1) Vox = mt/s Y = 80 metros g = 9.8 mt/s²

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

$t = \sqrt{\frac{(2)(80)}{9.80\ mt/s^2}}$

$t = \sqrt{16.335^2}$ 4.04 seg

b) X = Vox t

X = 30 mt/s × 4.04 = 121.2 mt

2) Vox = 198 Km/h Y = 372 mts g = 9.8 mt/s²

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

$t = \sqrt{\frac{(2)372\ mt}{9.8\ mt/s^2}}$

$t = \sqrt{63.67\ s^2}$ = 7.98 seg

b) X = Vox t

$\frac{198}{1} = \frac{1000\ mt}{1}$ $\frac{1}{5.04} = \frac{198,000}{5,040\ seg}$ 55 mt/s

X = 55 mt/s X = 7.98 seg = 439.9 mt

3) X = 90 mts V = 100 mts g = 9.8 mt/s²

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

$t = \sqrt{20.40\ mt/s^2}$ = 4.51 seg

$VOX = \frac{X}{t}$

VOX = 90 mt ÷ 4.51 seg = 19.96 mt/seg

Escaneado con CamScanner

4) $V_{0x} = 520$ pies/s $t = 7$ seg $g = 32.2$ pies/seg^2

a) altitud a la que vuela el avión

$y = \frac{gt^2}{2}$

$y = \frac{32.2 \text{ pies/seg}^2 (7 \text{ seg})^2}{2}$

$y = \frac{1,577.8 \text{ pies}}{2} =$ $y = 788.9$ Pies

B) Cual es su alcance horizontal

$X = V_{0x} t$

$X = 520$ pies/s $\times$ 7 seg $=$ $X =$ 3,640 Pies

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5) $y = 30$ mts $V_{0x} = 12$ m/s $g = 9.8$ m/s^2

a) $X = ?$

$X = V_{0x} \times T$

$T = \sqrt{\frac{(2)(30 \text{ mts})}{9.8 \text{ m/s}^2}}$

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

X 12 m/s $\times$ 2.47 seg $=$ $X =$ 29.64 mts

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6) $V_{0x} = 90$ m/s $y = 28$ mts g 9.8 mts/s^2

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

$t = \sqrt{\frac{2(28 \text{ mts})}{9.8 \text{ mts/s}^2}}$

$t = \sqrt{5.71 \text{ s}^2} =$ $t = 2.38$ seg

b) $X = V_{0x} T$

$X = 90$ m/s $\times$ 2.38 seg $=$ $X =$ 214.2

Escaneado con CamScanner

c) $Vx = Vox = 90\ mt/s$

$Vy = gt$

$Vy = 9.8\ mt/s^2 \times 2.385 = 23.32\ mt/s$

$VR = \sqrt{(Vx)^2 + (Vy)^2}$

$VR = \sqrt{(90\ mt/s)^2 + (23.32\ mt/s)^2}$

$VR = \sqrt{8.643\ mt/seg^2} = VB = 92.97\ mt/seg$

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7) $Y = 7.2$ metros $\quad X = 1.53$ metros $\quad g = 9.8\ mt/s^2$

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

$t = \sqrt{\frac{(2)(1.2\ mts)}{9.8\ mt/s^2}}$

$t = \sqrt{0.24\ seg^2} = 0.49\ seg$

$Vox = X \div t$

$Vox = \frac{1.53\ metros}{0.49\ seg} = Vox\ 3.12\ mt/s$

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8) $Y = 20$ metros $\quad X = 24$ metros $\quad g = 9.8 mt/s^2$

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

$t = \sqrt{\frac{(2)(20 metros)}{9.8\ mt/s^2}}$

$t = \sqrt{4.08\ seg^2} = 2.02\ seg$

$Vox = \frac{X}{T}$

$Vox = \frac{24\ metros}{2.02\ seg}$

$Vox = 11.88\ mt/seg$

Escaneado con CamScanner