

## Physics Equations Sheet

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

1	(final velocity) <sup>2</sup> – (initial velocity) <sup>2</sup> = 2 × acceleration × distance	$v^2 - u^2 = 2 a s$
2	elastic potential energy = 0.5 × spring constant × (extension) <sup>2</sup>	$E_e = \frac{1}{2} k e^2$
3	change in thermal energy = mass × specific heat capacity × temperature change	$\Delta E = m c \Delta \theta$
4	period = $\frac{1}{\text{frequency}}$	
5	<b>force on a conductor (at right angles to a magnetic field) carrying a current</b> <b>= magnetic flux density × current × length</b>	$F = B I l$
6	thermal energy for a change of state = mass × specific latent heat	$E = m L$
7	potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil	$V_p I_p = V_s I_s$