

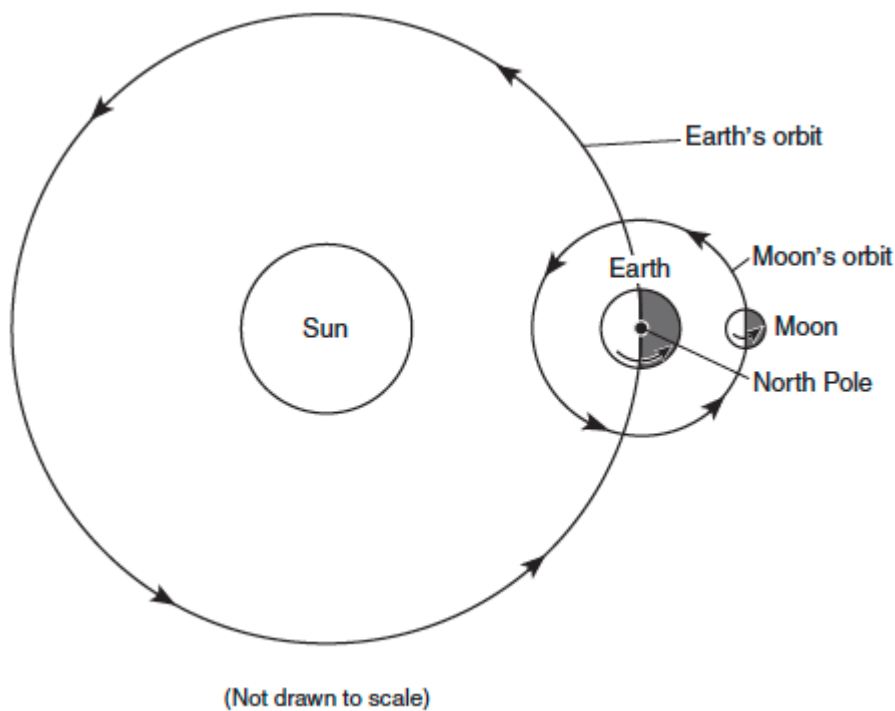
Name _____ Date ____/____/____

Astronomy Test

1. The Earth is kept in its rotational orbit around the Sun by _____.
a. gravitational forces
b. magnetic force
c. nuclear forces
d. electric forces

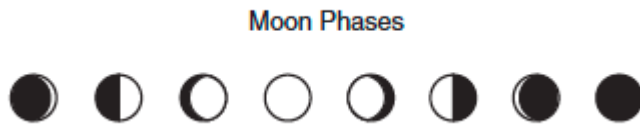
Use the information below to answer questions **2-4**.

Copy of Base your answers to following questions on the diagram below and on your knowledge of science. Arrows on the diagram represent the direction of the Moon's rotation and revolution and Earth's rotation and revolution.



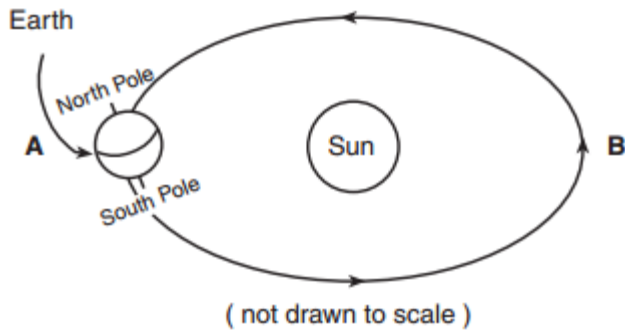
2. Circle the Moon phase that would be visible to an observer in New York State at night when the Moon is in the position shown in the diagram above.

