

1. Place an X where Polaris is located.
2. What is the approximate latitude where this photo was taken? $\qquad$
3. How many degrees does the earth rotate in 1 hour? $\qquad$
4. How many degrees have these stars moved during the time this photo was taken? $\qquad$
5. How many hours was the shutter of the camera left open to take this picture? $\qquad$
6. Highlight the track of an object that was within the earth's atmosphere during the time this picture was taken.
7. Use arrows to show the apparent direction some of the stars were moving.
8. If the following group of stars represents the Big Dipper, label the star trails in the picture that could be the stars $\alpha$ and $\beta$ ?

9. Describe what this picture might look like if the earth did not rotate.
