



NEWSHOUR

A NewsHour with Jim Lehrer special for students

EXTRA

LESSON: PLANETS IN PROPORTION

Directions

Using the formula sheets, complete the solar system table. Calculate the circumference and volume of the sun and the planets, as well as the diameter with respect to the earth. Write the circumference and volume using scientific notation. Determine the time it will take to get to the specified planet from Earth by jet at 1300 km/hr and by rocket at 40,000 km/hr. Determine the *light year time* it will take to get to the specified planet from Earth at 300,000 km/sec.

Terminology Reference

Mean distance: the average distance from one designated solar body to another. The actual distance varies because it is affected by the body's orbit, which is elliptical, not circular, meaning the actual distance between the planets is closer at some times than at others.

Equatorial measure (km or mi): the distance around the equator as opposed to the longitudinal measure.

AU: an astronomical unit that measures the mean distance from Earth to the Sun.

Light year (lt. yr.): is a measurement of the distance covered while traveling at a rate of 186,000 miles or 300,000 km per second. In one year light travels 9,860,000,000 km.

Heliopause: the boundary of our solar system, which is suspected to be between 9 and 11 trillion miles from Earth.