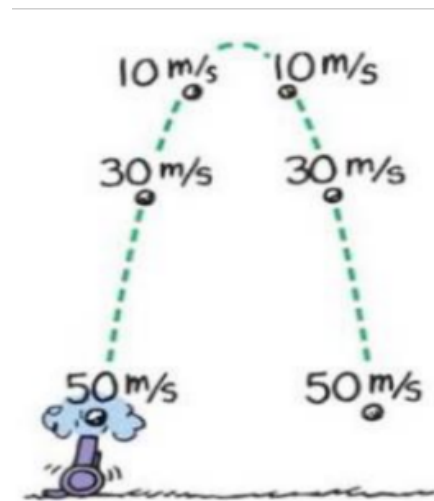
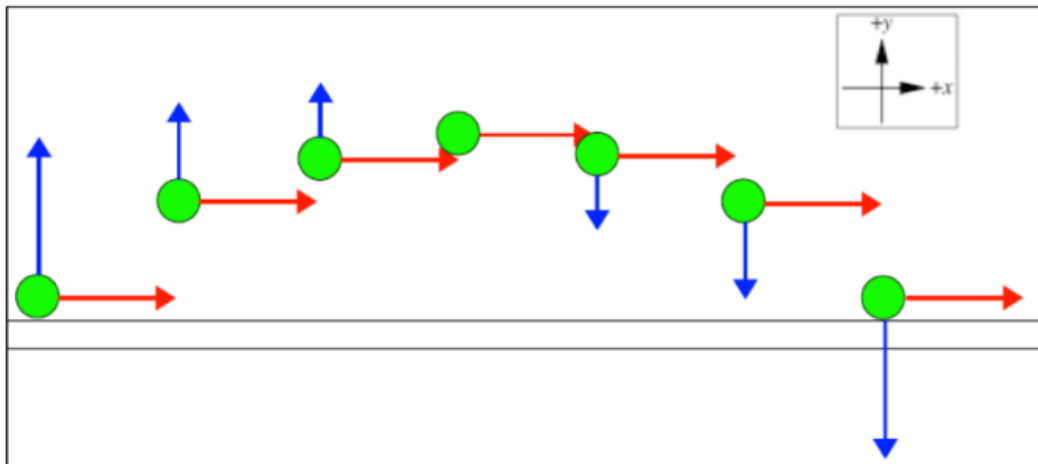


Projectile Launched Horizontally

Projectile Launched Vertically



<b>Projectile motion along the X axis (Horizontally)</b>	<b>Projectile motion along the Y axis (Vertically)</b>
$a = 0 \text{ m/s}^2$  $V_x = V_{ox}$  $X = V_{ox} t$	$a = a_g = g = -9.8 \text{ m/s}^2$  $V_y = V_{oy} + g t$  $Y = 1/2 (V_{oy} + V_y) t$  $V_y^2 = V_{oy}^2 + 2 g Y$  $Y = V_{oy} t + 1/2 g t^2$

Maximum height:  $Y = 1/2 V_{oy} t$  ( $V_{top} = 0,$ )

Time to reach the ground (hang Time) =  $t = -2 V_{oy} / g$

Time at maximum height =  $t = - V_{oy} / g$