Mathematical Constants

$e = 2.718281828459045$
$1/e = 0.367879441171442$
$e^2 = 7.389056098930650$
$\mathrm{Log}_{10}e = 0.434274481903252$
$\mathrm{Log}_{e}10 = 2.302585092994046$
$\mathrm{Log}_{10}\mathrm{Log}_{10}e = 9.637704311300537$

$\pi = 3.141592653589793$
$\pi^2 = 9.86960440108936$
$1/\pi = 0.318309886183791$
$\mathrm{Log}_{10}\pi = 0.497149872694134$
$\mathrm{Log}_{e}\pi = 1.144729885849400$
$\mathrm{Log}_{10}\sqrt{2\pi} = 0.399089934179057$
$e^{\pi} = 23.140692632779269$
$e^{-\pi} = 0.043213918263772$
$e^{\frac{1}{2}\pi} = 4.810477380965352$
$e^{-\frac{1}{2}\pi} = 0.207879576350762$

$\sqrt{2} = 1.41421356237309504880$
$\sqrt[3]{2} = 1.25992104989487316477$
$\sqrt{3} = 1.73205080756887729353$
$\sqrt[3]{3} = 1.44224957030740838232$
$\mathrm{Log}_{10}2 = 0.30102999566398119521$
$\mathrm{Log}_{e}2 = 0.69314718055994530942$
$\mathrm{Log}_{10}3 = 0.47712125471966243729$
$\mathrm{Log}_{e}3 = 1.09861228866810969140$

Physical Constants

Anomalous electron moment correction	1.159614e-3
Atomic mass unit	1.66056e-27 kg
Avogadro constant	6.0220e23 /mol
Bohr magneton	9.273e-24 J/T
Bohr radius	5.29177e-10 m
Boltzmann constant	1.3806e-23 J/K
Charge to mass ratio for electron	1.7588e11 /kg
Electron g-factor	1.00115966
Electron maqnetic moment	9.2848e-24 J/T
Electron radius	2.81793e-15 m
Electron rest mass	9.1095e-31 kg
Electron volt	1.6021e-19 C
Elementary charqe	1.6021e-19 C
Farady constant	9.6485e4 C
Fine structure constant	7.29735e-3
First radiation constant	3.7418e-16 Wm_2
Gas constant	3.7418e-16 J/mol K
Gravitational constant	6.67e-11 Nm_2 kg
Gyromaqnetic ratio of proton	2.67520e8 /sT
Josephson frequency -voltage ratio	4.83593e14 Hz/V
Maqnetic flux quantum	2.06785e-15 Wb
Molar std. volume, gas	2.2413 m_3/mol
Muon g-factor	1.001166
Muon maqnetic moment	4.4904e-26 J/T
Muon rest mass	1.8835e-28 kg

Neutron rest mass	1.67495e-27 kg
Normal volume, perfect qas	2.241e4 cm3/mol
Nuclear maqneton	5.0508e-27 J/T
Permeability of vacuum	1.2567e-6 H/m
Permittivity of vacuum	8.854187e-12 F/m
Planck constant	6.6261e-34 Js
Proton magnetic moment	1.41001e-26 J/T
Bohr magnetons	1.5210322e-3
Nuclear maqnetons	2.792845
Proton rest mass	1.67264e-27 kg
Quantum-charge ratio	4.1357e-15 J/HzC
Quantum of circulation	7.2738e-4 Js/kg
Ratio, electron to proton magnetic moment	6.5821068e2
Ratio, Sieggahn kxu to angstrom	1.00202
Ratio, muon moment to proton moment	3.18334
Ryberg constant	1.4387e7 /m
Speed of light (vacuum)	2.997924e8 m/s
Stefan-Boltzmann constant	5.670e-8 W/m2 k4
Thomson cross section	6.6524e-29 m2
Voltaqe-wavelength product	1.23985e-6 eVm
Wien displacement constant	2.897 cmK
Zeeman splflting constant	4.6685e-5 /cmG

Equivalent enerqies:
```
 u            9.31501     MeV
 proton mass    9.38279e2 MeV
 neutron mass   9.3957e2 MeV
 muon mass      1.05659e2 MeV
 electron mass  5.11003e2 MeV
 electron vaft  1.1604e4 K
```

Miscellaneous Constants

Density of dry air at 0 C, 760 mm = 1.2929 g / L

Density of mercury, 0 C = 13.5955 g / mL

Density of water, 3.98 C = 1.000000 g / mL

Electrochemical equiv. of silver = 0.001118 g / sec int. amp

Gas constant = 8.314 X 10^7 erg / g mole deg

Gravitational acceleration, sea level, 45 lat. = 980.621 cm / sec^2

Gravitation constant = 6.67 X 10^{-11} N m^2 / kg^2

Heat of fusion (water at 0 C) = 79.71 cal / g

Heat of vaporization of water (100 C) = 539.55 cal / g

Mass of hydrogen atom = 1.673 X 10^{-24} g

Mean density of the earth = 5.522 g / cm^3

Radius of the earth (equitorial) = 6378.388 km

Radius of the earth (polar) = 6356.912 km

Velocity of light (vacuum) = 2.99793 X 10^{10} cm / sec

Velocity of sound (dry air, 0 C) = 331.36 m / sec