

NEWTONIAN MECHANICS		a = acceleration F = force  h = height K = kinetic energy m = mass p = momentum  r = radius or distance t = time  U = potential energy v = velocity or speed  W = work done on a system x = position θ = angle  g = acceleration due to gravity (9.8 m/s <sup>2</sup> ) C = capacitance q = point charge  R = resistance k = Coulomb's constant (9.0 X 10 <sup>9</sup> N*m <sup>2</sup> /C <sup>2</sup> )  λ = wavelength f = frequency H = rate of heat transfer k = thermal conductivity L = thickness  Q = heat transferred to a system T = temperature U = internal energy	GEOMETRY AND TRIGONOMETRY
v = v <sub>i</sub> + at		Rectangle A = bh	A = area C = circumference
x = x <sub>i</sub> + v <sub>i</sub> t + ½ at <sup>2</sup>		Triangle A = ½ bh	V = volume S = surface area
v <sup>2</sup> = v <sub>i</sub> <sup>2</sup> + 2aΔx		Circle A = πr <sup>2</sup>	b = base h = height l = length w = width r = radius
v = Δx/t		Rectangular Solid V = lwh	
a = Δv/t		Cylinder V = πr <sup>2</sup> l S = 2πrl + 2πr <sup>2</sup>	
ΣF = F <sub>net</sub> = ma		Sphere V = 4/3 πr <sup>3</sup> S = 4πr <sup>2</sup>	
a <sub>c</sub> = v <sup>2</sup> /r		Right triangle a <sup>2</sup> + b <sup>2</sup> = c <sup>2</sup> sinθ = opposite/hypotenuse cosθ = adjacent/hypotenuse tanθ = opposite/adjacent	
p = mv			
K = ½ mv <sup>2</sup>			
ΔU <sub>g</sub> = mgh			
W = Fd cosθ			
ELECTRICITY AND MAGNETISM			
F = (kq <sub>1</sub> q <sub>2</sub> )/r <sup>2</sup>			
C <sub>p</sub> = C <sub>1</sub> +C <sub>2</sub> +C <sub>3</sub> ...			
C <sub>s</sub> = 1/C <sub>1</sub> + 1/C <sub>2</sub> + 1/C <sub>3</sub> ...			
R <sub>p</sub> = 1/R <sub>1</sub> + 1/R <sub>2</sub> + 1/R <sub>3</sub> ...			
R <sub>s</sub> = R <sub>1</sub> + R <sub>2</sub> + R <sub>3</sub> ...			
WAVES AND OPTICS			
v = fλ			
THERMAL PHYSICS			
H = (kAΔT)/L			
ΔU = Q + W			

