

Unit 2 Astronomy Unit Homework

Kepler and Planetary Motion

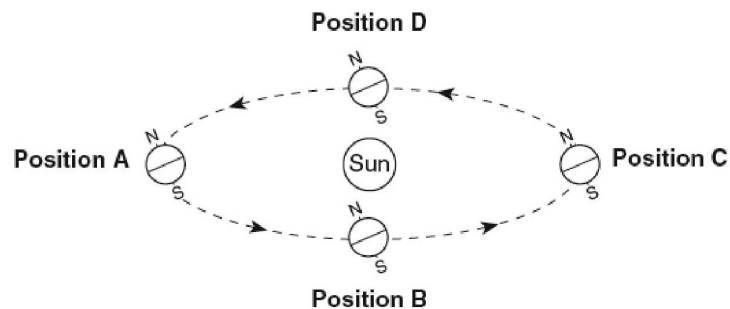
- 1.) Describe Kepler's 1st Law of motion. What shape does the Earth revolve in?
- 2.) Describe Kepler's 2nd Law of motion.
- 3.) Describe Kepler's 3rd Law of motion. Does Jupiter or the Earth have a longer or shorter revolution (year length)?
- 4.) In what *shape* does the Earth revolve in?
- 5.) What creates the *seasons* on Earth?
- 6.) What is the difference between *precession and nutation* of Earth's axis?
- 7.) What is *barycenter*? Where does the barycenter move when planet #1 mass increases?

Planet #1

Planet #2

Seasons and Tides

- 8.) Describe the season for the Northern and Southern hemispheres in each position.



- 9.) What causes the *tides* to change?

Solar Energy and Life on Earth

- 10.) What is the difference between fusion and fission?
- a. Which of the above processes does the sun use to create energy?
 - b. Which type of atoms produce solar fusion?
- 11.) Identify the electromagnetic waves that reach our Earth. How are they prevented from affecting our atmosphere?
- 12.) What is the importance of the *electromagnetic field* to the Earth?
- 13.) What benefits (good things) does the Sun provide for us?