Fundamental Constants

Constant	Symbol	Value
Velocity of light	c	$2.9979 \times 10^{8}\ \mathrm{m\ s^{-1}}$
Elementary charge	e	$1.6021 \times 10^{-19}\ \mathrm{C}$
Electron rest mass	m_e	$9.1091 \times 10^{-31}\ \mathrm{kg}$
Proton rest mass	m_p	$1.6725 \times 10^{-27}\ \mathrm{kg}$
Neutron rest mass	m_n	$1.6748 \times 10^{-27}\ \mathrm{kg}$
Planck constant	h	$6.6256 \times 10^{-34}\ \mathrm{J\ s}$
	$\hbar = h/2\pi$	$1.0545 \times 10^{-34}\ \mathrm{J\ s}$
Charge-to-mass ratio for electron	e/m_e	$1.7588 \times 10^{11}\ \mathrm{kg^{-1}\ C}$
Quantum charge ratio	h/e	$4.1356 \times 10^{-15}\ \mathrm{J\ s\ C^{-1}}$
Bohr radius	a_0	$5.2917 \times 10^{-11}\ \mathrm{m}$
Compton wavelength:		
of electron	$\lambda_{C,e}$	$2.4262 \times 10^{-12}\ \mathrm{m}$
of proton	$\lambda_{C,p}$	$1.3214 \times 10^{-15}\ \mathrm{m}$
Rydberg constant	R	$1.0974 \times 10^{7}\ \mathrm{m^{-1}}$
Bohr magneton	μ_B	$9.2732 \times 10^{-24}\ \mathrm{J\ T^{-1}}$
Avogadro constant	N_A	$6.0225 \times 10^{23}\ \mathrm{mol^{-1}}$
Boltzmann constant	k	$1.3805 \times 10^{-23}\ \mathrm{J\ K^{-1}}$
Gas constant	R	$8.3143\ \mathrm{J\ K^{-1}\ mol^{-1}}$
Ideal gas normal volume (STP)	V_0	$2.2414 \times 10^{-2}\ \mathrm{m^3\ mol^{-1}}$
Faraday constant	F	$9.6487 \times 10^{4}\ \mathrm{C\ mol^{-1}}$
Coulomb constant	K_e	$8.9874 \times 10^{9}\ \mathrm{N\ m^2\ C^{-2}}$
Vacuum permittivity	ϵ_0	$8.8544 \times 10^{-12}\ \mathrm{N^{-1}\ m^{-2}\ C^2}$
Magnetic constant	K_m	$1.0000 \times 10^{-7}\ \mathrm{m\ kg\ C^{-2}}$
Vacuum permeability	μ_0	$1.2566 \times 10^{-6}\ \mathrm{m\ kg\ C^{-2}}$
Gravitational constant	γ	$6.670 \times 10^{-11}\ \mathrm{N\ m^2\ kg^{-2}}$
Acceleration of gravity at sea level and at equator	g	$9.7805\ \mathrm{m\ s^{-2}}$

Numerical constants: $\pi = 3.1416$; $e = 2.7183$; $\sqrt{2} = 1.4142$; $\sqrt{3} = 1.7320$