



## Problem of the Week

### Problem B

### Are We There Yet?

Planets travel around the sun in elliptical orbits (ovals). Mercury is the planet closest to the sun. The distance between Earth and Mercury ranges from 77 000 000 km at its closest distance to 222 000 000 km at its farthest distance.

Because distances are so great in the solar system, scientists measure them in **Astronomical Units**, or **AU**. One AU is equal to the average distance between the Earth and the Sun, or about 149 600 000 km.

Complete the missing information in the table below.

Planet	Distance in AU from Earth	Distance in km from Earth	Travel Time
Mars	0.52		
Venus			61 days
Saturn		1 275 000 000	
Neptune	29.09		



To calculate the travel time, assume you are travelling from Earth to the planet in a rocket at a speed of 28 000 km per hour throughout your flight. Pick the most reasonable unit of measure for time (for example, 15 000 hours doesn't mean much, but when divided by 24 to get 625 days, you know that it's almost 2 years).