

APPARENT MOTION OF STARS (1)*

1) **How many degrees**, across the night sky, would the following stars appear to move in **2 hours**? (Refer to **page 1**, before your answer this question).

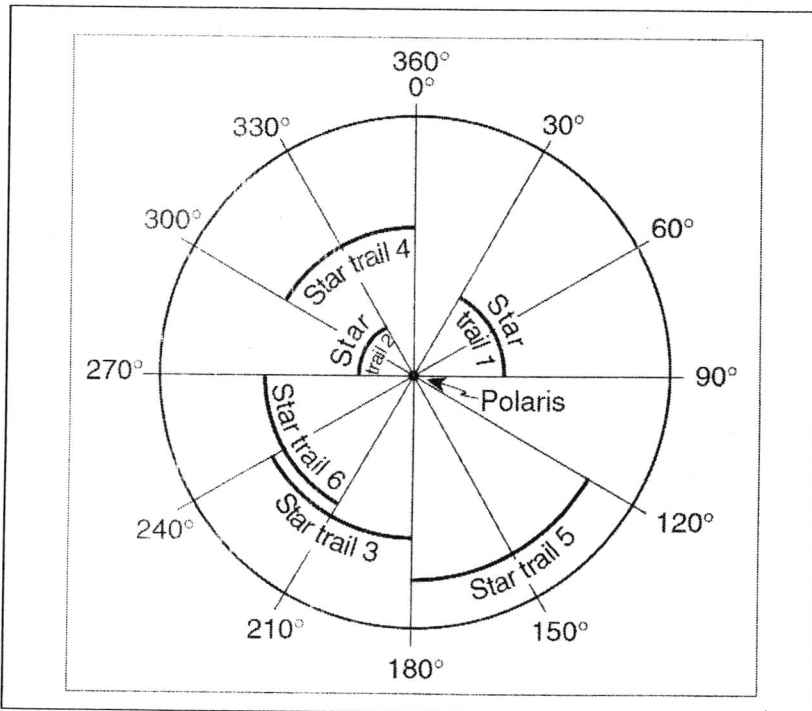
a) the Sun: _____°

Explain your answer: _____

b) Polaris: _____°

Explain your answer: _____

2) The following diagram represents a photograph of the trails of **6** different stars across the night sky. Determine the **number of hours** the camera lens was left open in order to capture these star trails. **Show** your work.



PROCEDURE

- **STEP 1:** Select **any of the 6 stars** shown in the diagram
- **STEP 2:** Determine **how many degrees** that star **appeared to have moved** (Find the **difference in degrees** between its **ending and starting point**)
- **STEP 3:** **Divide the # of degrees** calculated from **step 2 by 15°**

of hours= _____

APPARENT MOTION OF STARS (2)*

Directions: Look at the **four images** below, which display the apparent motion of stars as viewed from 4 different geographic directions (North, South, East, West). For each one of the photographs, identify the direction in which the camera was facing, when each photograph was taken. **Site evidence** for your selection. (Refer to the images of the handout "Apparent Motion Of Stars (1)")



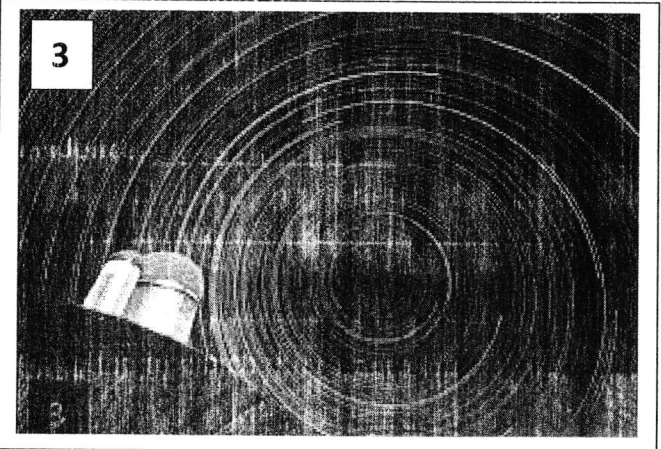
Direction in which the camera was facing:

