

Worksheet Projectile Motion

k	v
h = 3.5	d
h = 6.5 m	
a = 9.8 $\frac{m}{s^2}$	

①

$$d = vt$$

$$d = 3.5(1.15)$$

$$d = 4.0 \text{ m}$$

②

$$h = \frac{1}{2}gt^2$$

$$6.5 = 4.9t^2$$

$$t = 1.15 \text{ s}$$

k	v
h = 1.8 m	h
t = 3.0 s	d

$$d = vt$$

$$= 1.8(3)$$

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

$$h = \frac{1}{2}gt^2$$

$$= 4.9(3)^2$$

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

k	v
d = 5 m	v _x
v _y = 0	
a = 9.8 $\frac{m}{s^2}$	
h = 4.5 m	

$$d = vt$$

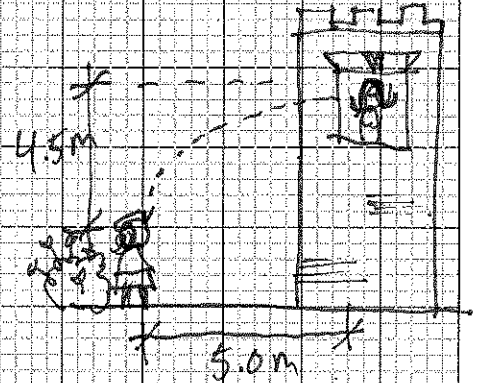
$$5 = v(0.96)$$

$$v = 5.23 \frac{m}{s}$$

$$h = \frac{1}{2}gt^2$$

$$4.5 = 4.9t^2$$

$$t = 0.96 \text{ s}$$



5.

k	v
v = 22 $\frac{m}{s}$	h
d = 26 m	

$$d = vt$$

$$26 = 22t$$

$$t = 1.18 \text{ s}$$

$$h = \frac{1}{2}gt^2$$

$$= 4.9(1.18)^2$$

$$h = 6.84 \text{ m}$$

4.

k	v
h = 62 m	
a = 9.8 $\frac{m}{s^2}$	
d = 24 m	v

$$d = vt$$

$$24 = v(3.56)$$

$$v = 6.74 \text{ m/s}$$

$$h = \frac{1}{2}gt^2$$

$$62 = 4.9t^2$$

$$t = 3.56 \text{ s}$$

	G	K	V
h	d = 75 m		
	v = $\frac{180 \text{ m}}{3}$		
v	a = $9.8 \frac{\text{m}}{\text{s}^2}$		h

$$d = vt$$

$$75 = 180t$$

$$t = 0.42 \text{ s}$$

$$h = \frac{1}{2}gt^2$$

$$= 4.9(0.42)^2$$

$$h = 0.85 \text{ m}$$

	70	K	V
	v = $\frac{108 \text{ km}}{\text{hr}}$		t =
	= $\frac{30 \text{ m}}{3}$		
	h = 60 m		

$$d = vt$$

$$h = \frac{1}{2}gt^2$$

$$160 = 4.9t^2$$

$$t = 5.7 \text{ seconds}$$

	80	K	V
	v = $\frac{88 \text{ km}}{\text{hr}}$		d
	h = 2500 m		

$$h = \frac{1}{2}gt^2$$

$$2500 = 4.9t^2$$

$$t = 22.6 \text{ s}$$

$$d = vt$$

$$= 88.8(22.6)$$

$$d = 2008 \text{ m}$$