Circle one:



- a. waxing crescent
 - b. 1st quarter
 - c. waxing gibbous
 - d. full moon
 - e. waning gibbous
 - f. 3rd quarter
 - g. waning crescent
 - h. new moon
3. Why is the Moon at this position is visible in the sky?
- a. the Moon produces its own light
 - b. the Moon reflects light from the Sun
4. What is the approximate amount of time the Moon takes to complete one cycle of phases and return to the same phase as shown in the diagram? Include units in your answer.
- a. one day
 - b. one week
 - c. one year
 - d. one month
5. The sun is _____.
- a. the smallest planet
 - b. the largest planet
 - c. the closest star to Earth
 - d. the farthest star from Earth

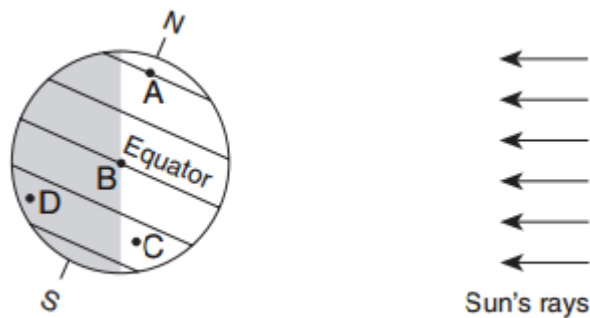
6. The diagram below shows Earth, as viewed from space, as it moves around the Sun.



Approximately how long does it take Earth to move from position A to position B?

1. 1 year
 2. 6 months
 3. 1 day
 4. 12 hours
7. The Sun appears to move across the sky during the day. The best explanation for this apparent motion is that Earth is
1. rotating on its axis
 2. revolving around the Sun
 3. much smaller than the Sun
 4. tilted on its axis
8. The length of a year is equivalent to the time it takes for one
1. rotation of Earth
 2. rotation of the Sun
 3. revolution of Earth around the Sun
 4. revolution of the Sun around Earth

9. The diagram below shows Earth as seen from space. Letters A through D are locations on Earth's surface.



When Earth is in this position, which location would experience the greatest number of daylight hours?

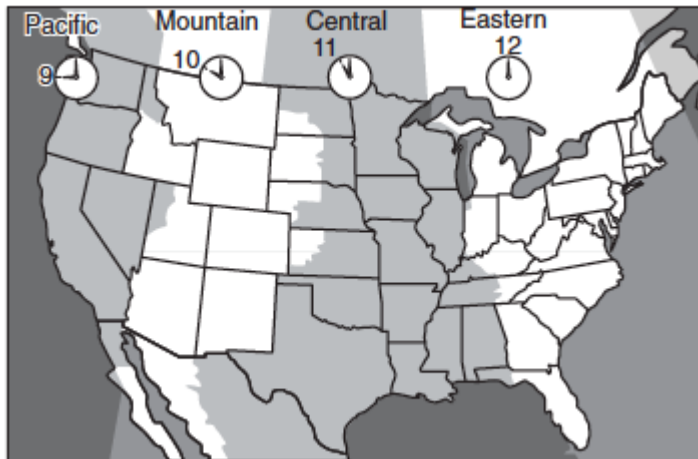
1. A
 2. B
 3. C
 4. D
10. A student drew the pictures below to show how the Moon looked from Earth over a two-week period.



The differences shown in the student's drawings are mostly due to the changing

1. distance between Earth and the Moon
 2. speed of the Moon in its orbit
 3. position of the Moon in its orbit
 4. position of the observer on Earth
11. The Moon has the greatest effect on Earth's
1. year
 2. seasons
 3. ocean tides
 4. daylight hours

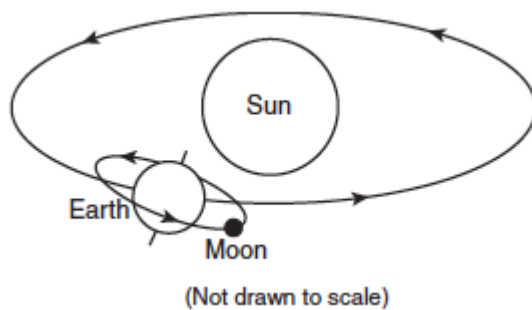
12. The map below shows the four major time zones in the continental United States.



If it is 9 a.m. in the Eastern Time Zone, what time is it in the Pacific Time Zone?

- 1.** 3 a.m.
- 2.** 6 a.m.
- 3.** 6 p.m.
- 4.** 9 p.m.

