

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**  
**GCSE (9–1)**

**J250 05/06/11/12**

**COMBINED SCIENCE A**  
**(GATEWAY SCIENCE) PHYSICS**

**Data Sheet (Insert)**

**JUNE 2018**

**MODIFIED ENLARGED**

## **INSTRUCTIONS**

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## **INFORMATION**

**The information in this Data Sheet is for the use of candidates following GCSE (9–1) Combined Science A (Physics) (J250 05/06/11/12).**



## Equations in physics

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

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

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

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

$\text{potential difference across primary coil} \times \text{current in primary coil} = \text{potential difference across secondary coil} \times \text{current in secondary coil}$

## HIGHER TIER ONLY

$\text{force on a conductor (at right angles to a magnetic field) carrying a current} = \text{magnetic field strength} \times \text{current} \times \text{length}$

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