

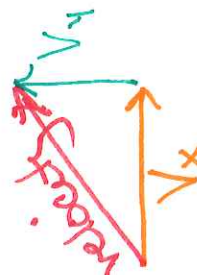
Vector Components of Projectile Motion Diagram 10/02



Free fall = straight down due only to gravity
 Projectile = out & down (may also be up) due to Force + gravity

↑ & ↓ → arrows represent vectors
 ↳ direction
 ↳ magnitude (length)

Path = trajectory
 = 1/2 or full parabola



• broken into
 x y components
 • independent
NOT RELY
 on each other

Vy vert
 • velocity along ⊕ x axis
 traveling vertically
 • astraveling ↓ decreases

Force ↑ Force g ↓ subtract
 • at top $V_{y\text{ vert}} = 0 \frac{m}{s}$
 Force ↑ = Force g ↓ subtract
 • astravel down
 Force Force g ↓ add

ag = acceleration due to gravity
 always $9.8 \frac{m}{s^2}$, down, never changes