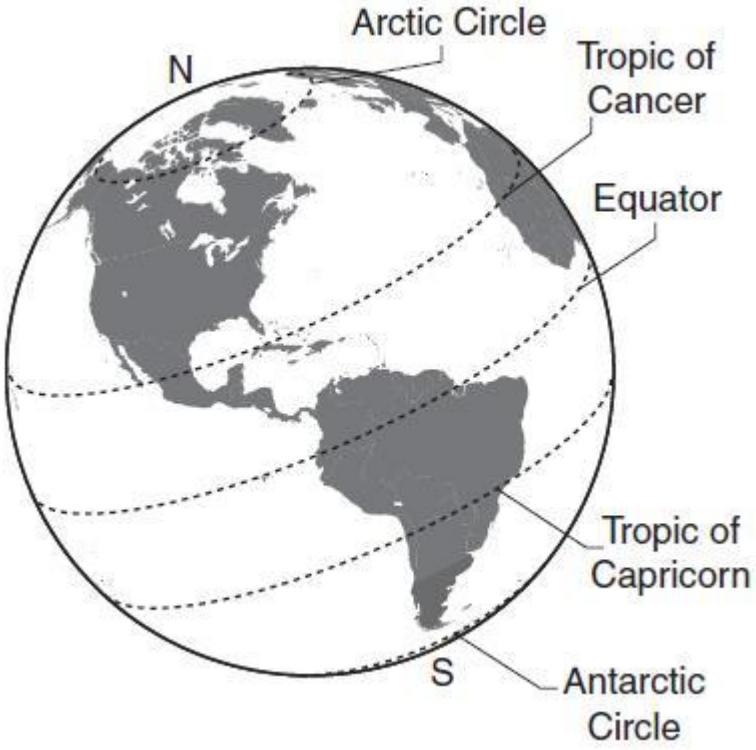
Unit 6 Test TEK 7 15

1.



At which latitude can the sun be visible for 24 hours straight in June?

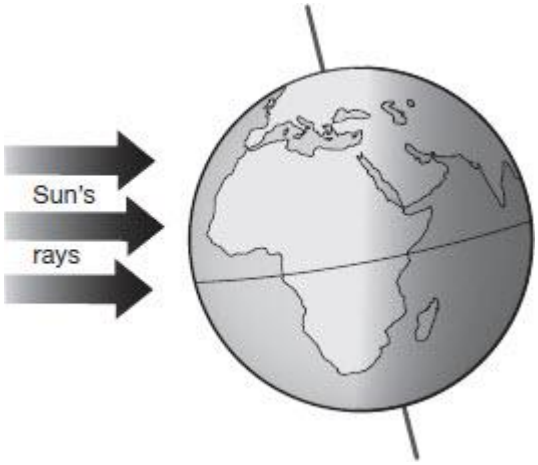
A. Arctic Circle
B. Tropic of Cancer
C. Equator
D. Tropic of Capricorn

2. Which best explains why summer days in Texas are most likely hotter than winter days?

F. The Earth's northern axis is tilted toward the Sun.
G. There is an increase in sunspots during summer months.
H. The Sun gives off more energy during the summer months.
J. The elliptical shape of the Earth's orbit moves it closer to the sun.

3. Which of the following observations provides the best evidence that Earth rotates on its axis?

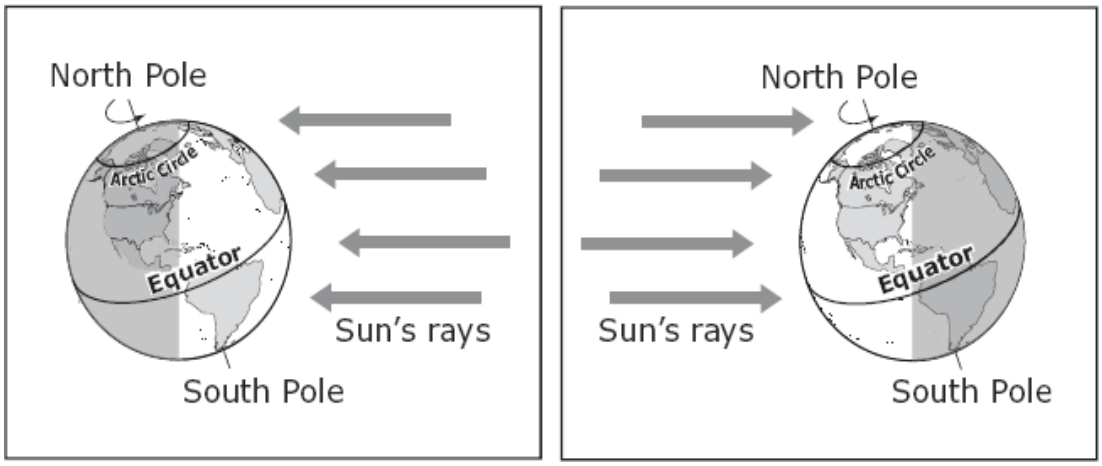
   A. The position of the planets among the stars changes during the year.
   B. The direction of the swing of a freely swinging pendulum changes during the day.
   C. The location of the constellations in relationship to Polaris changes from month to month.
   D. The length of the shadow cast by a flagpole at noontime changes from season to season.

