

AQA GCSE 9-1 Physics Equations to Learn

N = Not needed for GCSE Science
H = Higher Tier Only

Paper One – 22nd May 2019

1	P1	work done = force x distance	$W = F s$
2	P1	kinetic energy = $0.5 \times \text{mass} \times (\text{speed})^2$	$E_k = \frac{1}{2} m v^2$
3	P1	gravitational potential energy = mass x gravity x height	$E_p = m g h$
4	P1	power = work done / time = energy / time	$P = W / t$
5	P1	efficiency = useful output / input	$\text{Eff} = \text{Out} / \text{In}$
6	P4	charge = current x time	$Q = I t$
7	P4	potential difference = current x resistance	$V = I R$
8	P5	power = potential difference x current	$P = V I$
9	P5	power = (current) ² x resistance	$P = I^2 R$
10	P5	energy transferred = charge flow x potential difference	$E = Q V$
11	P6	density = mass / volume	$\rho = m / V$

Paper Two – 14th June 2019

1 N	P8	moment = force x distance	$M = F d$
2	P9	distance = speed x time	$s = v t$
3	P9	acceleration = change in velocity / time taken	$a = \Delta v / t$
4	P10	weight = mass x gravity	$W = m g$
5	P10	force = spring constant x extension	$F = k e$
6	P10	force = mass x acceleration	$F = m a$
7 H	P10	momentum = mass x velocity	$p = m v$
8 N	P11	pressure = force / area	$p = F/A$
9	P13	wave speed = frequency x wavelength	$v = f \lambda$

If $A = B C$ then $B = A / C$ and $C = A / B$

