

# TAKE NOTICE : Any FORMULA substitution may only be done with MKS Values.

[emailcollegecc@gmail.com](mailto:emailcollegecc@gmail.com) AJ NOLTE

## M K S SYSTEM

**meter**

Earth's circumference poles is 40008km (40008000m)  
At equator 67km more.

*Definition: 1 m is the distance light travels through a vacuum in exactly 1/299792458 seconds.*

**kg**

1 liter water is 1kg  
1m<sup>3</sup> is 1000 liter  
1000 kg 1 tonne  
example: 6 tonne truck has 6m<sup>3</sup> space so carries 6 tonne.

**seconds**

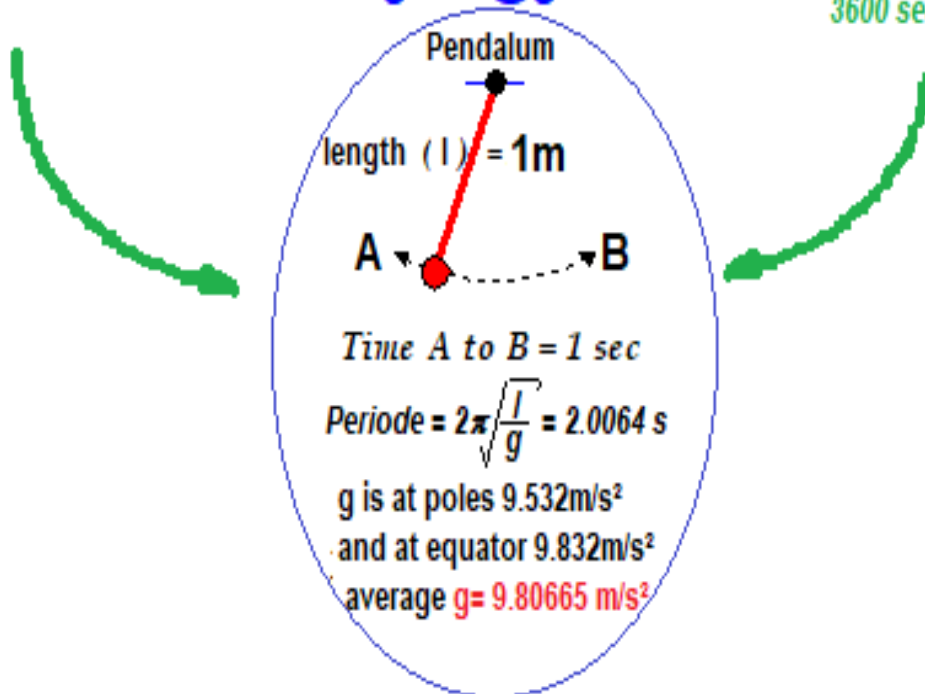
**SECOND**  
↔ 9192631770 waves



Caesium-133 atom,

Earth takes 24 Hours to make one revolution called a day. 1 hour has 3600 seconds.

[emailcollegecc@gmail.com](mailto:emailcollegecc@gmail.com)



## Abbreviations'

- |                       |                         |
|-----------------------|-------------------------|
| 1. Y: $10^{24}$ yotta | y: $10^{-24}$ yocto     |
| 2. Z: $10^{21}$ zetta | z: $10^{-21}$ zepto     |
| 3. E: $10^{18}$ exa   | a: $10^{-18}$ atto      |
| 4. P: $10^{15}$ peta  | f: $10^{-15}$ femto     |
| 5. T: $10^{12}$ tera  | p: $10^{-12}$ pico      |
| 6. G: $10^9$ giga     | n: $10^{-9}$ nano       |
| 7. M: $10^6$ mega     | $\mu$ : $10^{-6}$ micro |
| 8. k: $10^3$ kilo     | m: $10^{-3}$ milli      |
| 9. h: $10^2$ hecto    | c: $10^{-2}$ centi      |
| 10. da: $10^1$ deka   | d: $10^{-1}$ deci       |

## CONSTANTS TABLE [emailcollegecc@gmail.com](mailto:emailcollegecc@gmail.com)

Name	Abbrev	Value	Unit
Avogardo	Na	6.02 E +26	kg <sup>-1</sup>
Boltzman	k	1.38 E -23	JK <sup>-1</sup>
Moll-Volume	Vmol	22.4141	m <sup>3</sup> kgmol <sup>-1</sup>
Gas Costant	R	8.31457	kJkgmolK <sup>-1</sup>
Std.Temperature	Std.T	273.15	K
Std.pressure	Std.P	101.325	kPa
Stephan-Boltzman	$\sigma$	5.67051 E -8	Wm <sup>-2</sup>
Earth gravitation	g	9.80665	ms <sup>-2</sup>
Gravitation force	G	6.67259 E -11	Nm <sup>2</sup> kg <sup>-2</sup>
Planck's Constant	h	6.6260755 E -34	Js
Wein's Constant	$\sigma_w$	2.898 E -2	mK
Speed of Light	c	2.99792458 E 8	ms <sup>-1</sup>
Electron Charge	q	1.60217733 E -19	C
Electron mass	M <sub>e</sub>	9.1093897 E -31	kg
Proton mass	M <sub>p</sub>	1.6726231 E -27	kg
Neutron mass	M <sub>n</sub>	1.6749 E -27	kg
Hydrogen mass	M <sub>H</sub>	1.673534 E -27	kg
Permitivity of vacuum	$\mu_0$	4 $\pi$ E -7	Hm <sup>-1</sup> Turns <sup>-2</sup>
Emmittance of vacuum	$\epsilon_0$	8.85 E -12	Fm <sup>-1</sup>
M <sub>Earth</sub>	M <sub>Earth</sub>	5.9736 E 24	kg
M <sub>Sun</sub>	M <sub>Sun</sub>	1.988377 E 30	kg
M <sub>Moon</sub>	M <sub>Moon</sub>	7.349 E 22	kg
Earth-Sun Distance	AU	1.4959787 E 11	m
Earth-Moon Distance	D <sub>EM</sub>	3.844 E 8	m