You and your friends are out partying on August 12th, and at midnight you look up in the sky.

1. What constellation would you see directly overhead?

2. In what direction would you look to see the constellation Andromeda?

While outside, you decide to show off to your friends and impress them with your vast knowledge of the constellations. You first look for the North Pole Star.

3. What is the name of the star which lies almost directly above the Earth’s North Pole?

You remember that in order to find this star, you must first find the Big Dipper.

4. At midnight, how would the Big Dipper appear in the sky? (Draw a picture below with the correct orientation).

You point out to your friends that two stars in the bowl of the Big Dipper can direct you to the North Star.

5. What name have we given to these two stars?

6. You also remember that you can use the handle of the Big Dipper to find a rather bright star in the night sky. What star is that?
7. Is this star currently visible at midnight on August 12th?

8. What constellation is it in?

You and your friends decide that the night is still young, and you stay up all night. At 6am:

9. Where is the constellation which you found in question #1 now?

10. Where is the constellation Andromeda now?

You notice that most stars & constellations appear to rise in the east and set in the west, but that some never appear to dip below the horizon.

11. What are these types of constellations called?

12. List three of them.

13. In which direction do you have to face to see these stars?
14. To use a planisphere, you must first set the date and time of observation. Explain why.

15. On what day would you see the same stars in the sky at 9PM as you did at midnight on August 12th?

16. Why is it that the stars which you can see at midnight on August 12th can be seen at 9PM on a different night?

17. Through which of the following constellations is it possible for one of the planets to pass? (Circle all that apply.)
   - Aries
   - Canis Major
   - Cancer
   - Cassiopeia
   - Cygnus
   - Gemini
   - Leo
   - Ursa Major

18. What is this region of the sky called?

19. How is it defined?