

FORMULAE

You may find the following formulae useful.

energy transferred = current \times voltage \times time

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

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

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

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

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

(final speed)² = (initial speed)² + (2 \times acceleration \times distance moved)

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

pressure \times volume = constant

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

force = $\frac{\text{change in momentum}}{\text{time taken}}$

$$F = \frac{(mv - mu)}{t}$$

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

$$\Delta Q = m \times c \times \Delta T$$

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