

Tarea de plataforma

1 $V_{ox} = 30 \text{ m/s}$ $V = 30 \text{ m/s}$
 $g = 9.8 \text{ m/s}^2$

A) $t = \sqrt{\frac{24}{g}}$

$$t = \sqrt{\frac{2 \times 80 \text{ m}}{9.8 \text{ m/s}^2}}$$

$$t = \sqrt{16.33 \text{ s}^2}$$

B) $x = V_{ox} t$
 $x = 30 \text{ m/s} \times 4.04 = 121.2 \text{ m}$

$$2) v_{ox} = 198 \text{ Km/h} \quad y = 312 \text{ mt}$$

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

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

$$t = \sqrt{\frac{2 \times 312 \text{ mt}}{9.8 \text{ m/s}^2}}$$

$$t = \sqrt{63.67 \text{ s}^2}$$

$$t = 7.98 \text{ seg}$$

$$B) x = v_{ox} t$$

$$\frac{198}{1} = \frac{1}{1} \quad \frac{1000 \text{ mt}}{36000 \text{ s}} = \frac{1}{1} \quad \frac{1}{36000 \text{ s}} = \frac{1}{36000 \text{ s}}$$

$$\frac{198000 \text{ mt}}{36000 \text{ seg}} = 55 \text{ mt/s}$$

$$x = 55 \text{ mt/s} \times 7.98 \text{ seg} = 438.9 \text{ m}$$

3) $x = 90 \text{ mts}$ $y = 100 \text{ mts}$
 $g = 9.8 \text{ mts/s}^2$

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

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

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

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

$$v_{ox} = 19.96 \text{ m/s}$$

$$v_{ox} = 90 \text{ mts} \div 4.51 \text{ seg}$$

$$4 \quad V_{ox} = 520 \text{ pies/s} \quad t = 7 \text{ seg}$$
$$g = 32.2 \text{ pies}$$

A) Actitud a la que vuela el avión

$$Y = g \cdot t^2 \div 2$$

$$Y = \frac{32.2 \text{ pies/s}^2 (7 \text{ segundos})^2}{2}$$

$$Y = \frac{1577.8 \text{ pies}}{2} = Y = 788.9$$

B) Cual es su alcance horizontal

$$X = V_{ox} \cdot t$$
$$X = 520 \text{ pies/s} \times 7 \text{ seg} \quad X = 3640$$

5 $y = 30 \text{ m}$ $v_{0x} = 12 \text{ m/s}$
 $g = 9.8 \text{ m/s}^2$
 $x = ?$

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

$$t = \sqrt{\frac{2 \times 30 \text{ m}}{9.8 \text{ m/s}^2}}$$

$$t = \sqrt{6.12 \text{ s}^2} \quad t = 2.47 \text{ seg}$$

$$x = 12 \text{ m/s} \times 2.47 \text{ seg} =$$

$$x = 29.64 \text{ m}$$

$$VR = \sqrt{8.643 \text{ m/s}^2}$$

$$VR = 92.97 \text{ m/s}$$

$$7 \quad y = 1.2 \text{ m} \quad x = 1.53 \text{ m}$$

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

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

$$t = \sqrt{2 \times 1.2 \text{ m} / 9.8 \text{ m/s}^2}$$

$$t = \sqrt{0.24 \text{ s}^2} = 0.44 \text{ s}$$

$$V_{ox} = V \div t$$

$$V_{ox} = \frac{1.53 \text{ m}}{0.44}$$

$$V_{ox} = 3.12 \text{ m/s}$$

$$8) \quad y = 20 \text{ mts} \quad X = 24 \text{ mts} \quad g = 9.8$$

$$t = \sqrt{\frac{2y}{g}} \quad t = \sqrt{4.08} \text{ seg}$$

$$t = \sqrt{\frac{2 \times 20 \text{ m}}{9.8 \text{ m/s}^2}} \quad t = 2.02 \text{ seg}$$

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

$$V_{0X} = \frac{24 \text{ mts}}{2.02 \text{ seg}}$$

$$V_{0X} = 11.88 \text{ mts / seg}$$