

AQA GCSE Physics Paper 2 (P8 to P16) Equations

Recall may be required

1	P8	moment of a force = force x distance (normal to the direction of the force)	$M = F d$
2	P9	distance travelled = speed x time	$s = v t$
3	P9	acceleration = change in velocity / time taken	$a = \Delta v / t$
4	P10	weight = mass x gravitational field strength	$W = m g$
5	P10	force applied to a spring = spring constant x extension	$F = k e$
6	P10	resultant force = mass x acceleration	$F = m a$
7	P10	momentum = mass x velocity	$p = m v$
8	P11	pressure = force normal to the surface / area of that surface	$p = F/A$
9	P13	wave speed = frequency x wavelength	$v = f \lambda$

Given on equation sheet

1	P9	$(\text{final velocity})^2 - (\text{initial velocity})^2 = 2 \times \text{acceleration} \times \text{distance}$	$v^2 - u^2 = 2 a s$
2	P10	force = change in momentum / time taken	$F = m \Delta v / \Delta t$
3	P11	pressure due to a column of liquid = height of column x density of liquid x gravitational field strength (g)	$p = h \rho g$
4	P12	period = 1 / frequency	
5	P14	magnification = image height / object height	
6	P15	force on a conductor (at right angles to a magnetic field) carry current = magnetic flux density x current x length	$F = B I l$
7	P15	potential difference across primary coil / potential difference across secondary coil = number of turns in primary coil / number of turns in secondary coil	$V_p / V_s = n_p / n_s$
8	P15	potential difference across primary coil x current in primary coil = potential difference across secondary coil x current in secondary coil	$V_s I_s = V_p I_p$

Standard Symbols and Units

1	distance, s	length, l	extension, e	wavelength, λ	height, h	metre, m
2	time, t	period, T				second, s
3	area, a					meter squared, m^2
4	mass, m					kilogram, kg
5	speed, v	velocity, v	wave speed, v			meter per second, m/s
6	acceleration, a					meter per second squared, m/s^2
7	force, F	weight, W				newton, N
8	density, ρ					kilogram per metre cubed, kg/m^3
9	pressure, p					pascal, Pa (N/m^2)
10	gravitational field strength, g					newton per kilogram, N/kg
11	current, I					ampere or amp, A
12	potential difference, V					volt, V
13	spring constant, k					newton per metre, N/m
14	magnetic flux density, B					tesla, T
15	moment, M					newton meter, Nm
16	momentum, p					kilogram meter per second kg m/s
17	frequency, f					hertz, Hz

nano, n	micro, μ	milli, m	centi, c	kilo, k	mega, M	giga, G
10^{-9}	10^{-6}	10^{-3}	10^{-2}	10^3	10^6	10^9