Tarea de plataforma 3

1) a) $V_{ox} = 20\ mt/s \quad Y = 6 mts$

$g = 9.8\ m/s^2$

$x = V_{ox}\ t$

$x = 20\ mts \times 1.115$

$x = 22.2\ mt$

$t = \sqrt{\frac{2y}{g}} \qquad t = \sqrt{1.22\ seg^2}$

$t = \sqrt{\frac{2 \times 6 mt}{9.8\ m/s^2}} \qquad t = 1.11\ seg$

2) $y = 100\ mt \qquad x = 80\ mt$

$g = 9.8\ m/s^2$

$$t = \sqrt{\frac{2y}{g}} \qquad t = 4.52\ seg$$

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

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

$$Vox = \frac{x}{t} \qquad Vox = 17.70\ mt/seg$$

$$Vox = \frac{80\ mt}{4.52\ seg}$$

3) $v_{ox} = 5.5\ mt/s$ $\quad y = 2\ mt$

$g = 9.8\ m/s^2$

$x = v_{ox} \cdot t$

$x = 5.5\ m/s \times 0.63\ seg$

$x = 3.47\ seg$

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

$$t = \sqrt{\frac{2 \times 2\ mt}{9.8\ mt}}$$

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

$t = 0.63\ seg$

4) $Vox = 1.8\ mt/s$ $\quad t = 3\ seg$

$g = 9.8\ m/s^2$

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

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

$y = \frac{88.2\ mt}{2}$ $\quad y = 44.1\ m$

b) $x = Vox \cdot t$

$x = 1.8\ m/s \times 3\ seg$

$x = 5.4\ mts$

5) $V_{ox} = 26\ cm/s$ $\quad y = 72\ cm$

$g = 9.8\ m/s^2$

$x = V_{ox} \cdot t$

$x = 26\ cm/s \times 0.58\ seg$

$x = 9.8\ cm$

$9.8 = \frac{100}{1m} = \frac{980}{1m} = 980\ cm/s^2$

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

$t = \sqrt{\frac{2 \times 72\ cm/s}{9.80\ cm/s^2}}$

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

$t = 0.38\ seg$