

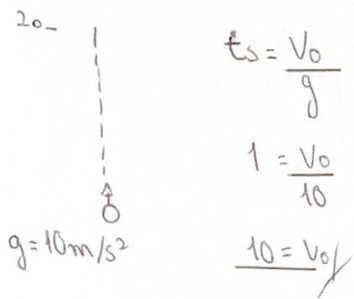
$$v_f^2 = v_0^2 + 2gh$$

$$60^2 = 20^2 + 2(10)h$$

$$3600 = 400 + 20h$$

$$3200 = 20h$$

$$\downarrow 160 = h$$



$$t_s = \frac{v_0}{g}$$

$$1 = \frac{v_0}{10}$$

$$\underline{10 = v_0}$$

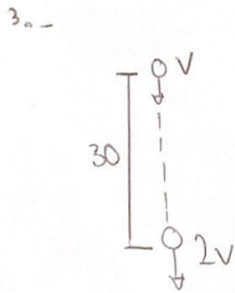
$$2 = 2t_s$$

$$1 = t_s$$

$$H_{\max} = \frac{v_0^2}{2g}$$

$$= \frac{10^2}{2(10)}$$

$$= \underline{5}$$



$$\left. \begin{aligned} 2v &= vt \\ v &= v_0 \\ t &= 2 \end{aligned} \right\}$$

$$\left. \begin{aligned} vt &= v_0 + gt \\ 2v &= v + 2g \\ v &= 2g \\ 10 &= 2g \end{aligned} \right\}$$

$$\underline{5 = g}$$

$$h = \frac{(v_0 + v_f) \cdot t}{2}$$

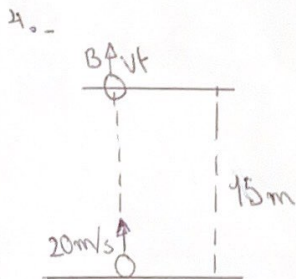
$$30 = \frac{(v + 2v) \cdot t}{2}$$

$$60 = 3v \cdot t$$

$$60 = 3v \cdot 2$$

$$60 = 6v$$

$$\underline{10 = v}$$



$$v_f^2 = v_0^2 - 2gh$$

$$v_f^2 = 20^2 - 2(10)(15)$$

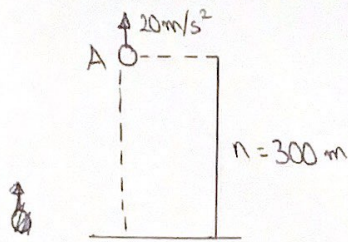
$$v_f^2 = 400 - 300$$

$$v_f^2 = 100$$

$$v_f = \underline{10}$$

$$g = 10 \text{ m/s}^2$$

6.-



$g = 10 \text{ m/s}^2$

$$v_f^2 = v_0^2 + 2gh$$

$$v_f^2 = (20)^2 + 2(10)(300)$$

$$v_f^2 = 400 + 6000$$

$$v_f^2 = 6400$$

$$v_f = 80 \text{ m/s}$$

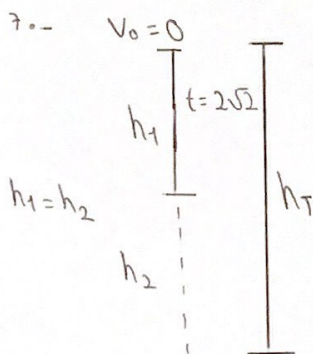
$$v_f = v_0 + gt$$

$$80 = 20 + 10 \cdot t$$

$$60 = 10t$$

$$6 = t$$

7.-



$g = 10 \text{ m/s}^2$

$$h = v_0 \cdot t + \frac{1}{2} (2 \cdot \sqrt{2})^2$$

$$h = 0 \cdot t + \frac{1}{2} (2 \cdot 2)$$
~~$$h = 2 + 2 = 4$$~~

$$2h = 10(4/2)$$

$$2h = 80$$

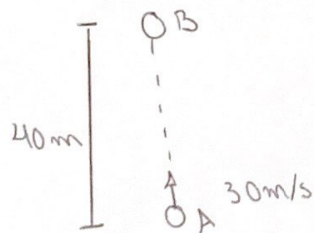
$$h = 40 \text{ m}$$

$$H_T = h_1 + h_2$$

$$H_T = 40 + 40$$

$$H_T = 80 \text{ m}$$

8.-



$g = 10 \text{ m/s}^2$

$$v_f^2 = v_0^2 - 2gh$$

$$v_f^2 = 30^2 - 2(10)(40)$$

$$v_f^2 = 900 - 800$$

$$v_f^2 = 100$$

$$v_f = 10 \text{ m/s}$$