

# CONSTANTS

## Mathematical Constants

<b>e</b>	Euler constant <b>2.7182818285</b>
<b><math>\pi</math></b>	Ratio of the circumference of a circle to its diameter <b>3.1415926536</b>

## Natural Constants

<b>a0</b>	Bohr radius <b>5.291772E-11 m</b>
<b><math>\alpha</math></b>	Fine structure constant ( $e^2/(2*\epsilon_0*c*h)$ ) <b>0.007297353</b>
<b>c</b>	Speed of light in vacuum (exact) <b>299792458 m/s</b>
<b><math>\epsilon_0</math></b>	Permittivity of vacuum or electric constant ( $1/(\mu_0*c^2)$ ) <b>8.8541878176E-12 A<sup>2</sup>*s<sup>2</sup>/(N*m<sup>2</sup>)</b>
<b>ec</b>	Elementary charge (positron charge) <b>1.6021765E-19 C</b>
<b>F</b>	Faraday constant (N*ec) <b>96485.34 C/mol</b>
<b><math>\Phi</math></b>	Magnetic flux quantum ( $h/2ec$ ) <b>2.0678337E-15 Wb</b>
<b>g</b>	Standard acceleration due to gravity (approximately equal to the acceleration due to gravity on the Earth's surface) <b>9.80665 m/s<sup>2</sup></b>
<b>G</b>	Newtonian constant of gravitation <b>6.674E-11 m<sup>3</sup>/(kg*s<sup>2</sup>)</b>
<b>G0</b>	Conductance quantum <b>0.00007748092 S</b>
<b>h</b>	Planck constant <b>6.626069E-34 J*s</b>
<b>hb</b>	Holds the Planck constant over $2\pi$ <b>1.0545717E-34 J*s</b>
<b>k</b>	Boltzmann constant <b>1.380651E-23 J/K</b>
<b>LP</b>	Planck length <b>1.6162E-35 m</b>
<b>md</b>	Deuteron rest mass <b>3.3435833E-27 kg</b>
<b>me</b>	Electron rest mass <b>9.109383E-31 kg</b>
<b>mn</b>	Neutron rest mass <b>1.6749273E-27 kg</b>
<b>mp</b>	Proton rest mass <b>1.6726217E-27 kg</b>

<b>mP</b>	Planck mass <b>2.1765E-08 kg</b>
<b>m<math>\mu</math></b>	Muon rest mass <b>1.8835314E-28 kg</b>
<b><math>\mu_0</math></b>	Permeability of vacuum or magnetic constant. <b>1.2566370614E-06</b>
<b><math>\mu_B</math></b>	Bohr magneton <b>9.274009E-24 C*J*s/kg</b>
<b><math>\mu_N</math></b>	Nuclear magneton <b>5.050783E-27 C*J*s/kg</b>
<b>N</b>	Avogadro constant <b>6.022142E+23 mol<sup>-1</sup></b>
<b>R</b>	Molar gas constant (N*k) <b>8.31447 J/(mol*K)</b>
<b>Rinf</b>	Rydberg constant <b>1.0973731568E+07 m<sup>-1</sup></b>
<b><math>\sigma</math></b>	Stefan-Boltzmann constant <b>5.6704E-08 J/(K<sup>4</sup>*s*m<sup>2</sup>)</b>
<b>tP</b>	Planck time (LP/c) <b>5.3912E-44 s</b>
<b>u</b>	Unified atomic mass unit (0.001 kg/mol)/N <b>1.6605389E-27 kg</b>
<b>Z0</b>	Characteristic impedance of vacuum ( $\mu_0*c$ ) <b>376.730313461 <math>\Omega</math></b>

The constants must have surrounding square brackets inside the editor. e.g. [ $\pi$ ]