


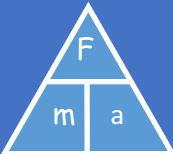
PHYSICS EQUATIONS To Remember

Topic 1 - Forces and motion




Speed = $\frac{\text{distance}}{\text{time}}$

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




Force = $\frac{\text{mass}}{\text{acceleration}}$




mass = $\frac{\text{weight}}{\text{gravity}}$


Topic 2 - Electricity




Current = $\frac{\text{Power}}{\text{Voltage}}$



Resistance = $\frac{\text{Voltage}}{\text{Current}}$




Charge = Current x time



Energy transferred = Charge x Voltage

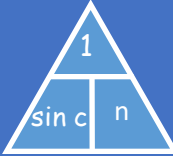
Topic 3 - Waves



wave speed = freq x wave length

Refractive index = $\frac{\text{angle of incidence}}{\text{angle of refraction}}$

$n = \frac{\sin i}{\sin r}$

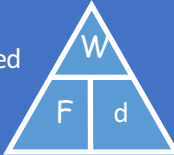


Critical angle = $\frac{1}{\text{refractive index}}$

Topic 4 - Energy Transfer

Efficiency = $\frac{\text{useful energy output}}{\text{useful energy input}}$

Work done = Force x Distance moved




Gravitational potential energy
GPE = m x g x h
Mass x gravitational field strength x height


KE = $\frac{1}{2} \times m \times v^2$

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

Topic 5 - Solids, Liquids, Gas



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



Pressure = $\frac{\text{Force}}{\text{Area}}$

$P = h \times \rho \times g$

Pressure difference = height x density x gravitational field strength