

# Lunar Physical Parameters

Property	Moon	Relative to Earth
Mean radius (km)	1737.103 ± 0.015	0.2727
Mean equatorial radius (km)	1738.139 ± 0.065	0.2725
Mean polar radius (km)	1735.972 ± 0.200	0.2731
Surface area (km <sup>2</sup> )	3.792 × 10 <sup>7</sup>	0.0744
Volume (km <sup>3</sup> )	2.196 × 10 <sup>10</sup>	0.0203
Mass (kg)	7.349 × 10 <sup>22</sup>	0.0123
Bulk density (g/cm <sup>3</sup> )	3.344	0.6063
Gravity (m/s <sup>2</sup> )	1.624	0.1654
Escape velocity (km/s)	2.376	0.2125
		<b>Earth</b>
Sidereal rotation period (Earth days)	27.321661	1
Synodic month (Earth days)	29.530589	-
Inclination of orbit to ecliptic	5.145°	0.00°
Inclination of equator to orbit	6.68°	23.45°

References: Lunar Sourcebook (1991) Cambridge University Press; The Planetary Scientist's Companion (1998) Oxford University Press.

