

Name _____ Date _____ Period _____

Astronomy Pretest/Posttest

Multiple choice— Choose the best answer.

1. Why does the moon appear to move across the sky during the night?
 - a. It travels around Earth every day.
 - b. Earth rotates on its axis.
 - c. It is extremely far away.
 - d. All objects in space are moving.
2. What happens when you see the moon's "phases" change? The moon appears to change
 - a. Color
 - b. Location
 - c. Shape
 - d. Distance

Use this diagram to answer the next two questions.

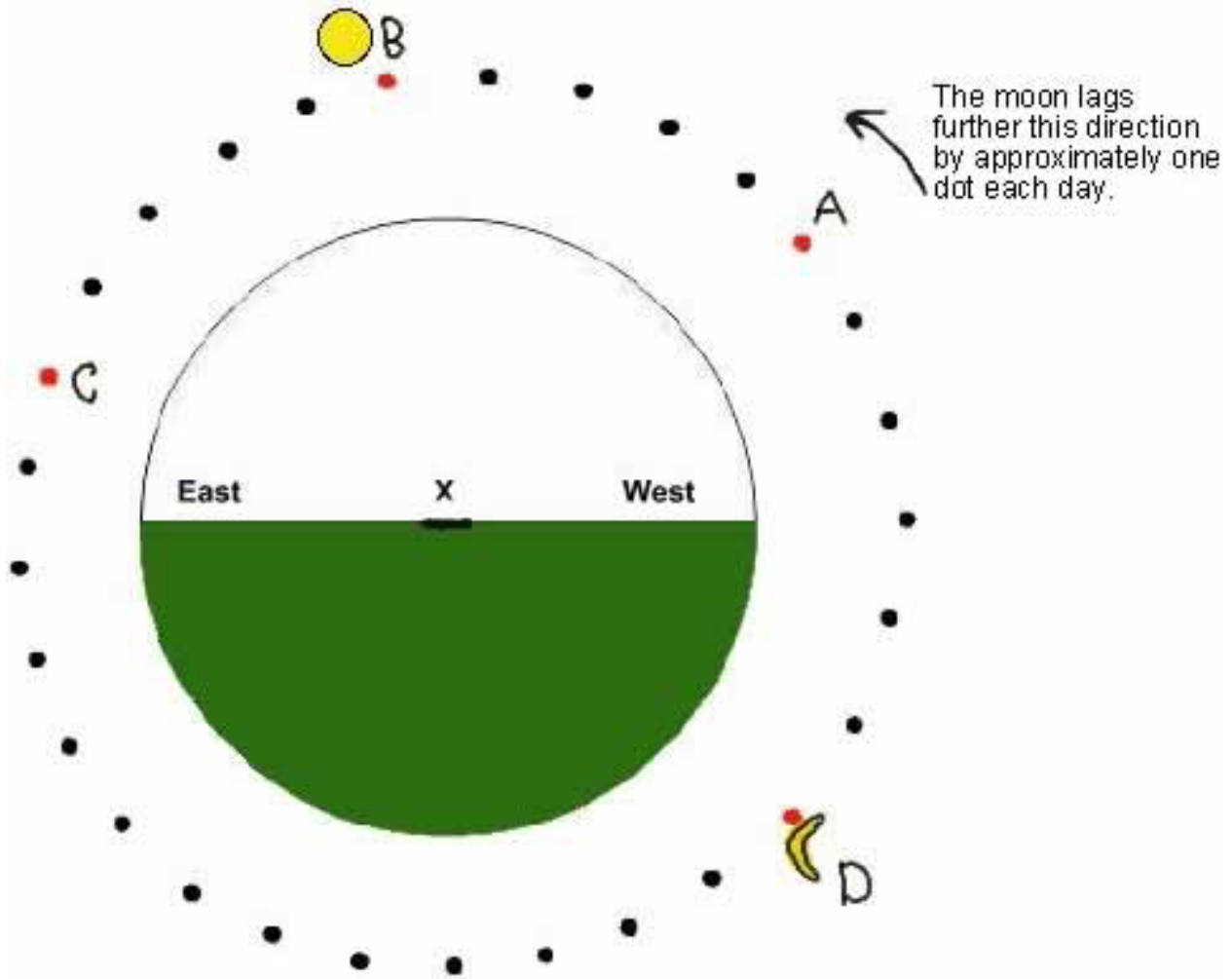


3. What phase of the moon would you see on this night?
 - a. Half moon
 - b. Gibbous moon
 - c. New moon
 - d. Full moon
4. How many days would pass before the moon was on the other side of Earth?
 - a. 7
 - b. 14
 - c. 21
 - d. 28

