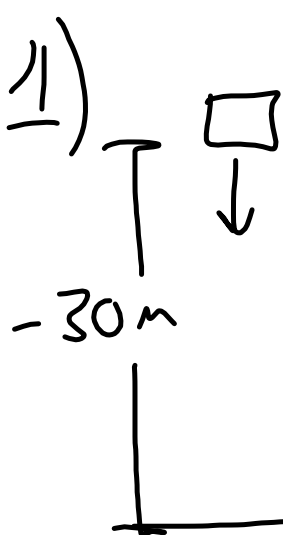


EXAM REVIEW



$$\uparrow^+ \quad v_i = 0 \text{ m/s}$$

$$a_g = -9.8 \text{ m/s}^2$$

$$t = ?$$

$$v_f = ?$$

$$\Delta y = v_i t + \frac{1}{2} a_g t^2$$

$$t = \sqrt{\frac{2\Delta y}{a_g}}$$

$$v_f^2 = v_i^2 + 2a_g \Delta y$$

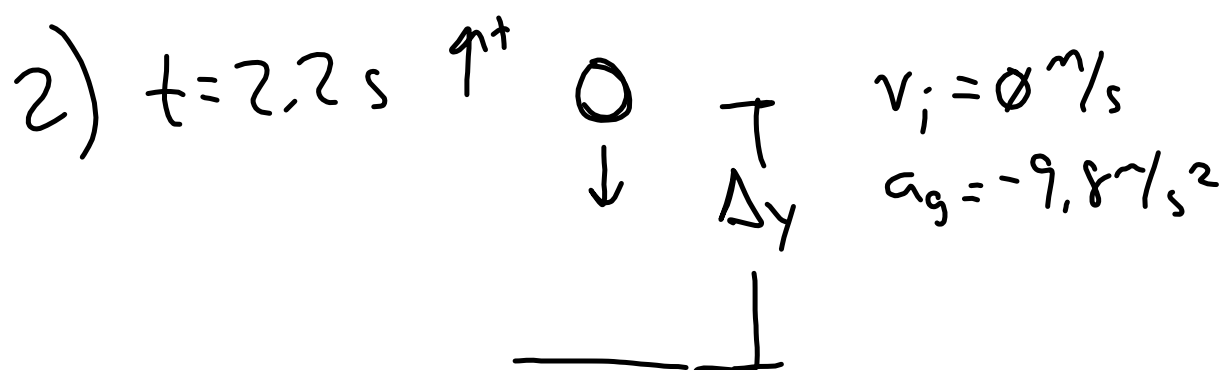
$$= \sqrt{\frac{2(-30\text{m})}{(-9.8\text{m/s}^2)}}$$

$$= 2.47 \text{ s}$$

$$v_f = \sqrt{2a_g \Delta y}$$

$$= \sqrt{2(-9.8\text{m/s}^2)(-30\text{m})}$$

$$= -24.2 \text{ m/s}$$



$$\begin{aligned}\Delta y &= v_i t + \frac{1}{2} a_g t^2 \\ &= \frac{1}{2} (-9.8 \text{ m/s}^2) (2.2 \text{ s})^2 \\ &= -23.7 \text{ m}\end{aligned}$$