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GCSE (9–1) Physics B (Twenty First Century Science)

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Data Sheet

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Equations in physics

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

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

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

$(\text{final speed})^2 - (\text{initial speed})^2 = 2 \times \text{acceleration} \times \text{distance}$

energy stored in a stretched spring = ½ × spring constant × $(\text{extension})^2$

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

Higher tier only –

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

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

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

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