

# Formulas given on IGCSE Physics Exam

A.C. NORMAN  
ACN.Norman@radley.org.uk

energy transferred = current  $\times$  voltage  $\times$  time

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

pressure  $\times$  volume = constant

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

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

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

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

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

(final speed)<sup>2</sup> = (initial speed)<sup>2</sup> + (2  $\times$  acceleration  $\times$  distance moved)  $v^2 = u^2 + (2 \times a \times s)$

## Triple

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

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

$\frac{\text{change in wavelength}}{\text{reference wavelength}} = \frac{\text{velocity of a galaxy}}{\text{speed of light}}$

$$\frac{(\lambda - \lambda_0)}{\lambda_0} = \frac{\Delta \lambda}{\lambda_0} = \frac{v}{c}$$



Except where otherwise noted, this work is licensed under  
<http://creativecommons.org/licenses/by-nc-sa/4.0/>