4. 

   The position of Earth relative to the sun's rays in the diagram above shows that it is —

   F. summer throughout the Northern Hemisphere
   G. daylight throughout the Northern Hemisphere
   H. summer throughout the Southern Hemisphere
   J. daylight throughout the Southern Hemisphere

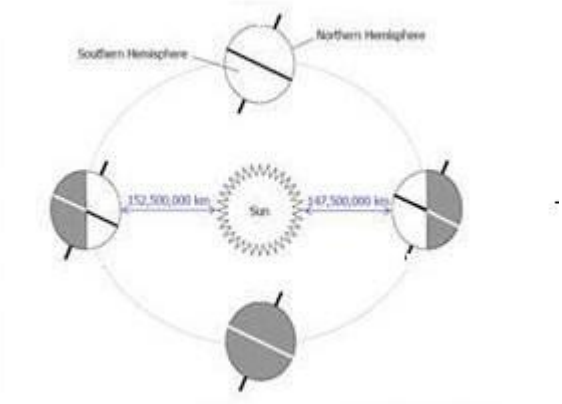
5. Look at the diagrams below. They show the tilt of Earth in relation to the sun during two different times of year.



What happens in the hemisphere that is tilted toward the sun?

A. The days are longer, and the temperatures are colder.
B. The days are shorter, and the temperatures are colder.
C. The days are longer, and the temperatures are warmer.

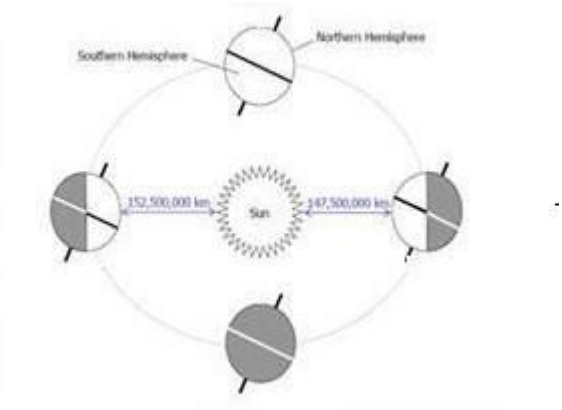
6.



The main concept modeled in the diagram above is the-

F. Earth is much larger than the Sun
G. Earth's rotation causes seasons on Earth
H. Sun's affect on Earth due to its rotation
J. Relationship that exists between the Sun and the Earth

7.



A concept modeled in the diagram above is-

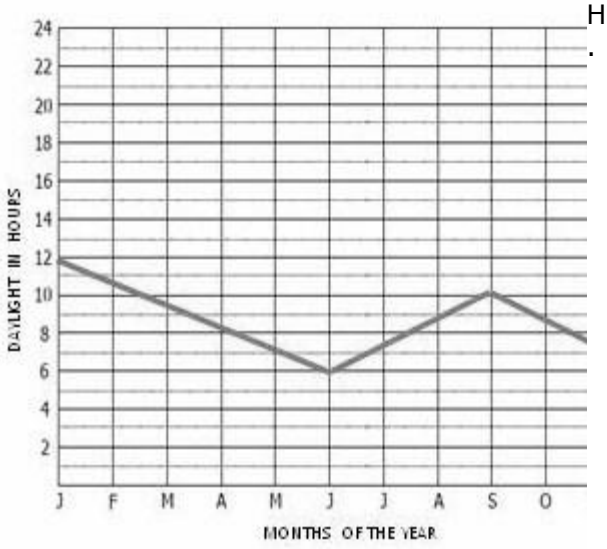
A. Day and night are caused by Earth's revolution.
B. The Earth's tilt greatly affects day and night.
C. The distance between the Sun and Earth has no affect on seasons.
D. The Sun moves closer to the Earth when the northern hemisphere is experiencing winter.