5. Why do we see phases of the moon during a month?
 - a. We see only the lit part of the moon as it moves around Earth.
 - b. We see only the parts of the moon that are always in shadow.
 - c. We see the eclipse of the moon that occurs nightly.
 - d. The moon is smaller when it is farther from us.
6. Which of the following would be a way to investigate the phases of the moon?
 - a. Watch all night.
 - b. Draw it every night for a month.
 - c. Measure the moon with a ruler.
 - d. Make measurements every Wednesday for a year.
7. Which of the following correctly describes the movement of Earth, moon and sun?
 - a. Moon revolves around sun, Earth revolves around moon.
 - b. Sun revolves around moon, moon revolves around Earth.
 - c. Moon revolves around Earth, Earth revolves around sun.
 - d. Sun and moon revolve around Earth.
8. What is the movement of Earth on its axis called?
 - a. Phases
 - b. Flotation
 - c. Revolution
 - d. Rotation
9. What is the movement of Earth around the sun called?
 - a. Precipitation
 - b. Random movement
 - c. Revolution
 - d. Rotation
10. What causes the apparent movement of objects across the sky during a day or night on Earth?
 - a. Revolution of Earth in its orbit
 - b. Rotation of Earth on its axis
 - c. Location of Earth in space
 - d. Objects are moving around Earth
11. If you watched the night sky for several hours, you would notice that the stars appear to be moving around
 - a. the North Star.
 - b. the Big Dipper.
 - c. the moon.
 - d. the milky way.

Use the following diagram to answer the next two questions.

The moon's position lags behind every night by about thirteen degrees (this is roughly the width of your fist held at arms length). This amounts to being slower by about fifty-five minutes each night. Assume each dot on the diagram is thirteen degrees, and that the moon would take twenty-nine of these dots to complete one cycle.

