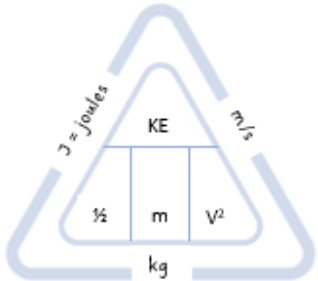


PHYSICS EQUATION SHEET

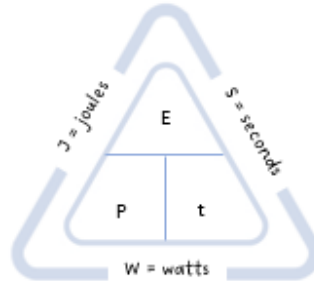
S = Separate Physics only
H = Higher tier only
★ = Given in the exam



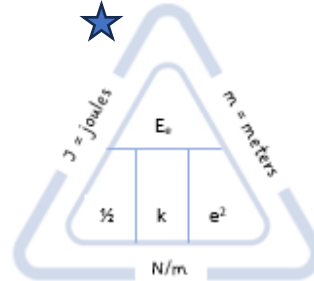
Kinetic energy = $\frac{1}{2} \times \text{mass} \times \text{speed}^2$



GPE = mass \times gfs \times height



Power \times Time = Energy



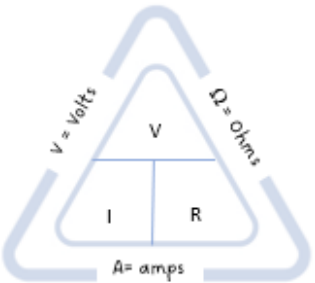
$E_e = 0.5 \times \text{spring constant} \times \text{extension}^2$



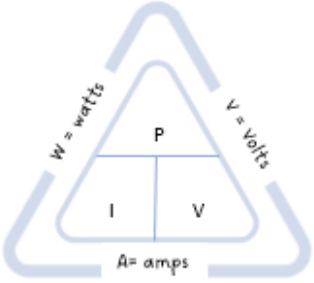
$\Delta E = \text{mass} \times shc \times \Delta\text{temp}$



Charge flow = current \times time



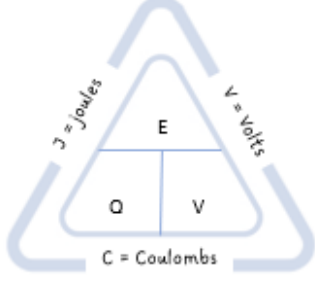
p.d = current \times resistance



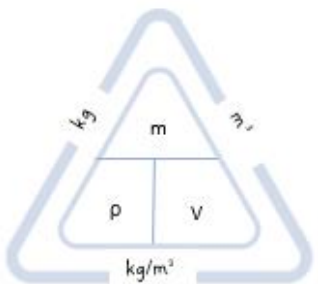
Power = current \times p.d



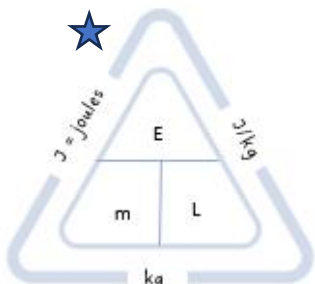
Power = current² \times resistance



Energy = charge flow \times p.d



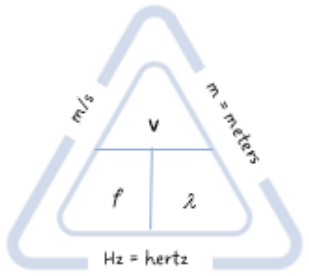
Density = $\frac{\text{mass}}{\text{volume}}$



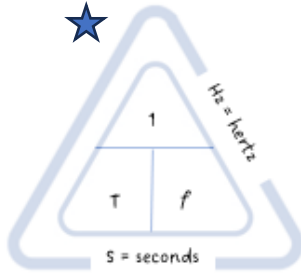
Energy change in state = mass \times slh



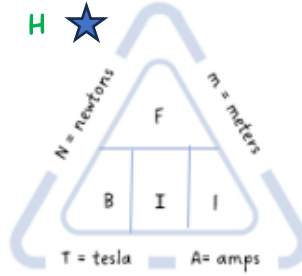
$\Delta E = \text{mass} \times shc \times \Delta\text{temp}$



