

$$v = \frac{\Delta d}{\Delta t}$$

$$a = \frac{\Delta v}{\Delta t}$$

$$F_{net} = m \cdot a$$

$$F_g = m \cdot g = \text{weight}$$

$$g = 9.8 \text{ m/s}^2$$

$$W = F \cdot d$$

$$PE = mgh$$

$$KE = \frac{1}{2}mv^2$$

$$W = \Delta E$$

$$TME = PE + KE$$

Kinematics Equation Sheet

Unused Variable	Equation
$d$	$v_f = v_i + at$
$a$	$d = \bar{v} \cdot t = \frac{v_i + v_f}{2} t$
$v_f$	$d = v_i t + \frac{1}{2} at^2$
$v_i$	$d = v_f t - \frac{1}{2} at^2$
$t$	$v_f^2 = v_i^2 + 2ad$

Common Force Subscripts

$F_g$  = Force of Gravity

$F_N$  = Normal Force

$F_f$  = Friction Force

$F_{air}$  = Air Resistance

$F_d$  = Drag Force

$F_B$  = Buoyant Force