

Sema 3

1) $V_{0x} = 20 \text{ m/s}$

$Y = 6 \text{ metros}$

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

$X = V_{0x} t$

$X = 20 \text{ m/s} \times 1.1 \text{ seg}$

$X = 22.2 \text{ mts}$

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

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

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

$t = 1.1 \text{ seg}$

2) $Y = 100 \text{ m}$

$X = 80 \text{ mts}$

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

$V_{0x} = \frac{X}{t}$

$V_{0x} = \frac{80 \text{ mts}}{4.52 \text{ seg}}$

$V_{0x} = 17.70 \text{ m/s}$

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

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

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

$t = 4.52 \text{ seg}$

3) $V_{0x} = 5.5 \text{ m/s}$

$Y = 2 \text{ mts}$

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

$X = V_{0x} t$

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

$X = 3.47 \text{ mts}$

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

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

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

$t = 0.63 \text{ seg}$

$$4 \quad v_{0x} = 1.8 \text{ m/s}$$

$$t = 3 \text{ seg}$$

$$g = 980 \text{ m/s}^2$$

$$a) \quad Y = \frac{g t^2}{2}$$

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

$$Y = \frac{88.2 \text{ m}}{2} = \underline{Y = 44.1 \text{ m}}$$

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

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

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

$$5) \quad v_{0x} = 26 \text{ cm/s}$$

$$Y = 12 \text{ cm}$$

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

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

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

$$x = 26 \text{ cm/s} \times 0.38 \text{ seg}$$

$$t = \sqrt{\frac{(12)(980 \text{ cm/s}^2)}{980 \text{ cm/s}^2}}$$

$$\underline{x = 9.88 \text{ cm}}$$

$$9.8 = \frac{100}{1 \text{ m}} = \frac{980}{1 \text{ m}} = 980 \text{ cm/s}^2 \quad t = \sqrt{0.75 \text{ seg}^2}$$

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