# PHYSICS RESOURCES

## VELOCITY EQUATION

$V = d / t$

$D = Vt$

$T = d / V$

## WORK, ENERGY & POWER

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

$\Delta KE = \frac{1}{2} m (Vf^2 - Vo^2)$

$GPE = mgh$

$W = Fd = \Delta E$

$h = \Delta PE / mg$

$h = \frac{1}{2}v^2 / g$

$W = \Delta KE + \Delta PE$

$P = W / t = Fd / t = (m)(a)d / t$

$t = (m)(a)d / P$

$d = \frac{1}{2} at^2$

$d = \frac{1}{2} m\Delta v^2 / F$

## ACCELERATION EQUATIONS

$V_1 = Vo + at$

$d = \frac{1}{2} (Vf + Vf)\ t\ d = Vft + \frac{1}{2} at^2$

$Vf^2 = Vf^2 + 2ad$

$t = Vf - Vf / a$

$t = 2d / Vo + Vf$

If $Vf = 0$ then

## FORCE EAQUATIONS

$Fnet = ma$

$a = Fnet / m$

$m = Fnet / a$

"If $Vo = Vf$ then $Fnet = 0$"

$Fg = mg$

"If $Vf > Fapp$"

"If no masses given then $\mu = a / g$"

"If V is constant then $Fapp = Ff$"

"If V is accelerating then F $Fapp - Fnet$"

"If no Fapp then $Ff = Fnet$"

$Fnet = Fapp - Ft$