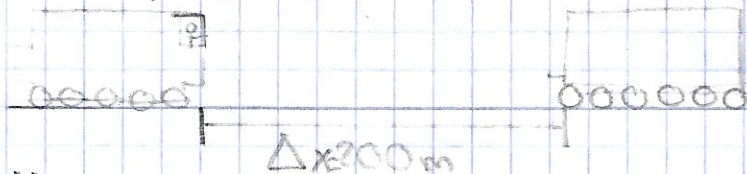


$$t = 0s$$

Tarea 1. $ax = 0.1m/s = cte$

$$v_{TP} = 25m/s$$

$$v_{TC} = 15m/s = cte$$



$$x_{TP} = x_{TC}$$

a)

$$x_{TC} = x_0 + v_{TC}t \rightarrow x_{TC} = 200 + 15t$$

$$x_{TP} = x_0 + v_{TP}t + \frac{1}{2}at^2 \rightarrow x_{TP} = 0 + 25t + \frac{1}{2}(-0.1)t^2$$

$$200 + 15t = 25t + \frac{1}{2}(-0.1)t^2 \rightarrow 15t - 25t - \frac{1}{2}(-0.1)t^2 = -200$$

$$-10t - \frac{1}{2}(-0.1)t^2 = -200 \rightarrow t + \frac{1}{20}t^2 = \frac{-200}{-15}$$

$$t = 266.6s // \text{ Si hay colisión}$$

b)

$$x_{TC} = 200 + (15)(266.6) = 4199m$$

c)

