

## Celestial Sphere Observations Practice

1. What is the approximate altitude of the Sun on path I?	
2. What is the azimuth of the Sun on path I?	
3. What is the approximate time of day when the Sun is at its position on path I?	
4. What direction would the Sun rise on the date represented by path I?	
5. What is the azimuth of the Sun on path II?	
6. What is the approximate time of day when the Sun is at its position on path II?	
7. What direction would Marvin's shadow point when the Sun is at its highest point on arc path I?	
8. Which would give Marvin a longer shadow: the noon Sun on path I or the noon Sun on path II? Explain your answer.	
9. If this diagram represents observations made from NYC, plot the approximate location	of Polaris on the celestial sphere