

PLEASE DO NOT WRITE ANYTHING ON THIS SHEET

Physics 10 Gravity and Electrostatics Data

Planet	Mass (kg)	Planet's Radius (km)	Average Distance to Sun (AU)	Period (Earth Years)
Mercury	3.3×10^{23}	2,440	0.3871	0.24
Venus	4.87×10^{24}	6,052	0.7233	0.62
Earth	5.97×10^{24}	6,371	1	1
Mars	6.42×10^{23}	3,390	1.524	1.88
Jupiter	1.90×10^{27}	69,900	5.203	11.86
Saturn	5.68×10^{26}	58,200	9.539	29.46
Uranus	8.68×10^{25}	25,362	19.19	84.01
Neptune	1.02×10^{26}	24,622	30.06	164.79

Other objects:

Sun: Mass = 1.99×10^{30} kg Radius (to surface) = 696,000 km

Moon: Mass = 7.35×10^{22} kg Radius (to surface) = 1737 km

Average distance from Moon to Earth = 385,000 km or 0.00257 AU

Period (around earth) = 27.32 days or 0.0748 Earth Years

Other important Gravity numbers:

$G = 6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$ 1 AU = 1.5×10^{11} m

Electrostatics:

$k = 9.0 \times 10^9 \text{ Nm}^2/\text{C}^2$ 1 electron has a charge of -1.6×10^{-19} C

Triboelectric Series (a selection), from **lowest** electron affinity to **highest** electron affinity:

Fur, Hair, Glass, Wool, Silk, Paper, Cotton, plastic, Hard Rubber, Polyester, Styrofoam