8. Seasons can be characterized by the quantity of direct, indirect or lack of radiation from the Sun on any specific latitude on Earth. Areas that have a greater length of time of direct sunlight would experience longer daylight hours each day. An area that experiences shorter daylight hours or no daylight would have less direct radiation striking it. Typically, when an area has longer daylight hours, it would reflect the season of summer. Shorter daylight hours would indicate winter.

If a student was researching the seasonal amount of radiation at specific latitudes, they could record the data reflecting the amount of daylight hours for each month of the year. This would be a good indicator of the season at a given time of year for either hemisphere.

Which graph would be the best indicator that an area found at 65 degrees north latitude would be experiencing the season of summer?

F.



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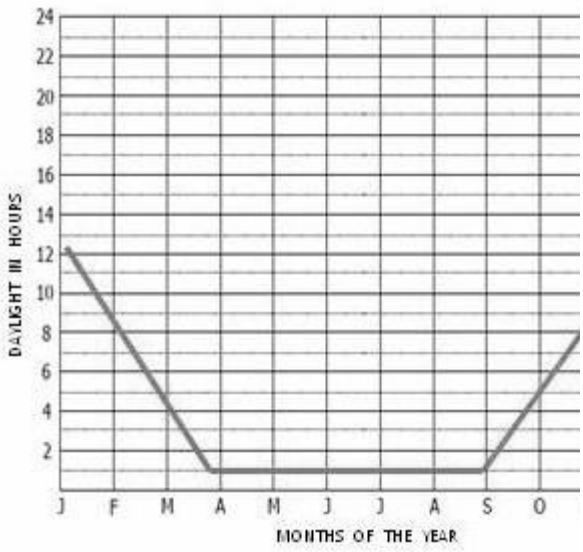

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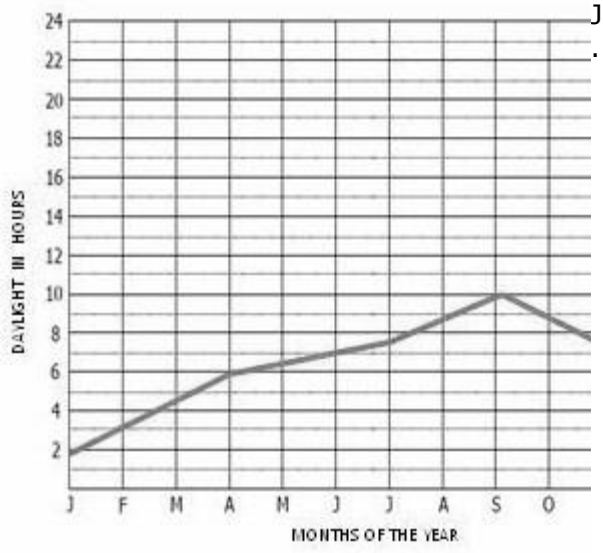
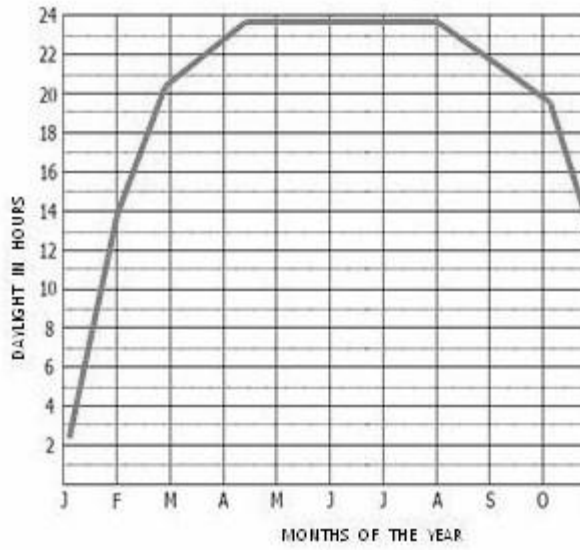


J.



