

Answer:

Saturn's equatorial radius is  $60\,268 \pm 4$  km and its polar radius is  $54\,364 \pm 10$  km. Jupiter's equatorial radius is  $71,492 \pm 4$  km and its polar radius is  $66,854 \pm 10$  km.

The mass of Saturn is  $5.6846 \times 10^{26}$  kg, the mass of Jupiter is  $1.8986 \times 10^{27}$  kg.

The density of Jupiter,  $1.326$  g/cm<sup>3</sup>, is the second highest of the gas giants.

Saturn is the only planet of the Solar System that is less dense than water—about 30% less. Although Saturn's core is considerably denser than water, the average specific density of the planet is  $0.69$  g/cm<sup>3</sup> due to the gaseous atmosphere.

The small density of Saturn compared to the density of Jupiter is explained by fact that the atmosphere of Saturn consist of more hydrogen and helium than atmosphere of Jupiter.