

# Kinematics in Two Dimensions

- $x = x_0 + v_{0x}t + 1/2 a_x t^2$

- $v_x = v_{0x} + a_x t$

- $v_x^2 = v_{0x}^2 + 2a_x \Delta x$

- $y = y_0 + v_{0y}t + 1/2 a_y t^2$

- $v_y = v_{0y} + a_y t$

- $v_y^2 = v_{0y}^2 + 2a_y \Delta y$

Must be able to identify variables in these equations!

**x and y motions are independent!**  
They share a common time t