

AQA GCSE · 8463

GCSE Physics Equation Sheet

The 2026 AQA physics equations sheet, with Higher tier equations marked.

1 Energy, electricity and density

On the sheet for Foundation and Higher.

Kinetic energy	$E_k = \frac{1}{2}mv^2$
Elastic potential energy	$E_e = \frac{1}{2}ke^2$
Gravitational potential energy	$E_p = mgh$
Change in thermal energy	$\Delta E = mc\Delta\theta$
Power	$P = \frac{E}{t}, P = \frac{W}{t}$
Efficiency	$\text{efficiency} = \frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$
Efficiency (power)	$\text{efficiency} = \frac{\text{useful power output}}{\text{total power input}}$
Charge flow	$Q = It$
Potential difference	$V = IR$
Electrical power	$P = VI, P = I^2R$
Energy transferred	$E = Pt, E = QV$
Density	$\rho = \frac{m}{V}$
Thermal energy for a change of state	$E = mL$
Gases	$pV = \text{constant}$

2 Forces, motion and waves

On the sheet for Foundation and Higher.

Weight	$W = mg$
Work done	$W = Fs$
Force on a spring	$F = ke$
Moment of a force	$M = Fd$
Pressure	$p = \frac{F}{A}$
Distance travelled	$s = vt$
Acceleration	$a = \frac{\Delta v}{t}$
Equation of motion	$v^2 - u^2 = 2as$
Resultant force	$F = ma$
Period	$T = \frac{1}{f}$
Wave speed	$v = f\lambda$
Magnification	$\text{magnification} = \frac{\text{image height}}{\text{object height}}$

3 Higher tier only (HT)

Marked HT on the sheet.

Pressure due to a column of liquid	$p = h\rho g$
Momentum	$p = mv$
Force and change in momentum	$F = \frac{m\Delta v}{\Delta t}$
Force on a conductor in a magnetic field	$F = BIl$

Transformer turns	$\frac{V_p}{V_s} = \frac{n_p}{n_s}$
Transformer power	$V_p I_p = V_s I_s$

From the exam board's published formulas for AQA GCSE - 8463, checked 21 October 2026. Always check your own exam paper.

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