

Directions:

- Complete the following quiz on a separate, unruled blank sheet of paper: for example, in your composition notebook, or on an electronic sketchpad. (do not complete the quiz on this document)
 - When you are finished, take a picture(s) of your completed quiz responses and review them to make sure that they are legible.
 - Upload the picture(s) of your responses to “Individual Quiz 1” in Canvas.
1. Please sign your name to indicate that you are not using any outside resources (notes, persons, online websites) to complete this quiz, nor will you share the contents of this quiz with any other person.
 2. Make a sketch that depicts the arrangement of the Sun, Moon, and Earth that sometimes leads to a solar eclipse.
 3. Sketch the arrangement between the Sun, Moon, and Earth for which the Earth would see a Waxing Gibbous.
 4. Sketch a horizon diagram for an observer at a latitude of **40-degrees north**.
 - ☐ Label the observer.
 - ☐ Label the compass directions.
 - ☐ Label the horizon.
 - ☐ Label the zenith.
 - ☐ Label the location of the north celestial pole.
 5. Sketch a horizon diagram for an observer at the **north pole**.
 - ☐ Label the observer.
 - ☐ Label the horizon.
 - ☐ Label the zenith.
 - ☐ Label the approximate path of the Sun on the summer solstice.
 6. **Select** a choice below that reflects your agreement/disagreement with this statement:

*“No matter where you are standing on Earth,
the Sun rises due east and sets due west during the entire year.”*

Disagree	Agree	Don’t Know
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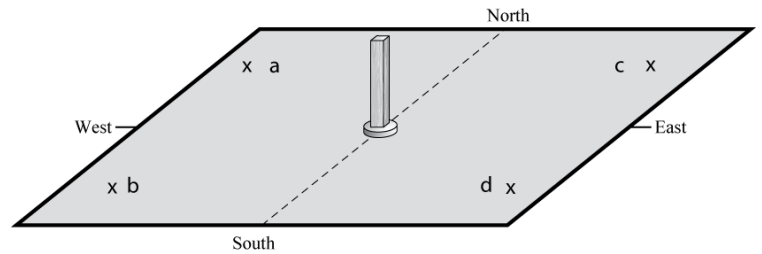
Please explain your reasoning regarding your choice. In your response, include:

 - (i) A description of what you agree or disagree with about this statement.
 - (ii) A sketch that represents an accurate portrayal of the phenomenon.
 - (iii) A description of your sketch to support the reader in understanding your example.

Continued on the next side...

7. From Boulder, which “x” could represent the position of the end of the stick’s shadow shortly before sunset during the winter?

- A. a
- B. b
- C. c
- D. d
- E. None of the above



Please explain your reasoning regarding your choice. In your response, include:

- (i) A sketch that represents an accurate portrayal of the phenomenon.
 - (ii) A description of your sketch to support the reader in understanding your example.
8. What is wrong about the following statement: “I can see a bright star that is at an altitude of 120 degrees and towards the northwest.”?
9. How should the illustration at the right be modified to include a more accurate representation of a person’s horizon?