Evidence: _____



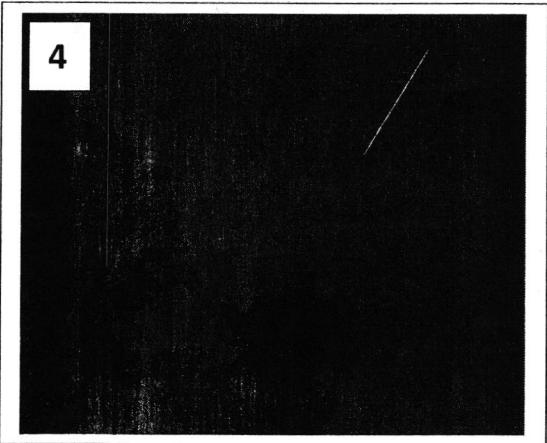
Direction in which the camera was facing:

Evidence: _____



Direction in which the camera was facing:

Evidence: _____

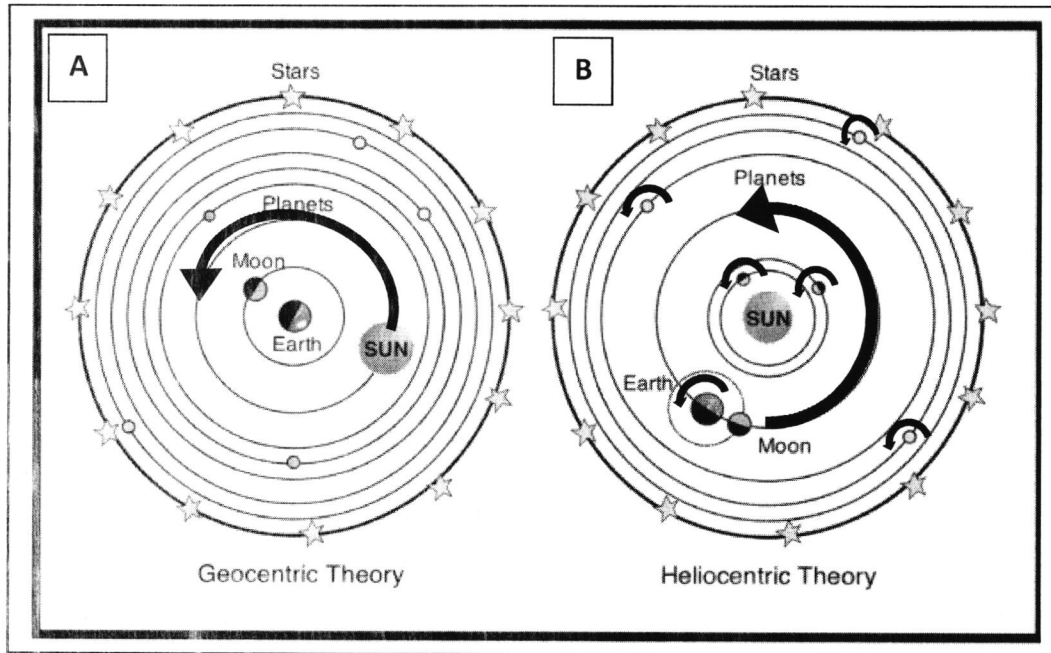


Direction in which the camera was facing:

Evidence: _____

APPARENT MOTION OF STARS (3)*

The two diagrams below represent the 2 models that tried to explain the motion of celestial objects. The one on the left is known as the Geocentric Model and it was originally proposed by Claudius Ptolemy, a Greek Philosopher/Astronomer, in the 2nd century A.D., while the one on the right is known as the Heliocentric Model, originally proposed by Copernicus, a Polish Astronomer, during the 16th century.



By citing evidence from the diagrams above, list 3 differences between the Geocentric and the Heliocentric models.

Geocentric Model

Heliocentric Model

1 _____

2 _____

3 _____

- (1) Identify the object in the center/middle of each model.
- (2) Which motion is the Sun doing?
- (3) Which motion(s) is the Earth doing?