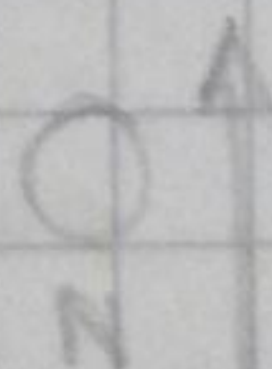


Examen final

1. Ambos llegan al mismo tiempo.

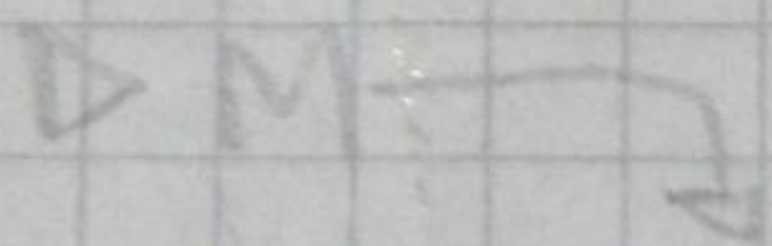
ya que en el enunciado nos dice que "Desprecia el rozamiento con el aire", por ende la masa no afecta

2.



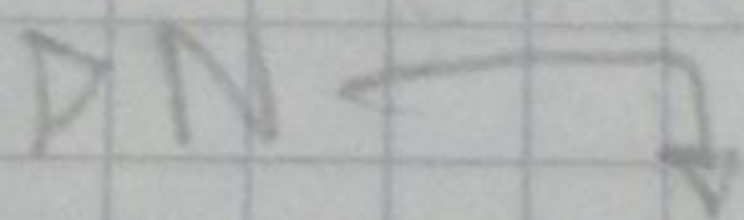
$$V^2 = V_0^2 - 2g(y-h)$$

No hay fricción con el aire



$$V_0 = -30 \text{ m/s}$$

$$\begin{aligned} V^2 &= (-30 \text{ m/s})^2 + 2gh \\ &= (30 \text{ m/s})^2 + 2gh \end{aligned}$$



$$V_0 = 30 \text{ m/s}$$

$$V^2 = (30 \text{ m/s})^2 + 2gh$$

Iguales

$$3. V_1 = 20 \text{ Km/h}$$

$$t = 1 \text{ h}$$

$$V_2 = 10 \text{ Km/h}$$

$$t = 2 \text{ h}$$

$$PV = d/t$$

$$V_1 \times t \longrightarrow \frac{20 \text{ Km}}{\text{h} \times 1 \text{ h}} = 20 \text{ Km}$$

$$V_2 \times t \longrightarrow \frac{10 \text{ Km}}{\text{h} \times 2 \text{ h}} = 20 \text{ Km}$$

$$4 T_1 = V_1 / g$$

$$T_2 = 4V_1 / g$$

$$h = \frac{V_1^2}{2}$$

$$h_1 = 8V_1^2$$

1/16 H es
16 veces h

5

$$\frac{90 \text{ N}}{10 \text{ Kg}} = \frac{90 \text{ Kg} \cdot \text{m/s}^2}{10 \text{ Kg}} = 90 \text{ m/s}^2$$