

TAREA DE PLATAFORMA # 3

1) A) $V_{0x} = 20 \text{ m/s}$ $y = 6 \text{ m}$
 $g = 9.8 \text{ m/s}^2$

$$x = V_{0x} t$$

$$x = 20 \text{ m/s} \times 1.11 \text{ s}$$

$$x = 22.2 \text{ m}$$

$$t = \sqrt{\frac{2y}{g}}$$

$$t = \sqrt{1.22 \text{ seg}^2}$$

$$t = \sqrt{\frac{2 \times 6 \text{ m}}{9.8 \text{ m/s}^2}}$$

$$t = 1.11 \text{ seg}$$

$$2) \quad y = 100 \text{ m} \quad x = 80 \text{ m}$$

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

$$t = \sqrt{\frac{2y}{g}}$$

$$t = 4.52 \text{ seg}$$

$$t = \sqrt{\frac{2 \times 100 \text{ m}}{9.8 \text{ m/s}^2}}$$

$$t = \sqrt{20.40 \text{ s}^2}$$

$$v_{ox} = \frac{x}{t}$$

$$v_{ox} = 17.70 \text{ m/s}$$

$$v_{ox} = \frac{80 \text{ m}}{4.52 \text{ seg}}$$

$$3) \quad v_{ox} = 5.5 \text{ m/s}$$

$$y = 2 \text{ m}$$

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

$$x = v_{ox} \cdot t$$

$$x = 5.5 \text{ m/s} \times 0.63 \text{ seg}$$

$$x = 3.47 \text{ m}$$

$$t = \sqrt{\frac{2y}{g}}$$

$$t = \sqrt{\frac{2 \times 2 \text{ m}}{9.8 \text{ m/s}^2}}$$

$$t = \sqrt{0.40 \text{ s}^2}$$

$$t = 0.63 \text{ seg}$$



4) $v_{0x} = 1.8 \text{ m/s}$ $t = 3 \text{ seg}$
 $g = 9.8 \text{ m/s}^2$

a) $y = \frac{g \cdot t^2}{2}$

$$y = (9.8 \text{ m/s}^2) \cdot (3 \text{ seg})^2$$

$$y = \frac{88.2 \text{ m}}{2}$$

$$y = 44.1 \text{ m}$$

b) $x = v_{0x} \cdot t$

$$x = 1.8 \text{ m/s} \times 3 \text{ seg}$$

$$x = 5.4 \text{ m}$$

5) $v_{0x} = 26 \text{ cm/s}$ $y = 72 \text{ cm}$
 $g = 9.8 \text{ m/s}^2$

$$x = v_{0x} \cdot t$$

$$x = 26 \text{ cm/s} \times 0.58 \text{ seg}$$

$$x = 9.8 \text{ cm}$$



$$g = \frac{100}{1m} = \frac{980}{1m} = 980 \text{ cm/s}^2$$

$$t = \sqrt{\frac{2y}{g}}$$

$$t = \sqrt{\frac{2 \times 72 \text{ cm/s}}{980 \text{ cm/s}^2}}$$

$$t = \sqrt{0.15 \text{ seg}^2}$$

$$t = 0.38 \text{ seg.}$$

