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Equation Sheet

GCSE (9–1) Combined Science B
(Twenty First Century Science)
Physics
J260/03, J260/07

The information in this sheet is for the use of candidates following GCSE (9–1) Combined Science B (Physics) (J260/03, J260/07).

A copy of this sheet will be provided as an insert within the question paper for each component.

Copies of this sheet may be used for teaching.

Version 2.0

Equations in physics

potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil	$V_p I_p = V_s I_s$
(final speed)^2 − (initial speed)^2 = 2 × acceleration × distance	$v^2 - u^2 = 2 a s$
change in internal energy = mass × specific heat capacity × change in temperature	$\Delta E = m c \Delta\theta$
energy to cause a change of state = mass × specific latent heat	$E = m l$
energy stored in a stretched spring = $\frac{1}{2}$ × spring constant × (extension)^2	$E = \frac{1}{2} k x^2$

Higher tier only

force = magnetic flux density × current × length of conductor	$F = B I l$
change in momentum = resultant force × time for which it acts	$\Delta p = F t$

Summary of updates

Date	Version	Details
May 2022	2.0	Word equations are presented in a table with the symbol equations. 0.5 is now represented as $\frac{1}{2}$