

1) a) $V_{ox} = 20 \text{ m/s}$ $Y = 6 \text{ metros}$ $g = 9.8 \text{ m/s}^2$

$$X = V_{ox} t$$

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

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

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

$$\underline{X = 22.2 \text{ m/s}}$$

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

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

2) $Y = 100 \text{ m}$ $X = 80 \text{ m/s}$ $g = 9.8 \text{ m/s}^2$

$$V_{ox} = \frac{X}{t}$$

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

$$V_{ox} = \frac{80 \text{ m/s}}{4.52 \text{ seg}}$$

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

$$\underline{V_{ox} = 17.70 \text{ m/s}}$$

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

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

3) $V_{ox} = 5.5 \text{ m/s}$ $Y = 2 \text{ m/s}$ $g = 9.8 \text{ m/s}^2$

$$X = V_{ox} t$$

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

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

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

$$\underline{X = 3.47 \text{ m/s}}$$

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

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

4) $V_{ox} = 1.8 \text{ m/s}$

$t = 3 \text{ sec}$

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

a) $Y = \frac{gt^2}{2}$

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

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

$Y = 44.1 \text{ m}$

b) $X = V_{ox} t$

$X = 1.8 \text{ m/s} \times 3 \text{ sec}$

$X = 5.4 \text{ m}$

5) $V_{ox} = 26 \text{ cm/s}$

$Y = 72 \text{ cm}$

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

$X = V_{ox} t$

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

$X = 26 \text{ cm/s} \times 0.38 \text{ sec}$

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

$X = 9.88 \text{ cm}$

$9.8 = \frac{100}{1 \text{ m}} = \frac{980}{1 \text{ m}} =$

980 cm/s^2

$t = 0.38 \text{ sec}$