

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

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

$$g = 9.80 \text{ m/s}^2$$

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

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

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

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

b)

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

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

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

$$5) v_{0x} = 260 \text{ cm/s}$$

$$x = 16 \text{ cm}$$

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

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

$$x = 260 \text{ cm} / 6 \times 0.58 \text{ sec}$$

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

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

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

$$980 \text{ cm/s}^2 t =$$

$$\sqrt{0.13 \text{ sec}^2}$$

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

$$1) \quad v_{ox} = 20 \text{ m/s}$$

$$Y = 6 \text{ m/s}^2$$

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

$$X = v_{ox} t$$

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

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

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

$$X = 22 \text{ m/s}$$

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

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

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

$$X = 80 \text{ m/s}$$

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

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

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

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

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

$$v_{ox} = 17.7 \text{ m/s}$$

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

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

$$Y = 2 \text{ m/s}^2$$

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

$$X = v_{ox} t$$

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

$$X = 5.5 \text{ m/s} \times 0.635 \text{ s}$$

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

$$X = 3.49 \text{ m/s}$$

$$t = \sqrt{0.405^2}$$

$$t = 0.635 \text{ s}$$