SI Prefixes

Factor	Name	Symbol	Factor	Name	Symbol
10^{1}	deca	da	10^{-1}	deci	d
10^{2}	hecto	h	10^{-2}	centi	c
10^{3}	kilo	k	10^{-3}	milli	m
10^{6}	mega	M	10^{-6}	micro	µ
10^{9}	giga	G	10^{-9}	nano	n
10^{12}	tera	T	10^{-12}	pico	p
10^{15}	peta	P	10^{-15}	femto	f
10^{18}	exa	E	10^{-18}	atto	a
10^{21}	zetta	Z	10^{-21}	zepto	z
10^{24}	yotta	Y	10^{-24}	yocto	y

Recommended Values of Physics Constants and Conversion Factors

Quantity	Symbol	Value
speed of light in a vacuum	either c or C_0	299 792 458m.s^{-1}
magnetic constant	μ_0	4π x 10^{-7} = 12.566 370 614…x 10^{-7} NA^{-2}
electric constant	ε_o	8.854 187 817…x 10^{-12} F m^{-1}
elementary charge	e	1.602 176 487(40) x 10^{-19} C
Newtonian gravitational constant	G	6.674 28(67) x 10^{-11} m^3 kg^{-1} s^{-2}
unified atomic mass unit	u	1.660 538 782(83) x 10^{-27} kg
rest mass of electron	m_e	9.109 382 15(45) x 10^{-31} kg
rest mass of proton	m_p m_p/m_e	1.672 621 637(83) x 10^{-27} kg 1 836.152 6675(39)
rest mass of neutron	m_n	1.674 927 211(84) x 10^{-27} kg
energy equivalence of rest mass of electron	$m_e c^2$	0.510 998 910(13) MeV
energy equivalence of rest mass of proton	$m_p c2$	938.272 013(23) MeV
energy equivalence of rest mass of neutron	$m_n c^2$	939.565 346(23) MeV

Planck constant	h	6.626 068 96(33) x 10^{-34} J s
$h/2\pi$	$\hbar$	1.054 571 628(53) x 10^{-34} J s
Rydberg constant	R	10 973 731.568 527(73) m^{-1}
fine structure	α	7.297 352 5376(50) x 10^{-3}
inverse	α^{-1}	137.035 999 679(94)
Bohr radius	a_0	0.529 177 208 59(36) x 10^{-10} m
classical electron radius	r_e	2.817 940 2894(58) x 10^{-15} m
Avogadro constant	Either N_A or L	6.022 141 79(30) x 10^{23} mol^{-1}
Molar gas constant	R	8.314 472(15) J mol^{-1} K^{-1}
Boltzmann constant	k	1.380 6504(24) x 10^{-23} J K^{-1}
Stefan-Boltzmann constant	σ	5.670 400(40) x 10^{-8}W m^{-2} K^{-4}
Bohr magnetron	μ_B	927.400 915(23) x 10^{-26} J T^{-1}
Nuclear magnetron	μ_N	5.050 783 24(13) x 10^{-27} J T^{-1}
magnetic flux	ϕ_0	2.067 833 667(52) x 10^{-15} Wb

*Units in brackets () contain the standard uncertainty of the value