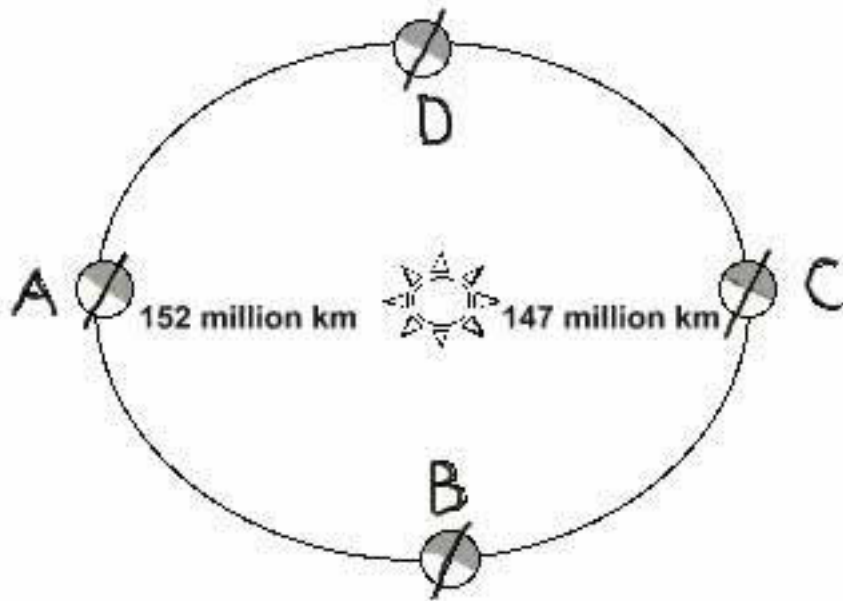


12. If you stand at point X and the moon is at point B, when will it be at point A?

- a. 13 days ago
- b. In 16 days
- c. In 24 days
- d. In 6 days

13. If the moon is at point D below the horizon, how many days until it is at point C?
- 16 days
 - 5 days
 - 2 days
 - 8 days
14. If the Farmers Almanac told you that the full moon was on April 5, 2006, which day in April of the same year would you most likely see a last quarter moon?
- April 9
 - April 13
 - April 17
 - April 21
15. Which of these things would revolve rather than rotate?
- An electric train running on a circular track.
 - A tire rolling down the road.
 - A top spinning on the floor.
 - A fan blowing air in a room.
16. Day and night are caused by
- the sun and the moon moving across the sky.
 - the revolution of the earth around the sun.
 - the rotation of the earth on its axis.
 - the earth moving in and out of the moon's shadow.
17. Why does the air temperature rise in the summer?
- In the northern hemisphere we are closer to the sun in the summer.
 - The air becomes thicker and more dense as the temperature goes up.
 - The sun's rays are more direct angle and the days are longer.
 - The ratio of the hours of daylight to the hours of night is reduced.
18. Why is it summer in the Southern Hemisphere when it is winter in the Northern Hemisphere?
- The Southern Hemisphere is closest to the sun.
 - The Southern Hemisphere is receiving the most direct rays from the sun.
 - The Southern Hemisphere is in the path of warm winds from the equator.
 - The Southern Hemisphere is balancing out the temperatures for Earth.
19. What time of year is the sun farthest from the earth?
- Winter in the Northern Hemisphere.
 - Spring in the Northern Hemisphere.
 - Summer in the Northern Hemisphere.
 - Fall in the Northern Hemisphere.

Use the diagram below to answer the next three questions.



20. In which positions will the day and night hours be equal?
- A and B
 - B and C
 - C and D
 - B and D
21. What season is it at point A in the northern hemisphere? Assume the north pole is on top.
- Winter
 - Spring
 - Summer
 - Fall
22. What season would it be at point D?
- Winter
 - Spring
 - Summer
 - Fall
23. In what month would Utah have the greatest number of daylight hours?
- January
 - June
 - September
 - December

Use this drawing of a lamp and a black piece of paper to answer the next two questions.



24. Which piece of paper would be the hottest after the light had shone on it for one hour?

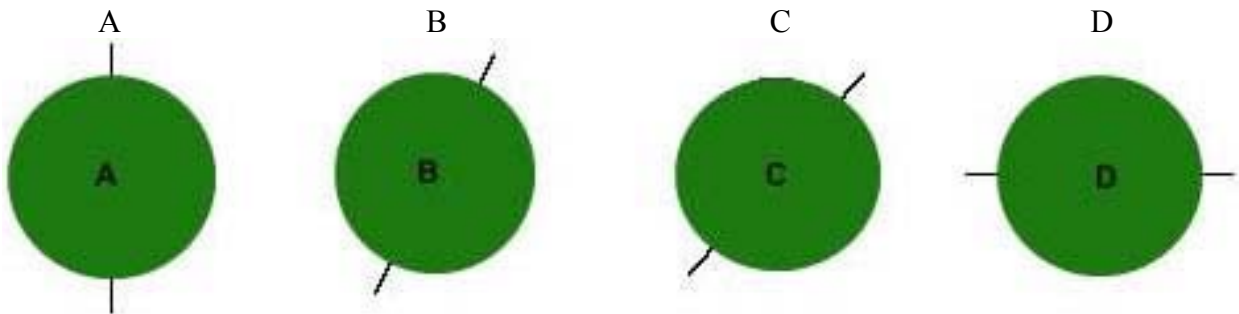
Assume that the papers were all the same distance from the light bulb.

- a. A
- b. B
- c. C
- d. D

25. What variable changed in the experiment shown above?

- a. The amount of time the light shone on the paper.
- b. The amount of energy the light bulb gave off.
- c. The color of the paper.
- d. The angle at which the light hit the paper.

26. Which of the following images shows the most correct angle of the Earth's axis relative to the sun?



- a. A
- b. B
- c. C
- d. D

27. In what month would the sun's light strike Utah at the lowest angle?

- a. January
- b. June
- c. September
- d. December

Answer Key

1. b

2. c

3. d

4. b

5. a

6. b

7. c

8. d

9. c

10. b

11. a

12. c

13. a

14. b

15. a

16. c

17. c

18. b

19. c

20. d

21. c

22. b

23. b

24. d

25. d

26. b

27. d