



GCSE Physics (8463)

Physics Equations Sheet

[Turn over]

1	<p>pressure due to a column of liquid = height of column × density of liquid × gravitational field strength (g)</p>	$p = h \rho g$
2	<p>(final velocity)² – (initial velocity)² = 2 × acceleration × distance</p>	$v^2 - u^2 = 2 a s$
3	<p>force = $\frac{\text{change in momentum}}{\text{time taken}}$</p>	$F = \frac{m \Delta v}{\Delta t}$
4	<p>elastic potential energy = 0.5 × spring constant × (extension)²</p>	$E_e = \frac{1}{2} k e^2$
5	<p>change in thermal energy = mass × specific heat capacity × temperature change</p>	$\Delta E = m c \Delta \theta$

6	<p>period = $\frac{1}{\text{frequency}}$</p>	$T = \frac{1}{f}$
7	<p>magnification = $\frac{\text{image height}}{\text{object height}}$</p>	
8	<p>force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length</p>	$F = B I l$
9	<p>thermal energy for a change of state = mass × specific latent heat</p>	$E = m L$

ω

Equations 1, 3, 8, 10 and 11 are for Higher Tier only.

[Turn over]

10	<p>potential difference across primary coil potential difference across secondary coil</p> <p>=</p> <p>number of turns in primary coil number of turns in secondary coil</p>	$\frac{V_p}{V_s} = \frac{n_p}{n_s}$
11	<p>potential difference across primary coil × current in primary coil</p> <p>= potential difference across secondary coil × current in secondary coil</p>	$V_p I_p = V_s I_s$
12	<p>For gases: pressure × volume = constant</p>	$p V = \text{constant}$

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