

Table A-3 Conversion Factors

1 inch = 2.54 centimeters	1 centimeter = 0.394 inch
1 foot = 0.3048 meter	1 meter = 39.36 inches = 3.28 feet
1 mile = 1.6093 kilometers	1 kilometer = 0.6214 mile
1 slug = 14.594 kilograms	1 kilogram = 0.0685 slug
1 pound = 4.4482 newtons	1 newton = 0.2248 pound
1 foot-pound = 1.35582 joules	1 joule = 0.7376 foot-pound
1 horsepower = 745.7 joules/s	1 joule/s = 1 watt

Table A-4 Temperature Scales

	Kelvin (K)	Centigrade (°C)	Fahrenheit (°F)
Absolute zero	0 K	-273°C	-459°F
Freezing point of water	273 K	0°C	32°F
Boiling point of water	373 K	100°C	212°F

Conversions:

$$K = ^\circ C + 273$$

$$^\circ C = \frac{5}{9} (^\circ F - 32)$$

$$^\circ F = \frac{9}{5} ^\circ C + 32$$

Table A-5 Units Used in Astronomy

1 angstrom (Å)	= 10^{-8} cm
	= 10^{-10} m
1 astronomical unit (AU)	= 1.495979×10^{11} m
	= 92.95582×10^6 miles
1 light-year (ly)	= 6.3240×10^4 AU
	= 9.46053×10^{15} m
	= 5.9×10^{12} miles
1 parsec (pc)	= 206,265 AU
	= 3.085678×10^{16} m
	= 3.261633 ly
1 kiloparsec (kpc)	= 1000 pc
1 megaparsec (Mpc)	= 1,000,000 pc

Table A-6 Constants

Astronomical unit (AU)	= 1.495979×10^{11} m
Parsec (pc)	= 206,265 AU
	= 3.085678×10^{16} m
	= 3.261633 ly
Light-year (ly)	= 9.46053×10^{15} m
Velocity of light (c)	= 2.997925×10^8 m/s
Gravitational constant (G)	= 6.67×10^{-11} m ³ /s ² kg
Mass of Earth (M_\oplus)	= 5.976×10^{24} kg
Earth equatorial radius (R_\oplus)	= 6378.164 km
Mass of sun (M_\odot)	= 1.989×10^{30} kg
Radius of sun (R_\odot)	= 6.9599×10^8 m
Solar luminosity (L_\odot)	= 3.826×10^{26} J/s
Mass of moon	= 7.350×10^{22} kg
Radius of moon	= 1738 km
Mass of H atom	= 1.67352×10^{-27} kg