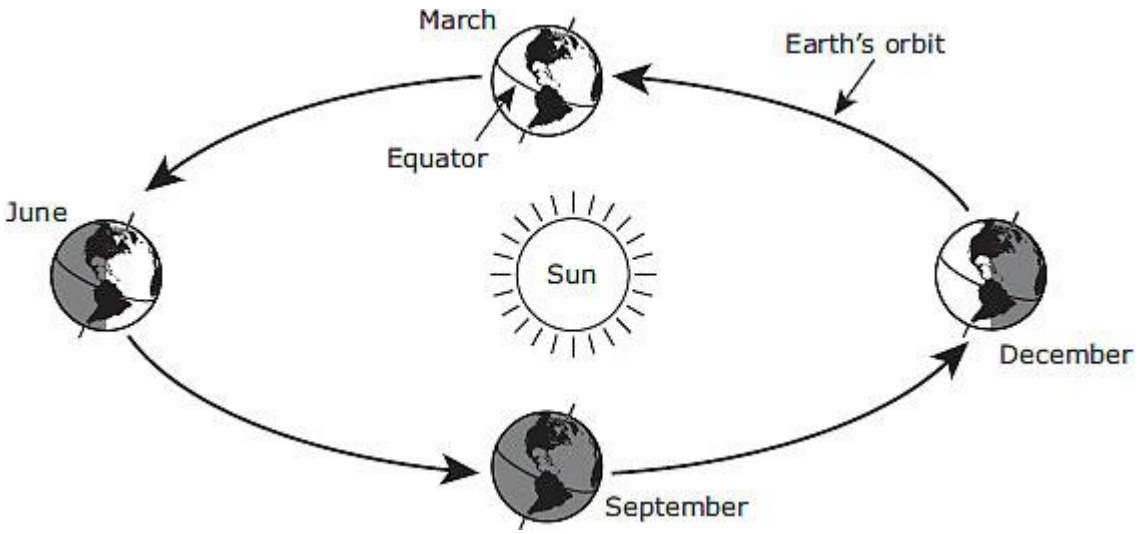
9. Which of the following statements best explains why the Northern Hemisphere is warmer in July?

A. The Sun's rays are more direct on the Northern Hemisphere.
B. The Northern Hemisphere is closer to the Sun in the summer.
C. In July, the greenhouse effect increases in the Northern Hemisphere.
D. During this month, the warm ocean currents flow northward from the tropics.

10. Choose a statement that best illustrates the reason why the Northern Hemisphere experiences longer daylight hours in summer than in winter.

F. Daylight hours are produced by the rotation of the Earth.
G. In summer, the Sun's rays are more direct on the Tropic of Capricorn.
H. The Sun's rays are primarily on the Southern Hemisphere in summer.
J. During the summer, the Sun's position is higher in the sky so it takes longer to set.

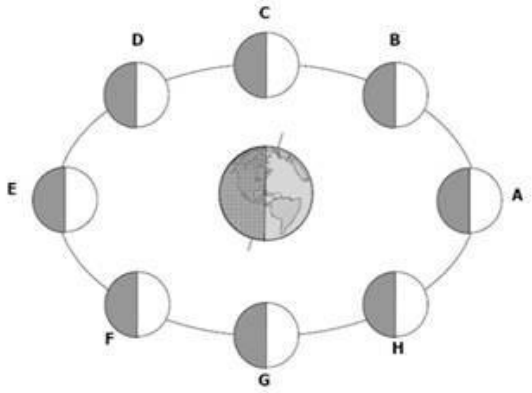
11.



Earth would not have seasons if it —

A. no longer tilted on its axis
B. stopped rotating on its axis
C. took an additional month to orbit the sun
D. revolved around the sun in the opposite direction

12.



Choose the best statement that explains the concept shown in the diagram.

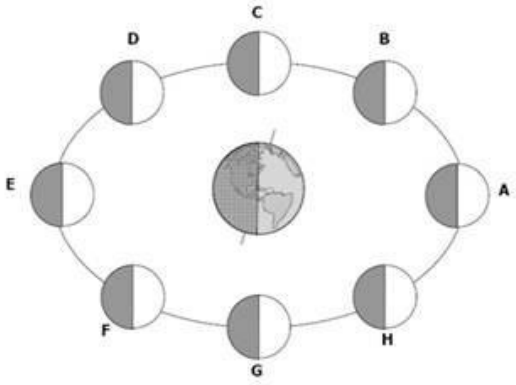
F. Lunar phases occur in a repeating pattern due to the revolution of the Moon around the Earth as the Earth revolves on its axis.

