



GCSE Combined Science: Trilogy (8464)
GCSE Combined Science: Synergy (8465)

Physics Equations Sheet

[Turn over]

1	(final velocity)² – (initial velocity)² = 2 × acceleration × distance	$v^2 - u^2 = 2 a s$
2	elastic potential energy = 0.5 × spring constant × (extension)²	$E_e = \frac{1}{2} k e^2$
3	change in thermal energy = mass × specific heat capacity × temperature change	$\Delta E = m c \Delta \theta$
4	period = $\frac{1}{\text{frequency}}$	$T = \frac{1}{f}$

5	<p>force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length</p>	$F = B I l$
6	<p>thermal energy for a change of state = mass × specific latent heat</p>	$E = m L$
7	<p>potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil</p>	$V_p I_p$ $= V_s I_s$

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Equations 5 and 7 are for Higher Tier only.

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**Insert for GCSE Combined Science:
Trilogy (8464) and GCSE Combined
Science: Synergy (8465)/E4**