

Paper Reference(s) 4PH1/1P 4SD0/1P
Pearson Edexcel International GCSE (9–1)

Physics

UNIT: 4PH1

Science (Double Award) 4SD0

PAPER: 1P

Thursday 16 November 2023 – Morning

Formulae Booklet

**DO NOT RETURN THIS BOOKLET WITH
THE QUESTION PAPER.**

You may find the following formulae useful.

energy transferred = current × voltage × time

$$E = I \times V \times t$$

frequency = $\frac{1}{\text{time period}}$

$$f = \frac{1}{T}$$

power = $\frac{\text{work done}}{\text{time taken}}$

$$P = \frac{W}{t}$$

power = $\frac{\text{energy transferred}}{\text{time taken}}$

$$P = \frac{W}{t}$$

orbital speed = $\frac{2\pi \times \text{orbital radius}}{\text{time period}}$

$$v = \frac{2 \times \pi \times r}{T}$$

$$\begin{aligned} &(\text{final speed})^2 = \\ &(\text{initial speed})^2 + (2 \times \text{acceleration} \times \text{distance moved}) \end{aligned}$$

$$v^2 = u^2 + (2 \times a \times s)$$

$$\text{pressure} \times \text{volume} = \text{constant}$$

$$p_1 \times V_1 = p_2 \times V_2$$

$$\frac{\text{pressure}}{\text{temperature}} = \text{constant}$$

$$\frac{p_1}{T_1} = \frac{p_2}{T_2}$$

Where necessary, assume the acceleration of free fall,
 $g = 10 \text{ m/s}^2$.