G. The Sun's illumination on the Moon is constant; the phases are due to our perception of that illumination.

H. As the Earth revolves around the Sun, lunar phases occur in a regular and repeating pattern.

J. The diagram shows the cyclical pattern of the Moon as it rotates around the Earth.

13. Using the illustration of the lunar cycle, which phase is visible at point B?



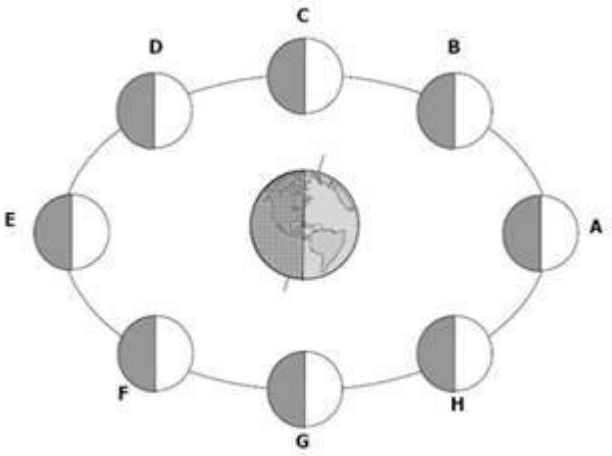
A.

C.

B.

D.

14. Using the illustration of the lunar cycle, which lunar phase, as viewed from Earth, would a person see at point G?



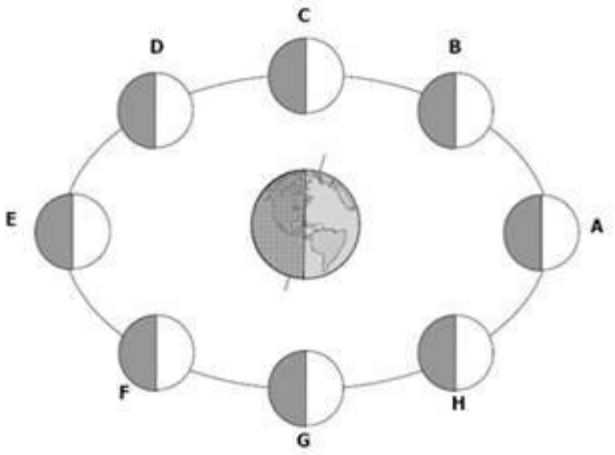
F.

G.

H.

J.

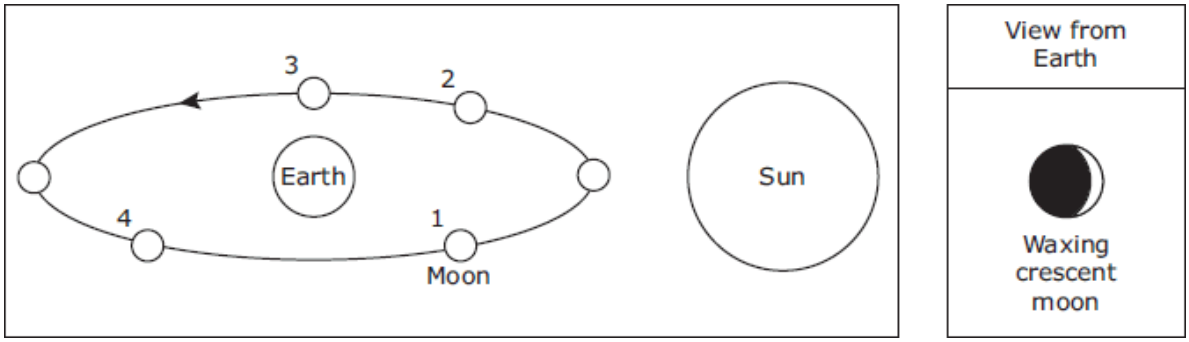
15.



All models have disadvantages and advantages when a person uses them as a resource for information. What would be the best advantage when using the lunar cycle diagram as a resource?

