Practice: Motions of the Earth

1. Mark each of the following as information pertaining to the Earth’s rotation or revolution:
	1. \_\_\_\_\_ Takes 24 hours
	2. \_\_\_\_\_ Takes 1 year
	3. \_\_\_\_\_ Causes days and nights
	4. \_\_\_\_\_ Spinning
	5. \_\_\_\_\_ Orbit around the sun
	6. \_\_\_\_\_ Heliocentric
	7. \_\_\_\_\_ Counterclockwise
2. Seasons:
	1. Describe why the Earth has seasons.
	2. Label the image below with each of the following: *direction of revolution (write and use arrows), direction of rotation (write and use arrows), northern hemisphere, southern hemisphere, March, June, September, December, the hemisphere in which you live (use stars)*



* 1. Complete the chart below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hemisphere | March | June | September | December |
| Direction of Tilt | Season | Direction of Tilt | Season | Direction of Tilt | Season | Direction of Tilt | Season |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

1. Earth’s Shape:
	1. Identify Earth’s shape.
	2. Explain why the Earth is not a perfect sphere.
2. Identify if each of the following describes precession or nutation:
	1. \_\_\_\_\_ Does not affect the angle of the Earth’s tilt
	2. \_\_\_\_\_ Could also be described as the Earth’s swiveling on its axis
	3. \_\_\_\_\_ The reason the North Star alternated between Polaris and Vega
	4. \_\_\_\_\_ Could also be described as the Earth wobbling on its axis
	5. \_\_\_\_\_ Causes a 0.5° change in the Earth’s tilt
	6. \_\_\_\_\_ Is caused by the moon’s gravity
	7. \_\_\_\_\_ Results in the seasons being more/less extreme depending on the angle of tilt
3. Illustrate precession.
4. Illustrate nutation.
5. Explain why the following statement is inaccurate: *The Earth revolves around the sun.*
6. Indicate a likely location for the barycenter given the two revolving objects depicted below:
7. Identify two different barycenters associated with the Earth.