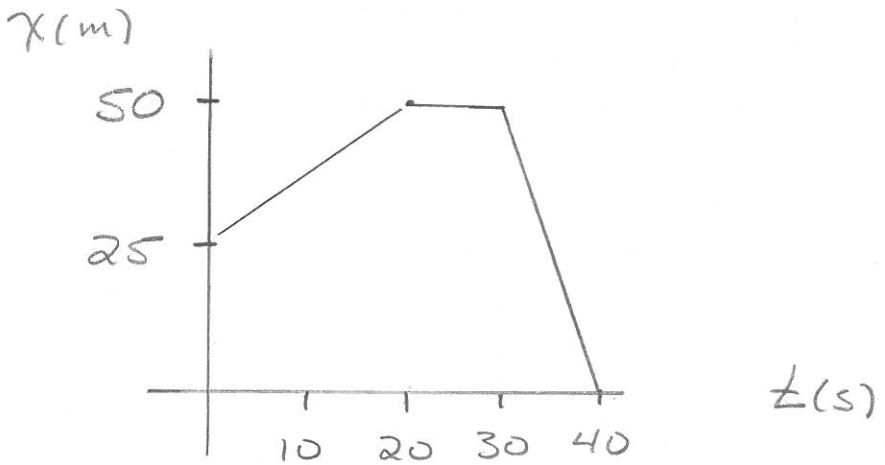


Velocity, $v_x = \frac{dx}{dt}$ = instantaneous slope

Here slope (and v_x) is constant for

$t = 0 \to 20s$; $t = 20 \to 30s$; and $t = 30 \to 40s$.

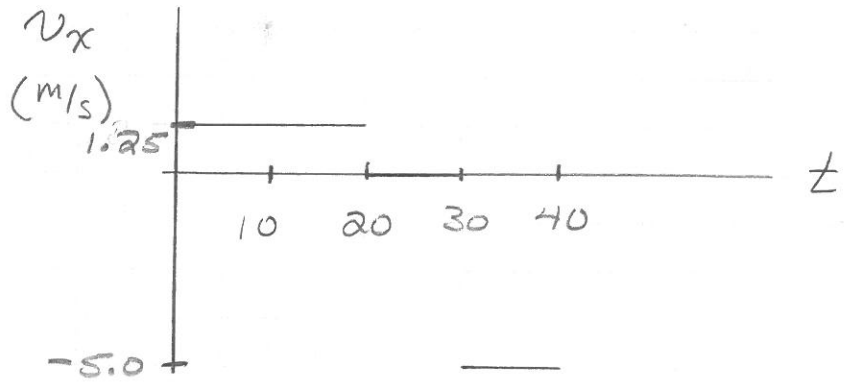
So

at $t = 10s$: $v_x = \frac{\Delta x}{\Delta t} = \frac{50-25}{20-0} = \underline{1.25\ m/s}$

at $t = 25s$: $v_x = \frac{\Delta x}{\Delta t} = \frac{50-50}{30-20} = \underline{0.0\ m/s}$

at $t = 35s$: $v_x = \frac{\Delta x}{\Delta t} = \frac{0-50}{40-30} = \underline{-5.0\ m/s}$

So:



— what is the motion for this?