

Paper	Equation number	Word equation	Symbol equation
1 & 2	1	weight = mass × gravitational field strength (<i>g</i>)	$W = m g$
1	2	work done = force × distance (along the line of action of the force)	$W = F s$
2	3	force applied to a spring = spring constant × extension	$F = k e$
Sep	4	moment of a force = force × distance (normal to direction of force)	$M = F d$
Sep	5	pressure = $\frac{\text{force normal to a surface}}{\text{area of that surface}}$	$p = \frac{F}{A}$
2	6	distance travelled = speed × time	$s = v t$
2	7	acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$	$a = \frac{\Delta v}{t}$
2	8	resultant force = mass × acceleration	$F = m a$
2	9 HT	momentum = mass × velocity	$p = m v$
1	10	kinetic energy = 0.5 × mass × (speed) ²	$E_k = \frac{1}{2} m v^2$
1	11	gravitational potential energy = mass × gravitational field strength (<i>g</i>) × height	$E_p = m g h$
1 & 2	12	power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
1 & 2	13	power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
1	14	efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
1	15	efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
2	16	wave speed = frequency × wavelength	$v = f \lambda$
1	17	charge flow = current × time	$Q = I t$
1	18	potential difference = current × resistance	$V = I R$
1	19	power = potential difference × current	$P = V I$
1	20	power = (current) ² × resistance	$P = I^2 R$
1	21	energy transferred = power × time	$E = P t$
1	22	energy transferred = charge flow × potential difference	$E = Q V$
1	23	density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$