

Some physical quantities and their dimensions

$M = \text{mass}$, $L = \text{length}$, $T = \text{time}$, $\Theta = \text{temperature}$, $Q = \text{charge}$

Quantity	Symbol	Dimension
acceleration	a	LT^{-2}
angular velocity	ω	T^{-1}
area	A	L^2
area moment of inertia	I	L^4
bending modulus	κ, EI	ML^3T^{-2}
Boltzmann constant	k_B	$ML^2T^{-2}\Theta^{-1}$
charge	Q	Q
chemical potential	μ	ML^2T^{-2}
electric current	I	$T^{-1}Q$
density	ρ	ML^{-3}
diffusivity	D	L^2T^{-1}
elastic (Young's) modulus	E, G, Y	$ML^{-1}T^{-2}$
electric field	\mathbf{E}	$MLT^{-2}Q^{-1}$
energy; free energy; potential; work	$E; F, G; U, V; W$	ML^2T^{-2}
entropy	S	ML^2T^{-2}
force	F, f	MLT^{-2}
gravitational constant	g	LT^{-2}
kinematic viscosity	ν	L^2T^{-1}
length; coordinate	a, ℓ, L, x, y, z, r , etc.	L
magnetic dipole moment	\mathbf{m}	$L^2T^{-1}Q$
magnetic field	\mathbf{B}	$MT^{-1}Q^{-1}$
mass	m	M
moment of inertia	I	ML^2
momentum (angular)	L	ML^2T^{-1}
momentum (linear)	p	MLT^{-1}
power	P	ML^2T^{-3}
pressure; stress	$p; \sigma$	$ML^{-1}T^{-2}$
surface tension	γ	MT^{-2}
temperature	T	Θ
tension	T	MT^{-2}
time	t	T
torque	τ	ML^2T^{-2}
velocity	v, u, U	LT^{-1}
viscosity	η	$ML^{-1}T^{-1}$
volume	V	L^3