

2. Kepler's 2nd Law Problem

As a person who lives in the Northern Hemisphere; I happen to have a person from the Southern Hemisphere visiting. While looking at this Southern Hemisphere person it dawned on me that our summers should be longer than Southern Hemisphere summers due to Kepler's 2nd Law. The results are mind-bogglingly. Calculate how many days/minutes longer the Northern Hemisphere summer-like weather is than the winter-like weather.

Hints:

- 1). Study Kepler's 2nd Law of Planetary Motion
- 2). is the Earth closer to the Sun in the summer or the winter?
- 3). Find when exactly spring starts and exactly when the following fall starts (this would represent the more summer like weather in either hemisphere) and calculate the number of days between them. Then take the same fall start time and the next consecutive years spring exact start time (this would represent the more winter like weather in either hemisphere) and calculate the days between them. Finally, take the difference of your two calculations above.

Answer: You have to do it yourself Dr. Kung (for now) as you would not believe the difference in the days!