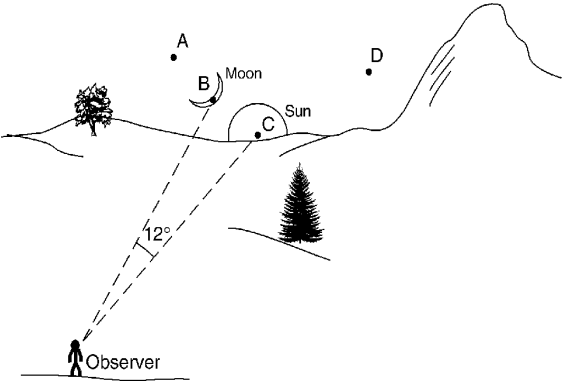


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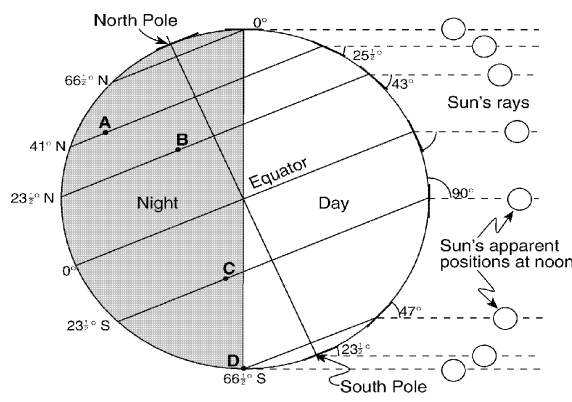
Date: _____

1. Locations in New York State are warmest in summer because sunlight in summer is
 - A. least intense and of shortest duration
 - B. least intense and of longest duration
 - C. most intense and of shortest duration
 - D. most intense and of longest duration

2. The diagram shows the positions of the Moon and the Sun at sunset during an evening in New York State. Points A, B, C, and D represent positions along the western horizon.
 

At sunset on the following evening, the Moon will be located at position

- A. A B. B C. C D. D

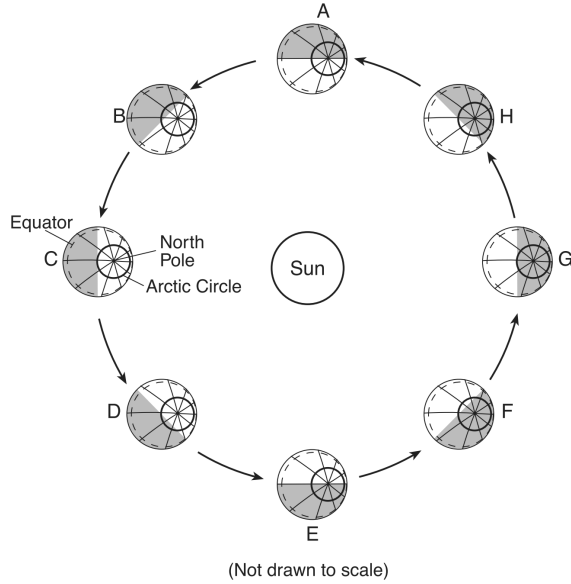
3. Base your answer(s) to the following question(s) on the diagram below, which shows the altitude and apparent position of the noontime Sun, as seen from various latitudes on Earth on a particular day of the year. Letters A through D represent locations on Earth's surface.
 

(Not drawn to scale)

Which season will begin at 41° N latitude, three months after the date represented by this diagram?

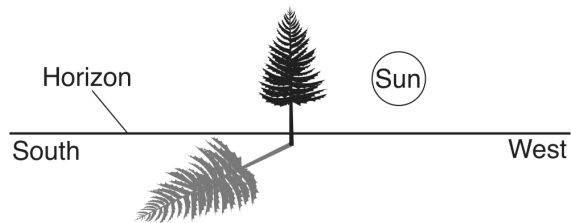
- | | |
|-----------|-----------|
| A. summer | B. fall |
| C. winter | D. spring |

4. Base your answer(s) to the following question(s) on the diagram below, which shows Earth's orbit around the Sun as viewed from space. Earth is shown at eight different positions labeled A through H. Earth's North Pole, Arctic Circle, and equator have been labeled at position C. The arrows show the direction of orbital motion.



Approximately how many days does Earth take to move from position A position C?