A. The lunar diagram model does not show the direction of the Sun's radiation.
B. It correctly describes the relationship of the size and position of the Earth and the Moon during each month.
C. The moon's direction of movement as it revolves around the Earth is not illustrated in the lunar cycle diagram.
D. The diagram helps a person to understand the paradox between what is seen and what actually occurs during the lunar cycle.

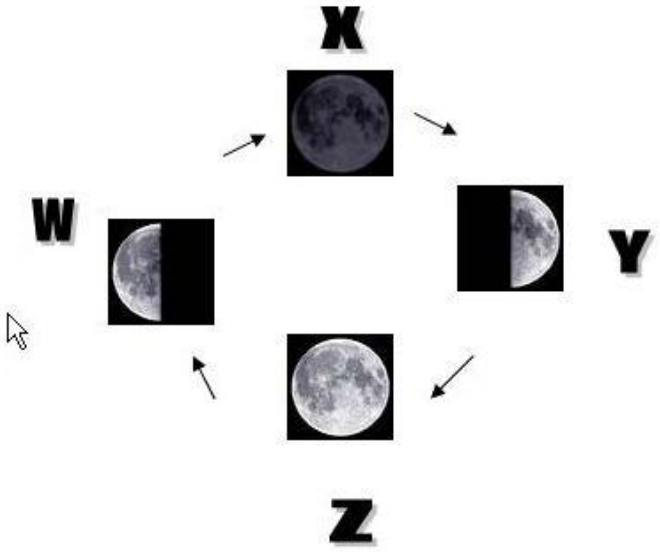
16.



The diagram above shows the orbit of the moon around Earth. At which point in the moon's orbit will a person standing on Earth see a waxing crescent moon?

F. 1
G. 2
H. 3
J. 4

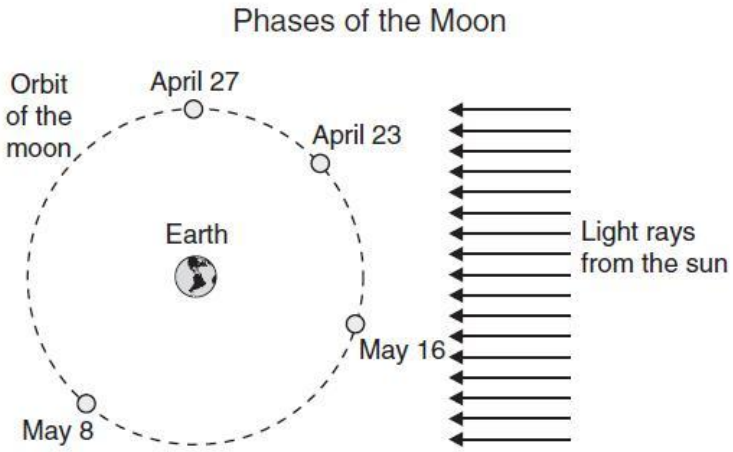
17.



Which picture above represents the New Moon phase of the lunar cycle?

A. W B. X C. Y D. Z

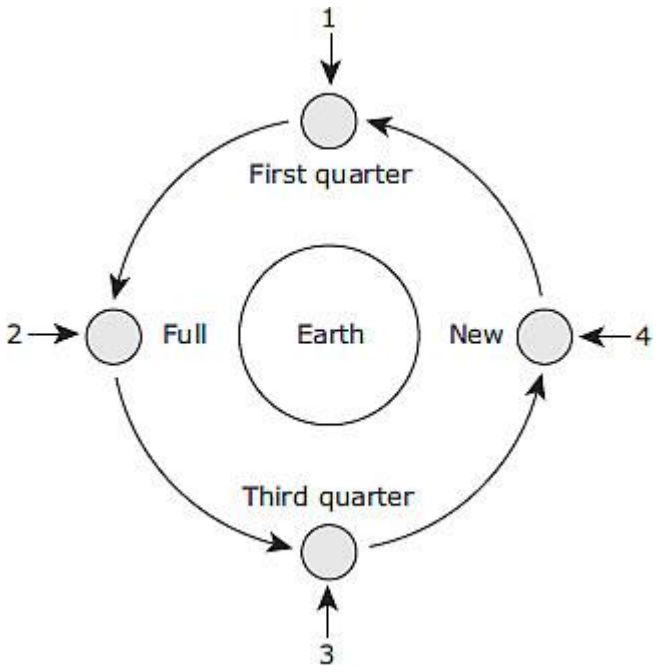
18.



