Given x2.5

(+ Units)

$t_i = 0s$

$t_f = 2.0s$

$a = .5\ m/s^2$

$V_i = 0\ m/s$

$V_f = ?$

Eq x2.5

$$a = \frac{\Delta V}{\Delta t} = \frac{V_f - V_i}{t_f - t_i}$$

$$a(t_f - t_i) + V_i = V_f$$

Sub x2.5

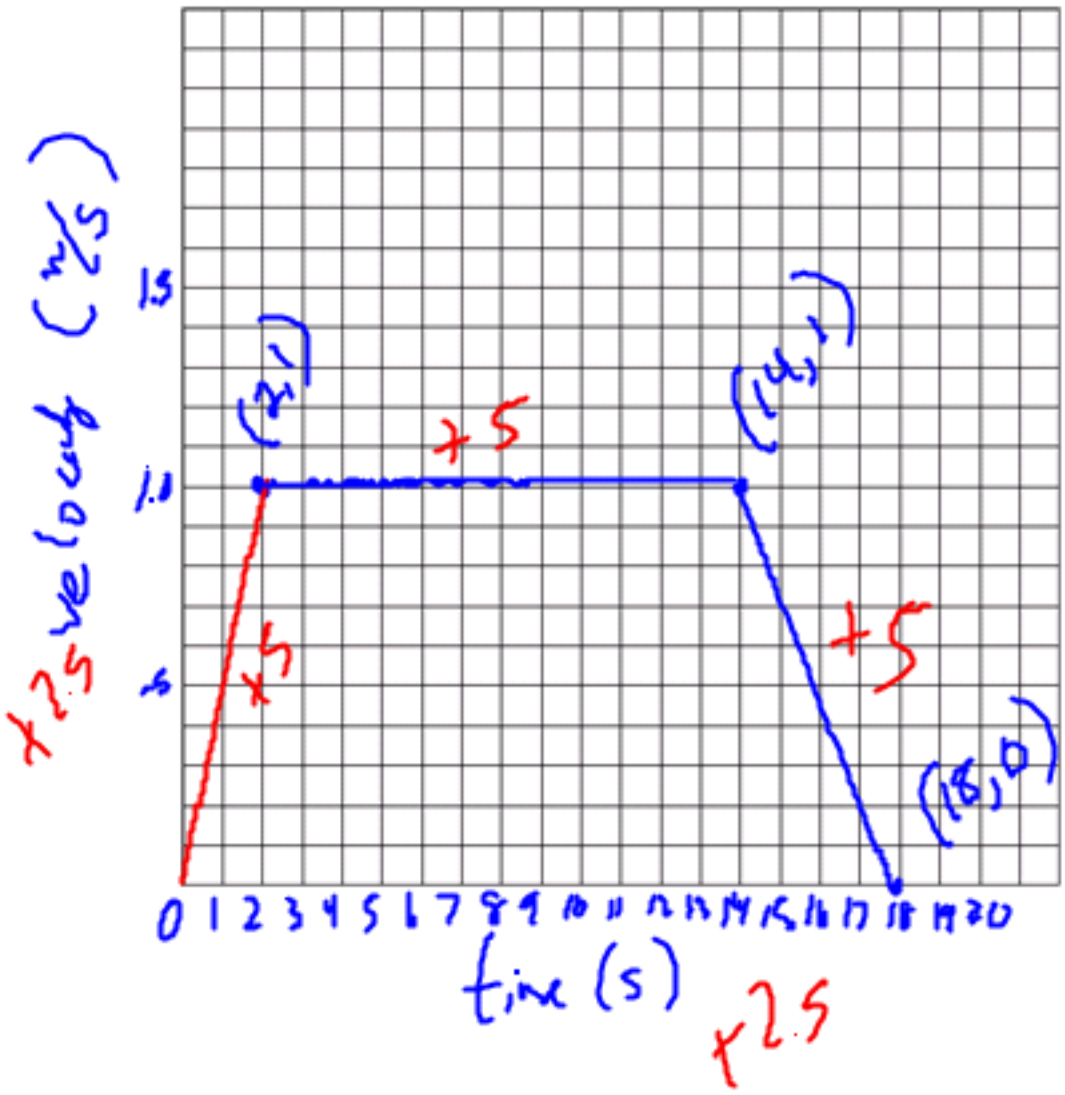
$$V_f = .5\ m/s^2 (2s - 0s) + 0\ m/s$$

Solve + Ans x2.5

$$V_f = .5\ m/s^2 (2s) + 0\ m/s$$

$$V_f = 1\ m/s + 0\ m/s$$

$$V_f = 1\ m/s$$



Leg 2 6m

constant $v = 1\ m/s$

$\Delta t = 12s$

$t_i = 2s$

$t_f = ?$

Eq. $\Delta t = t_f - t_i$

$\Delta t + t_i = t_f$

Sub. $12s + 2s = t_f$

Solve $14s = t_f$

3rd Leg

Given

$t_i = 14s$

$t_f = ?$

$\Delta t = 4s$

$V_i = 1\ m/s$

$V_f = ?$

$a = .25\ m/s^2$

Eq

$\Delta t = t_f - t_i$

$\Delta t + t_i = t_f$

$a = \frac{V_f - V_i}{\Delta t}$

$a(\Delta t) + V_i = V_f$

$-a(\Delta t) + V_i = V_f$

Sub

$4s + 14s = t_f$

$-.25\ m/s(4s) + 1\ m/s = V_f$

$-1\ m/s + 1\ m/s = V_f$

$0 = V_f$

Solve for

$18s = t_f$

↑ Constant direction