Directions: Using the Class Notes: Astronomy, complete the following activity.

I. Apparent to Actual Motions

• Geocentric Model - 


Problem 1: 

Problem 2: 

• Heliocentric Model - 

Match the Terms:

________ Celestial Object  a. star directly above the north pole and/or south pole  

________ Celestial Sphere  b. the visible portion of the sky  

________ Horizon  c. angular distance measured along the horizon  

________ Zenith  d. long exposure photo providing evidence of rotation  

________ Star Trail  e. the edge of the visible portion of the celestial sphere  

________ Circumpolar Star  f. angular distance measured above the horizon  

________ Polar Star  g. stars that move around a polar star  

________ Altitude  h. a natural object that can be seen in the sky  

________ Azimuth  i. the highest point on the celestial sphere
II. Earth’s Motions

- Rotation - ________________________________________________________________

  1. Evidence: ______________________________________________________________
  2. Evidence: ______________________________________________________________

- Revolution - ______________________________________________________________

  1. Evidence: ______________________________________________________________

Label the following:

1. Dates of the solstices and equinoxes
2. Draw in the Major Axis
3. Label the Foci
4. Label the Sun
Supplemental: Annotating Class Notes

• Eccentricity - 

• The eccentricity of a circle is ______ and the eccentricity of a line is ______

• Solve: As Planet X revolves around a star, calculate the eccentricity if the distance between to foci is 5,000,000 km and the length of the major axis is 149,600,000 km [show all work].

• Compare: Planet X’s eccentricity of orbit to Earth’s orbit. ________________________________

III. The Moon

Fill in the chart below with the associated time for each Moon motion:

<table>
<thead>
<tr>
<th>Period of Rotation</th>
<th>Period of Revolution</th>
<th>Lunar Phase Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fill in the chart below with the associated time for each Moon motion:

[Images of lunar phases]
IV. The Sun

• Sun - ____________________________________________________________________________
  
• Makes up _______ of the mass in our solar system

• Fusion - the source of the ________________ energy

V. The Solar System

Match the Terms:

_________ Jovian planet a. gaseous planet with low densities

_________ Asteroid b. solid surface planets with high densities

_________ Terrestrial Planet c. rock that creates a streak through our atmosphere

_________ Meteorite d. solids that change to a gas when heated by the Sun

_________ Comet e. small fragment that orbits the Sun

_________ Solar System f. everything under the Sun’s gravitational influence

Complete the Paragraph about the Evolution of our Solar System

Five billion years ago a large cloud of gas and dust left over from an exploded star started to condense and rotate due to _________________. A large portion of the gas and dust began to accumulate in center. The other concentrations clumped together and formed the planets. Eventually the concentration in the center became too ________________ it ignited due to nuclear fusion. A violent ________________ radiated outward from the Sun and pushed most of the gases and debris between the planet of ____________________ and ____________________.