5. A tree in New York State casts a shadow as shown in the diagram below.



What time of day and season are represented by the diagram?

- A. early morning in winter
- B. early morning in summer
- C. late afternoon in winter
- D. late afternoon in summer

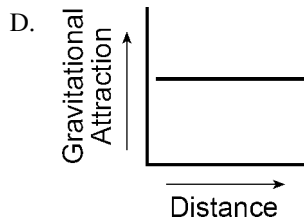
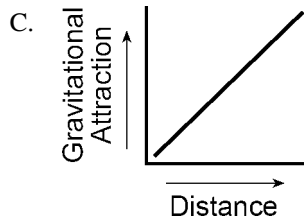
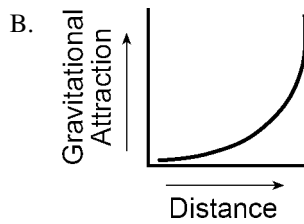
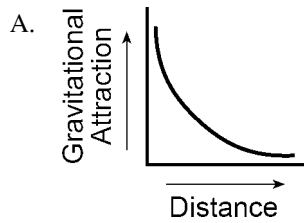
6. During which Northern Hemisphere season is Earth closest to the Sun?

- A. spring
- B. summer
- C. autumn
- D. winter

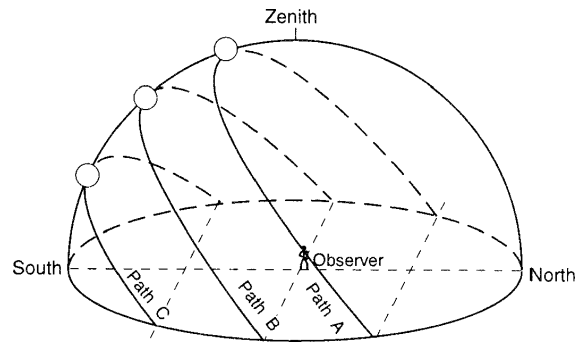
7. The force of gravity between two objects is greatest when

- A. masses are small and the objects are close together
- B. masses are small and the objects are far apart
- C. masses are large and the objects are close together
- D. masses are large and the objects are far apart

8. Which graph best represents the relationship between the gravitational attraction of two objects and their distance from each other?



9. Base your answer(s) to the following question(s) on the diagram below and on your knowledge of Earth science. The diagram shows the apparent paths of the Sun at the beginning of each season for an observer at a location in New York State.



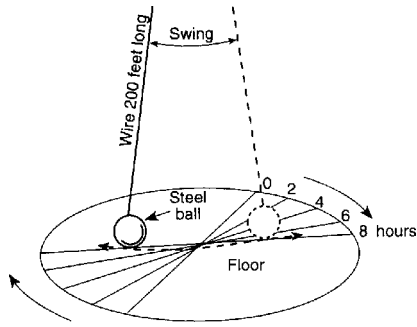
The Sun's apparent daily movement across the sky is caused by

- A. the Sun's revolution around Earth
- B. Earth's revolution around the Sun
- C. the Sun's rotation on its axis
- D. Earth's rotation on its axis

10. The deflection of planetary winds (the Coriolis effect) is a direct result of the

- A. rotation of Earth
- B. revolution of Earth
- C. gravitational forces within Earth
- D. convection currents within the asthenosphere

11. The diagram below represents a Foucault pendulum swinging freely for 8 hours.



The pendulum appears to change its direction of swing because of Earth's

- A. tectonic plate movement
- B. force of gravity
- C. rotation
- D. revolution

12. Which statement provides the best evidence that Earth revolves around the Sun?
- A. The Sun follows an apparent daily path, rising in the east and setting in the west
 - B. A Foucault pendulum appears to shift its direction of swing in a predictable manner
 - C. The stars appear to follow circular paths around the North Star (Polaris)
 - D. The seasons of spring, summer, fall, and winter repeat in a pattern

13. Which planet has the most eccentric orbit?

- A. Mercury
- B. Venus
- C. Neptune
- D. Pluto

seasons-test 11/13/2013

1.
Answer: D
2.
Answer: A
3.
Answer: D
4.
Answer: Any value from 88 to 94 d.
5.
Answer: C
6.
Answer: D
7.
Answer: C
8.
Answer: A
9.
Answer: D
10.
Answer: A
11.
Answer: C
12.
Answer: D
13.
Answer: D