

KEPLER'S LAWS: PLANETARY DATA

	Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune
Semi-major axis (AU)	0.387	0.723	1.0	1.52	5.20	9.57	19.17	30.18
Eccentricity (ϵ)	0.206	0.007	0.017	0.093	0.049	0.056	0.047	0.009
Radius (km)	2,440	6,054	6,378	3,397	71,492	60,268	25,559	24,746
Mass (Earth Masses)	0.055	0.82	1.0	0.11	318	95.2	14.5	17.1
Orbital period (Earth days)	88	225	365.25	687	4346	10756	30681	60193
Day Length (Earth Days)	176	117	1.0	1.03	0.41	0.43	0.75	0.67
Surface Gravity (g)	0.38	0.91	1.0	0.38	2.34	0.93	0.92	1.12

NOTES

1 AU (or Astronomical Unit) = 149,600,000 km and is the mean distance from the Earth to the Sun.

1 Earth Mass = 5,980,000,000,000,000,000,000 kg.

1 g = 9.8 m/s² - this is the acceleration due to gravity on Earth.

Day lengths are sidereal days (time taken to rotate once) except for Mercury and Venus which are solar days (time from midnight to midnight).