



Oxford Cambridge and RSA

**Autumn 2021**

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

**J260 03/07**

**Data Sheet**



**INSTRUCTIONS**

- Do **not** send this Data Sheet for marking. Keep it in the centre or recycle it.

**INFORMATION**

- This document has **2** pages.

## Equations in physics

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

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

$$\text{energy to cause a change of state} = \text{mass} \times \text{specific latent heat}$$

$$\text{energy stored in a stretched spring} = \frac{1}{2} \times \text{spring constant} \times (\text{extension})^2$$

$$\begin{aligned} &\text{potential difference across primary coil} \times \text{current in primary coil} = \\ &\text{potential difference across secondary coil} \times \text{current in secondary coil} \end{aligned}$$

**Higher tier only –**

$$\text{force} = \text{magnetic flux density} \times \text{current} \times \text{length of conductor}$$

$$\text{change in momentum} = \text{resultant force} \times \text{time for which it acts}$$

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