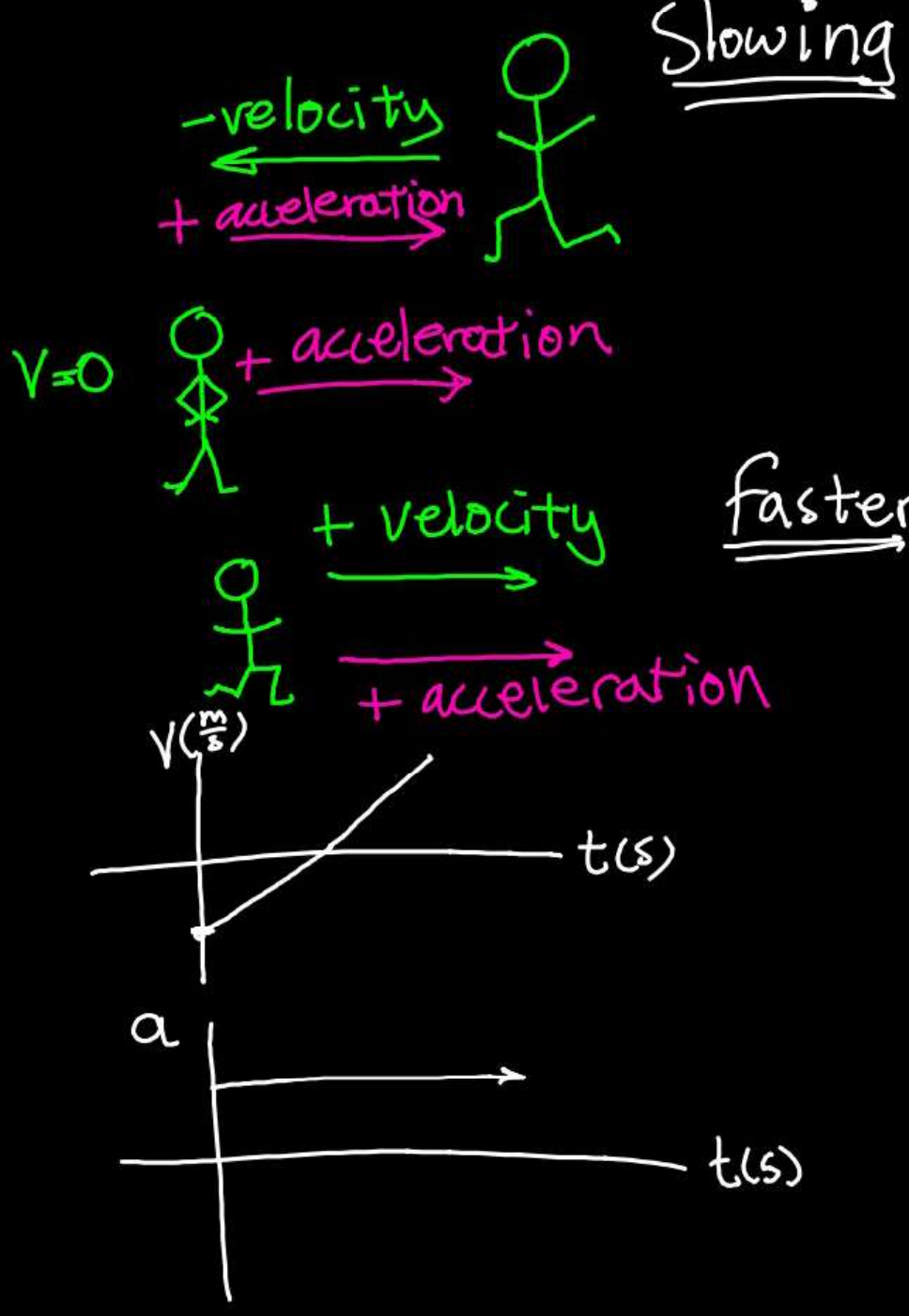
Bellwork

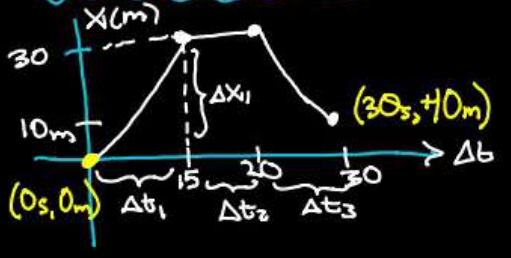
What happens if a person is walking left and accelerating right?



Objectives TTCL

1. Kahoots today, Quiz Monday
2. Return Graded Quiz
   Anything to turn in?
3. Acceleration model problem/Finish W.S.

Quiz Review



$\Delta\vec{x}_1 = 30m$

$\Delta\vec{x}_2 = 0m$

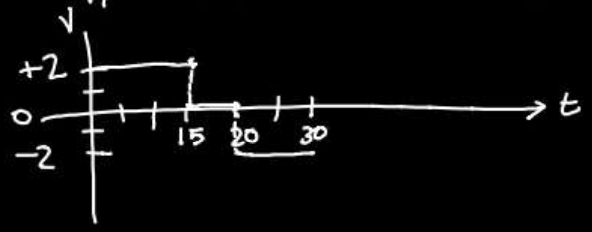
$\Delta\vec{x}_3 = -20m$

$\Delta t_1 = 15s$

$\Delta t_2 = 5s$

$\Delta t_3 = 10s$

$\vec{V}_1 = +2\frac{m}{s}$, $\vec{V}_2 = 0\frac{m}{s}$ $\vec{V}_3 = -2\frac{m}{s}$



Distance $30m + 0m + 20m = \boxed{50m}$

±Displacement $+30m + 0m - 20m = +10m$

Average Speed

$$S = \frac{d(\text{total})}{\Delta t(\text{total})} = \frac{50m}{30s} = 1.7\frac{m}{s}$$

±Average Velocity

$$\vec{V} = \frac{\Delta\vec{x}(\text{total})}{\Delta t} = \frac{+10m}{30s} = +0.33\frac{m}{s}$$

Model Problem

$$\vec{a} = \frac{\vec{V}_f - \vec{V}_i}{\Delta t}$$

Practice B:

$\vec{a} = -1.85 \frac{m}{s^2}$

$\vec{V}_i = ?$

$V_f = 3.07 \frac{m}{s}$

$\Delta t = 6.7 s$

⊕ velocity

Slows

⊖ acceleration

Equation

$$\vec{a} = \frac{\vec{V}_f - \vec{V}_i}{\Delta t}$$

$$6.7 s\left(-1.85 \frac{m}{s}\right) = \left(\frac{3.07 \frac{m}{s} - \vec{V}_i}{6.7 s}\right) 6.7 s$$

$$-12.395 \frac{m}{s} = 3.07 \frac{m}{s} - V_i$$

$$-3.07 \frac{m}{s} \qquad -3.07 \frac{m}{s}$$

$$\boxed{+15.465 \frac{m}{s}} = +V_i$$