



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

Physics Equations Sheet

[Turn over]

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

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>	$V_p I_p = V_s I_s$

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)/E1**