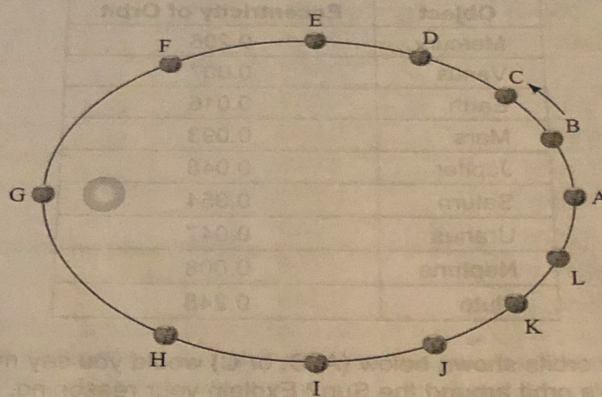


**Part II: Kepler's Second Law and the Speed of the Planets**

The drawing below shows another planet's orbit. In this case, the twelve positions shown (A–L) are each exactly one month apart. As before, the planet shown obeys Kepler's second law.



- 8) Does the planet appear to be traveling the same distance each month?
- 9) At which position would the planet have been traveling the fastest? The slowest? Explain your reasoning.
- 10) At Position D, is the speed of the planet increasing or decreasing as time goes on? Explain your reasoning.
- 11) Provide a concise statement that describes the relationship that exists between a planet's orbital speed and the planet's distance from its companion star.