

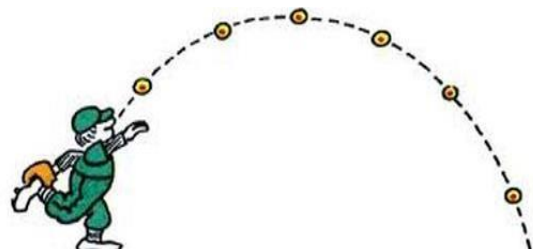


Projectile Motion

What is Projectile Motion?

• Objects that are _____ or _____ in the air and are subject to _____ are called _____.

• _____ is the _____ path that an object follows when _____, launched, or otherwise projected near the surface of _____.



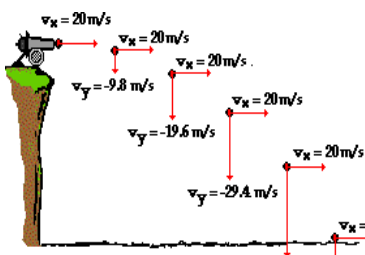
The path of a projectile curve is called a _____.

Projectile Motion is TWO Dimensional!

Projectiles are traveling in _____ dimensions, therefore have _____ on the _____ and _____ axis at the _____.

_____ (V_x) is _____ because there are _____ acting on it in the _____-direction.

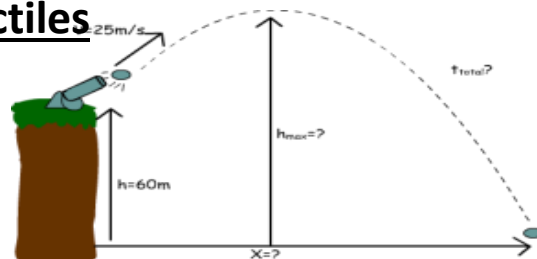
_____ (V_y) is _____ due to the force of _____.



Acceleration due to gravity is _____ m/s^2 .

* All aforementioned notes are ignoring air resistance

TWO Types of Projectiles



_____ launched

_____ -horizontally launched

What quantities can be MEASURED and CALCULATED with projectiles?

HORIZONTAL

ΔX _____
 V_{ix}, V_{fx} _____
 a_x = is always _____
 t = _____

VERTICAL

ΔY _____
 V_{iy}, V_{fy} _____
 a_y = is always _____
 t = _____

HOW can they be measured?

$$\Delta X = V_{ix} t$$

$$\Delta Y = V_{iy} t + \frac{1}{2} a t^2$$

$$V_{fy} = V_{iy} + a t$$

$$V_{fy}^2 = V_{iy}^2 + 2 a \Delta y$$