Name_____ Date_____ Hour_____

Planet Revolution Speed

Calculate each planets revolutionary speed. You will need to first find the planets revolutionary distance. Use these formulas to solve these problems: $c=2\pi r$ or $c=\pi d$, and $s=d/t$. You must Show Me The Math in order to receive full credit.

Mercury

AU_____ Revolutionary Time_____

Venus

AU_____ Revolutionary Time_____

Earth

AU_____ Revolutionary Time_____

Mars

AU_____ Revolutionary Time_____

Jupiter

AU_____ Revolutionary Time_____

Saturn

AU_____ Revolutionary Time_____

Uranus

AU_____ Revolutionary Time_____

Neptune

AU_____ Revolutionary Time_____

Example: A planet is 2.8 AU's from its sun and completes an orbit every 5 years. Double the AU distance because 1 AU is the radius. Multiply that value by how many km are equivalent to an AU. You now have that planets diameter in km to use to find the circumference. Convert the time of revolution into hours and divide it into the circumference to find the speed of revolution.

(2.8AU)(2)=5.6(150,000,000km)=840,000,000km(3.14)=2,637,000,000km; (5y)x$\frac{365.25d}{1y}$x$\frac{24h}{1d}$=43,830h; s=$\frac{2,637,600,000km}{43,830h}$=60,178km/h