The diagram above shows the moon orbiting Earth. An observer on Earth sees different phases on different dates. Which of the following dates is closest to the new-moon phase?

F. April 23 G. April 27 H. May 8 J. May 16

19. The diagram below shows four phases of the moon as it revolves around Earth.



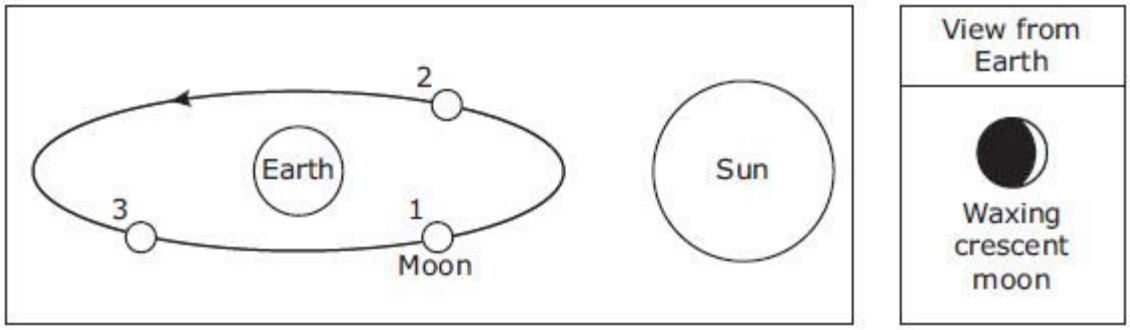
A student builds a model based on this diagram. The student uses foam balls to represent the moon and Earth and a flashlight to represent the sun. The student should shine the flashlight on the model of Earth from Position—

A. 1
B. 2
C. 3
D. 4

20. A student keeps a record of the phases of the moon for one month. On the first night of the student's observations, the full moon is visible in the sky. After the full moon, which of these phases will the student observe next?

F. Waxing crescent moon
G. Waxing gibbous moon
H. Waning crescent moon
J. Waning gibbous moon

21. The diagram below shows the orbit of the moon around Earth.



At which point in the moon's orbit will a person standing on Earth see a waxing crescent moon?

A. 1
B. 2
C. 3

22. The gravitational pull of the moon has a great effect on the ocean tides found on Earth. How does the daily tidal pattern occur on shorelines?

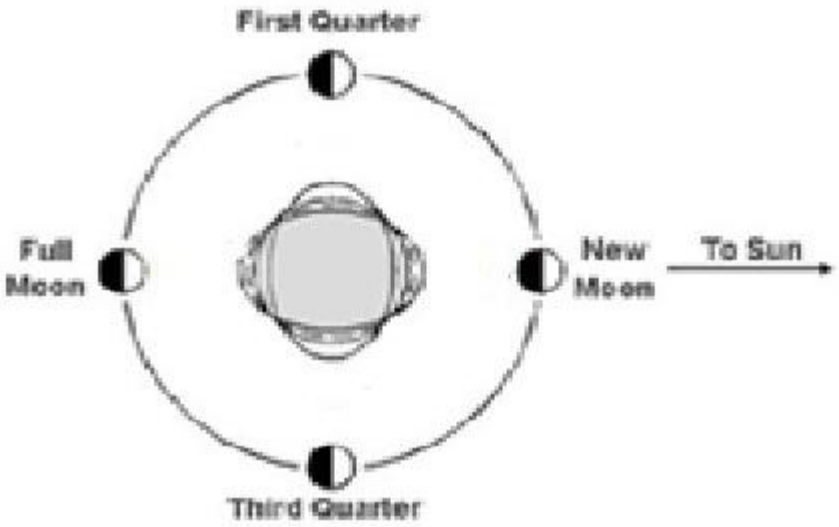
F. The pattern of daily tides occurs regularly every hour.
G. Tides move in and out on a regular pattern of every twelve hours.
H. The height of the ocean tides occur in a pattern of every six hours.
J. One day, the ocean tides are high, and then the next day the area will experience low tides

23.

Using the graphic above, identify the resulting tides from the positions of both the Sun and the moon.

