

Symbols and units for physical quantities

Candidates should be able to give the symbols for the following physical quantities and, where indicated, state the units in which they are measured. The list for the Extended syllabus content includes both the Core and the Supplement.

All candidates should be able to use the following multipliers: M mega, k kilo, c centi, m milli

Extended candidates should also be able to use the following multipliers: G giga, μ micro, n nano

Core			Supplement		
Quantity	Usual symbol	Usual unit	Quantity	Usual symbol	Usual unit
length	l, h, d, s, x	km, m, cm, mm			
area	A	m^2, cm^2			
volume	V	m^3, cm^3, dm^3			
weight	W	N			
mass	m, M	kg, g	mass	m, M	mg
time	t	h, min, s	time	t	ms, μ s
density	ρ	$g/cm^3, kg/m^3$			
speed	u, v	km/h, m/s, cm/s			
acceleration	a	m/s^2			
acceleration of free fall	g	m/s^2			
force	F	N			
gravitational field strength	g	N/kg			
			spring constant	k	N/m, N/cm
			momentum	p	kg m/s
			impulse		N s
moment of a force		N m			
work done	W	J, kJ, MJ			
energy	E	J, kJ, MJ, kWh			
power	P	W, kW, MW			
pressure	p	$N/m^2, N/cm^2$	pressure	p	Pa
temperature	θ, T	$^{\circ}C, K$			

Core			Supplement		
Quantity	Usual symbol	Usual unit	Quantity	Usual symbol	Usual unit
			specific heat capacity	c	J/(g °C), J/(kg °C)
frequency	f	Hz, kHz			
wavelength	λ	m, cm	wavelength	λ	nm
focal length	f	m, cm			
angle of incidence	i	degree (°)			
angle of reflection	r	degree (°)			
angle of refraction	r	degree (°)			
critical angle	c	degree (°)			
			refractive index	n	
potential difference/ voltage	V	V, mV, kV			
current	I	A, mA			
e.m.f.	E	V			
resistance	R	Ω			
charge	Q	C			
count rate		counts/s, counts/minute			
half-life		s, minutes, h, days, weeks, years			
			Hubble constant	H_0	s^{-1}