The information in this sheet is for the use of candidates following GCSE (9-1) Physics B (J259/01-04)

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.
Equations in physics

(final speed)² – (initial speed)² = 2 × acceleration × distance

change in internal energy = mass × specific heat capacity × change in temperature

energy to cause a change of state = mass × specific latent heat

energy stored in a stretched spring = \frac{1}{2} × spring constant × (extension)²

potential difference across primary coil × current in primary coil =
potential difference across secondary coil × current in secondary coil

for gases: pressure × volume = constant (for a given mass of gas and at a constant temperature)

Higher tier only –

force = magnetic flux density × current × length of conductor

potential difference across primary coil ÷ potential difference across secondary coil =
number of turns in primary coil ÷ number of turns in secondary coil

pressure due to a column of liquid = height of column × density of liquid × g

change in momentum = resultant force × time for which it acts