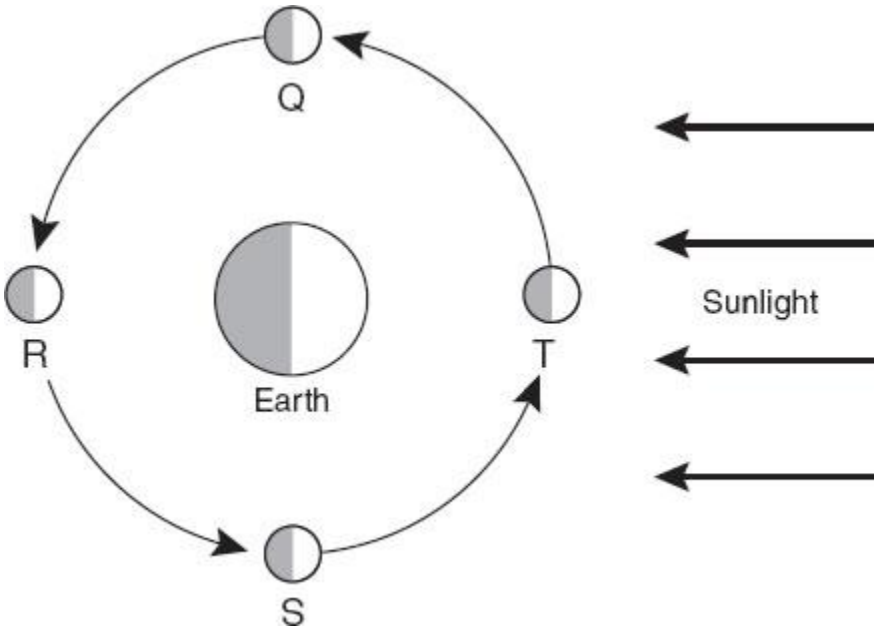
A. Spring tides
B. Fall tides
C. Neap tides
D. Autumnal tides

24.



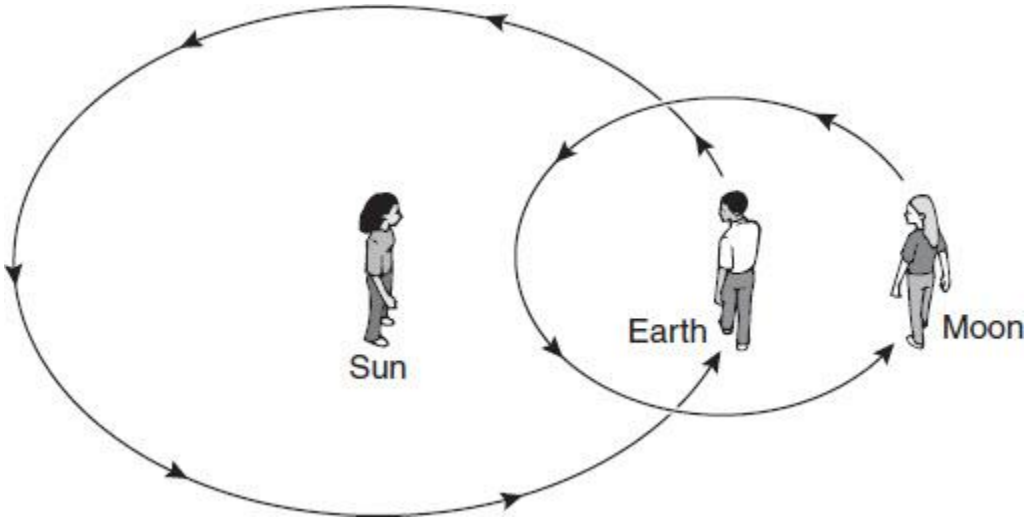
Choose the alignment of the Earth, moon, and the Sun that best represent a Spring tide.

F. Third quarter, Earth, New moon, the Sun
G. First quarter, Earth, New moon, the Sun
H. Full Moon, Earth, New Moon, the Sun
J. None of the above



25. The diagram shows the orbit of the moon around Earth. Between which two points will the moon appear to change from a new moon to a quarter moon?

A. Q and R
B. R and S
C. S and T
D. T and Q



26. Three students use their bodies to show how the sun, the moon, and Earth are aligned during the phases of the moon. What is one limitation of this model?

F. It cannot show the relative motion of the three objects.
G. It cannot be safely used to show gaseous objects such as the sun.
H. It cannot show how the sun's light affects the moon's appearance.
J. It cannot be used to show the direction of Earth's revolution.