

Physics Equations Sheet GCSE Combined Science: Trilogy (8464) GCSE Combined Science: Synergy (8465)

1	(final velocity) ² – (initial velocity) ² = $2 \times \text{acceleration} \times \text{distance}$	$v^2 - u^2 = 2 \ a \ s$
2	elastic potential energy = $0.5 \times \text{spring constant} \times (\text{extension})^2$	$E_{\rm e} = \frac{1}{2} k {\rm e}^2$
3	change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = m c \Delta \theta$
4	period = $\frac{1}{\text{frequency}}$	$T = \frac{1}{f}$
5	force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length	F=BIl
6	thermal energy for a change of state = mass \times 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	$V_p I_p = V_s I_s$

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