

## Observation Questions

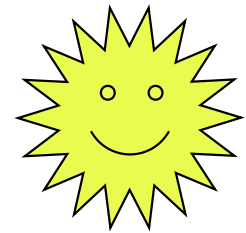
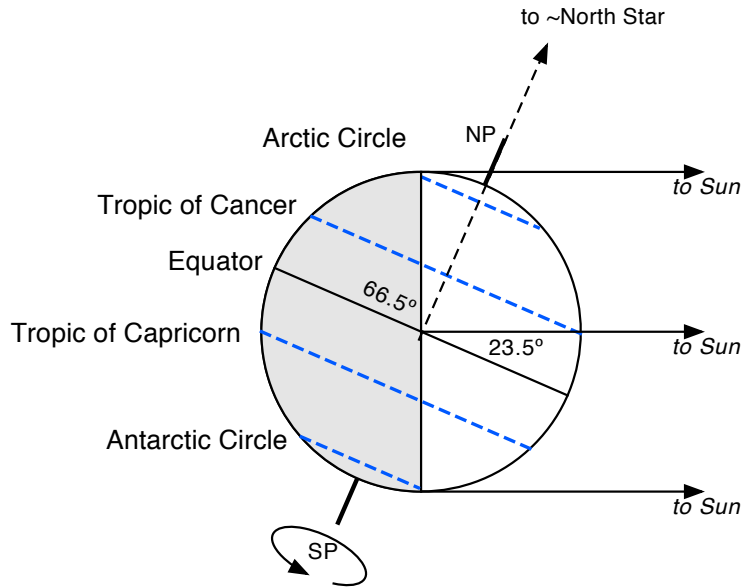
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*Use the diagrams on the back of this if you are having a hard time.*

1. Imagine you are on the North Pole. Describe the motion of the sun at the following times:
  - a. On the Spring Equinox.
  - b. On the Summer Solstice.
  - c. On the Fall Equinox.
  - d. On the Winter Solstice.
  
2. For the following locations, how far above the horizon would the North Star be?
  - a. On the North Pole.
  - b. On the equator.
  - c. On the South Pole.
  - d. In Acton (about  $42^\circ$  latitude.)
  
3. For the following locations, what is the maximum possible "height" of the sun in the sky on the date of the summer solstice?
  - a. On the North Pole.
  - b. On the equator.
  - c. On the Tropic of Cancer.
  - d. In Acton (about  $42^\circ$  latitude.)
  
4. For the following locations, what is the maximum possible "height" of the sun in the sky on the date of the vernal equinox?
  - a. On the North Pole.
  - b. On the equator.
  - c. On the Tropic of Cancer.
  - d. In Acton (about  $42^\circ$  latitude.)

## Observation Questions

*Summer Solstice - Northern Hemisphere*  
*Winter Solstice - Southern Hemisphere*



*Winter Solstice - Northern Hemisphere*  
*Summer Solstice - Southern Hemisphere*