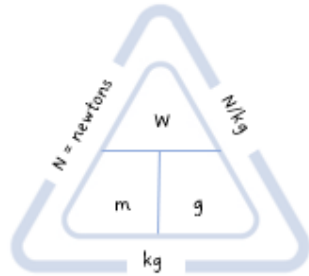
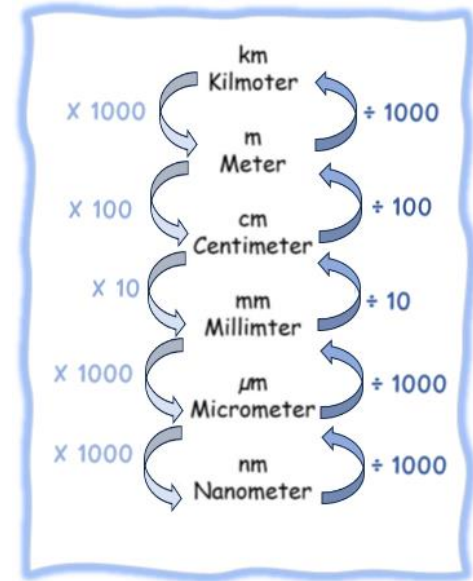
Wave speed = frequency \times wavelength



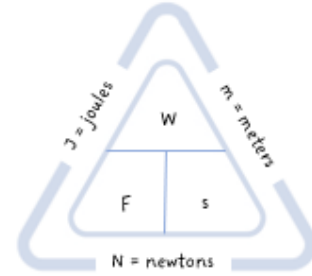
Time period = $\frac{1}{\text{frequency}}$



Force = magnetic flux density \times current \times length



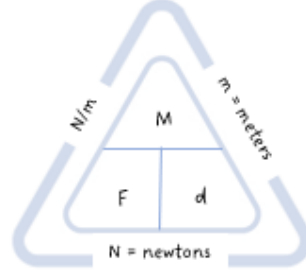
Weight = mass \times gfs



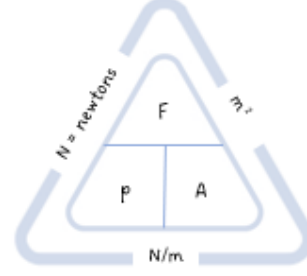
Work done = force \times distance



Force = spring constant \times extension



Moment = force \times distance



Pressure = $\frac{\text{force}}{\text{area}}$

Other Equations

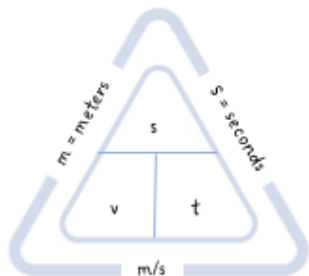
Pressure \times volume = constant (For gas)
 $P \times V = \text{Constant}$ ★

Magnification = $\frac{\text{image height}}{\text{object height}}$
 $M = \frac{h_{\text{image}}}{h_{\text{object}}}$ ★ ★

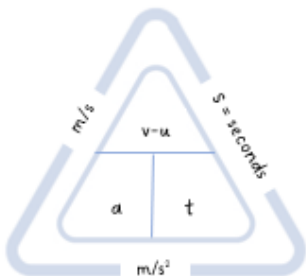
$\frac{\text{P.D across primary coil}}{\text{P.D across secondary coil}} = \frac{\text{Turns in primary coil}}{\text{Turns in secondary coil}}$
 $\frac{V_p}{V_s} = \frac{N_p}{N_s}$ ★ ★ ★

p.d primary \times current primary = p.d. secondary \times current secondary
 $V_p I_p = V_s I_s$ ★ ★

final velocity² - initial velocity² = 2 \times acceleration \times distance
 $V^2 - U^2 = 2as$ ★



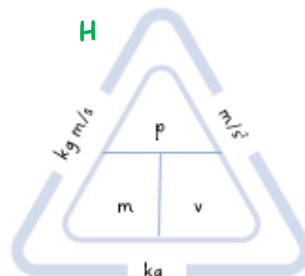
Distance travelled = speed \times time



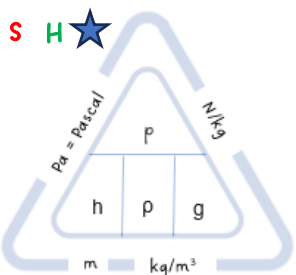
Acceleration = $\frac{\text{change in velocity}}{\text{time}}$



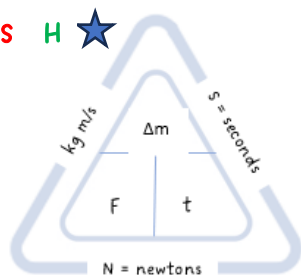
Force = mass \times acceleration



Momentum = mass \times velocity



Pressure = height \times density \times gfs



Force = $\frac{\text{change in momentum}}{\text{time}}$