



## Equations in physics

change in thermal energy = mass  $\times$  specific heat capacity  $\times$  change in temperature

thermal energy for a change in state = mass  $\times$  specific latent heat

for gases: pressure  $\times$  volume = constant

(for a given mass of gas and at a constant temperature)

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

energy transferred in stretching =  $0.5 \times \text{spring constant} \times (\text{extension})^2$

potential difference across primary coil  $\times$  current in primary coil =

potential difference across secondary coil  $\times$  current in secondary coil

**Higher tier only –**

**pressure due to a column of liquid = height of column  $\times$  density of liquid  $\times$  g**

**force on a conductor (at right angles to a magnetic field) carrying a current =  
magnetic flux density  $\times$  current  $\times$  length**

**potential difference across primary coil  $\div$  potential difference across secondary coil = number  
of turns in primary coil  $\div$  number of turns in secondary coil**

---

# OCR

Oxford Cambridge and RSA

### Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.