***Science Matter and Energy* Formula Sheet for Chapter 10**

Displacement = final position – initial position

# Δ x =xf – xi

# 

# Hypotenuse2 = (leg 1)2 + (leg 2)2 (Pythagorean theorem)

a2 + b2 = c2

Speed = distance/time

s = d/t

Velocity = displacement/time

V = Δx/t

Acceleration = final velocity-initial velocity/time

a = vf - vi/t

Force = mass \* acceleration

F = ma

Gravitational Force = G \* mass of object 1 \* mass of object 2/distance2

F = G(m1+m2)/d2

Distance = ½ (acceleration of gravity) (time)2

D = 1/2gt2

Work = Force \* distance

W = Fd

Power = work/time

P = w/t

Momentum = mass \* velocity

p = mv

IMA = input distance/output distance

IMA = di/do