



## Table of Constants

Mass ( $M_{\oplus}$ )	$5.98 \times 10^{24} \text{ kg}$	<b>Earth</b>
Radius ( $R_{\oplus}$ )	$6.38 \times 10^6 \text{ m}$	
Acceleration of gravity	$9.8 \text{ m/s}^2$	
Obliquity of Ecliptic	$23^{\circ}27'$	
Length of Tropical Year	365.2422 mean solar days	
Length of Sidereal Year	365.2564 mean solar days	
Albedo ( $a$ )	0.39	
Mass ( $M_{\text{C}}$ )	$7.35 \times 10^{22} \text{ kg}$	<b>Moon</b>
Radius ( $R_{\text{C}}$ )	$1.74 \times 10^6 \text{ m}$	
Mean distance from Earth	$3.84 \times 10^8 \text{ m}$	
Orbital inclination with the Ecliptic	$5.14^{\circ}$	
Albedo	0.14	
Apparent magnitude (mean full moon)	−12.74	
Mass ( $M_{\odot}$ )	$1.99 \times 10^{30} \text{ kg}$	<b>Sun</b>
Luminosity ( $L_{\odot}$ )	$3.83 \times 10^{26} \text{ W}$	
Absolute Magnitude ( $\mathcal{M}_{\odot}$ )	4.72 mag	
Angular diameter	0.5 degrees	
Effective Surface Temperature	5800 K	
Jupiter's orbit semi-major axis	5.204 AU	<b>Jupiter</b>
Jupiter's orbital period	11.8618 yr	
Diameter of human pupil	6 mm	<b>Distances and sizes</b>
1 AU	$1.50 \times 10^{11} \text{ m}$	
1 pc	206,265 AU	
Distance from Sun to Barnard's Star	1.83 pc	
Mars orbit semi-major axis	1.52 AU	
Gravitational constant ( $G$ )	$6.67 \times 10^{-11} \text{ N} \cdot \text{m}^2 \cdot \text{kg}^{-2}$	<b>Physical constants</b>
Planck constant ( $h$ )	$6.62 \times 10^{-34} \text{ J} \cdot \text{s}$	
Boltzmann constant ( $k_{\text{B}}$ )	$1.38 \times 10^{-23} \text{ J} \cdot \text{K}^{-2}$	
Stefan-Boltzmann constant ( $\sigma$ )	$5.67 \times 10^{-8} \text{ W} \cdot \text{m}^{-2} \cdot \text{K}^{-4}$	
Hubble constant ( $H_0$ )	$72 \text{ km s}^{-1} \text{ Mpc}^{-1}$	
Speed of light ( $c$ )	$299,792,458 \text{ m/s}$	
Proton mass	$938.27 \text{ MeV} \cdot \text{c}^{-2}$	
Deuterium mass	$1875.60 \text{ MeV} \cdot \text{c}^{-2}$	
Neutron mass	$939.56 \text{ MeV} \cdot \text{c}^{-2}$	
Helium-3 mass	$2808.30 \text{ MeV} \cdot \text{c}^{-2}$	
Helium-4 mass	$3727.40 \text{ MeV} \cdot \text{c}^{-2}$	