

Physics 40S — Data Tables

Table of Constants

Gravitational Constant	$G = 6.67 \times 10^{-11} \text{ N} \cdot \text{m}^2 / \text{kg}^2$
Gravitational Acceleration	$g = 9.8 \text{ m} / \text{s}^2$
Coulomb's Constant	$k = 9 \times 10^9 \text{ N} \cdot \text{m}^2 / \text{C}^2$
Elementary Charge	$e = 1.60 \times 10^{-19} \text{ C}$
Mass of an Electron	$m_e = 9.11 \times 10^{-31} \text{ kg}$
Mass of a Proton	$m_p = 1.67 \times 10^{-27} \text{ kg}$

Prefixes Table

Factor	Prefix	Symbol
10^9	giga	G
10^6	mega	M
10^3	kilo	k
10^{-2}	centi	c
10^{-3}	milli	m
10^{-6}	micro	μ
10^{-9}	nano	n

Solar System Data Table

Object	Mass (kg)	Radius of Object (m)	Orbital Radius (m)	Orbital Period (s)
Sun	1.98×10^{30}	6.95×10^8	NA	NA
Mercury	3.28×10^{23}	2.57×10^6	5.79×10^{10}	7.60×10^6
Venus	4.83×10^{24}	6.31×10^6	1.08×10^{11}	1.94×10^7
Earth	5.98×10^{24}	6.38×10^6	1.49×10^{11}	3.16×10^7
Mars	6.37×10^{23}	3.43×10^6	2.28×10^{11}	5.94×10^7
Jupiter	1.90×10^{27}	7.18×10^7	7.78×10^{11}	3.74×10^8
Saturn	5.67×10^{26}	6.03×10^7	1.43×10^{12}	9.30×10^8
Uranus	8.80×10^{25}	2.67×10^7	2.87×10^{12}	2.66×10^9
Neptune	1.03×10^{26}	2.48×10^7	4.50×10^{12}	5.20×10^9
Pluto	6×10^{23}	3×10^6	5.9×10^{12}	7.82×10^9
Moon	7.34×10^{22}	1.74×10^6	3.8×10^8	2.36×10^6