

Physics Equations Sheet

GCSE Physics (8463)

1	pressure due to a column of liquid = height of column × density of liquid × gravitational field strength(g)	p = h ρ g
2	(final velocity) ² – (initial velocity) ² = $2 \times acceleration \times distance$	$v^2 - u^2 = 2 \ a \ s$
3	force = change in momentum time taken	$F = \frac{m \Delta v}{\Delta t}$
4	elastic potential energy = $0.5 \times \text{spring constant} \times (\text{extension})^2$	$E_{\rm e} = \frac{1}{2} k {\rm e}^2$
5	change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = m c \Delta \theta$
6	$period = \frac{1}{frequency}$	$T=\frac{1}{f}$
7	$magnification = \frac{image \ height}{object \ height}$	
8	force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length	F = B
9	thermal energy for a change of state = mass × specific latent heat	E = m L
10	potential difference across primary coil potential difference across secondary coil = number of turns in primary coil number of turns in secondary coil	$\frac{V_p}{V_s} = \frac{n_p}{n_s}$
11	potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil	$V_{\rm p} I_{\rm p} = V_{\rm s} I_{\rm s}$
12	For gases: pressure × volume = constant	p V = constant

Higher Tier only equations are in **bold**.