13. The illustration below shows the Moon orbiting Earth and Earth orbiting the Sun.

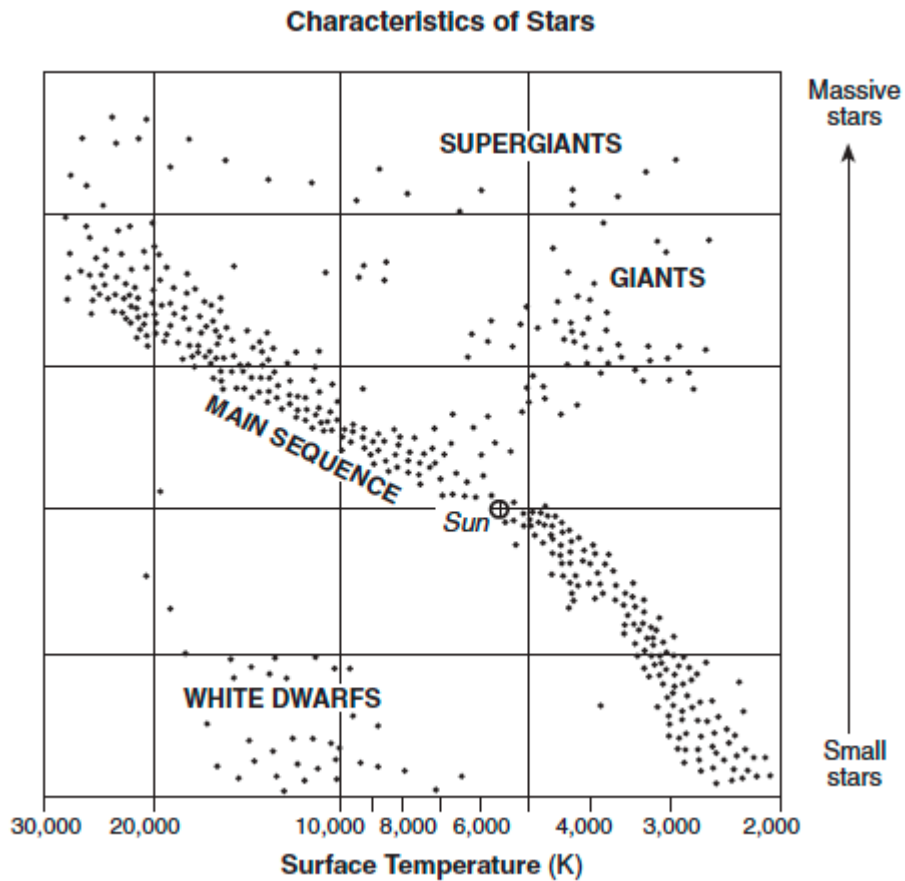


Which force is responsible for these orbiting motions?

- 1.** friction
- 2.** electricity
- 3.** magnetism
- 4.** gravity

- 14.** The longitude of a location determines which time zone it is in. Different time zones are the result of
- 1.** Earth's rotation
 - 2.** Earth's revolution
 - 3.** the Moon's rotation
 - 4.** the Moon's revolution
- 15.** In New York State, an observer will usually see the Sun rise in the
- 1.** north
 - 2.** south
 - 3.** east
 - 4.** west
- 16.** The length of one day on Earth is determined by how long it takes
- 1.** the Moon to revolve once
 - 2.** the Moon to rotate once
 - 3.** Earth to rotate once
 - 4.** Earth to revolve once
- 17.** When Earth's shadow falls on the Moon, the shadow causes a
- 1.** high tide
 - 2.** low tide
 - 3.** lunar eclipse
 - 4.** Moon phase

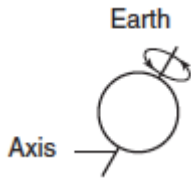
- 18.** The graph below shows the relative sizes and surface temperatures of four groups of stars. The surface temperature of the stars is measured in Kelvin (K). The Sun is part of the main sequence group.



According to the graph, the Sun is best described as

- 1.** massive sized, with a surface temperature of approximately 20,000 K
- 2.** massive sized, with a surface temperature of approximately 10,000 K
- 3.** average sized, with a surface temperature of approximately 8,000 K
- 4.** average sized, with a surface temperature of approximately 6,000 K

19. The diagram below shows Earth as viewed from space.

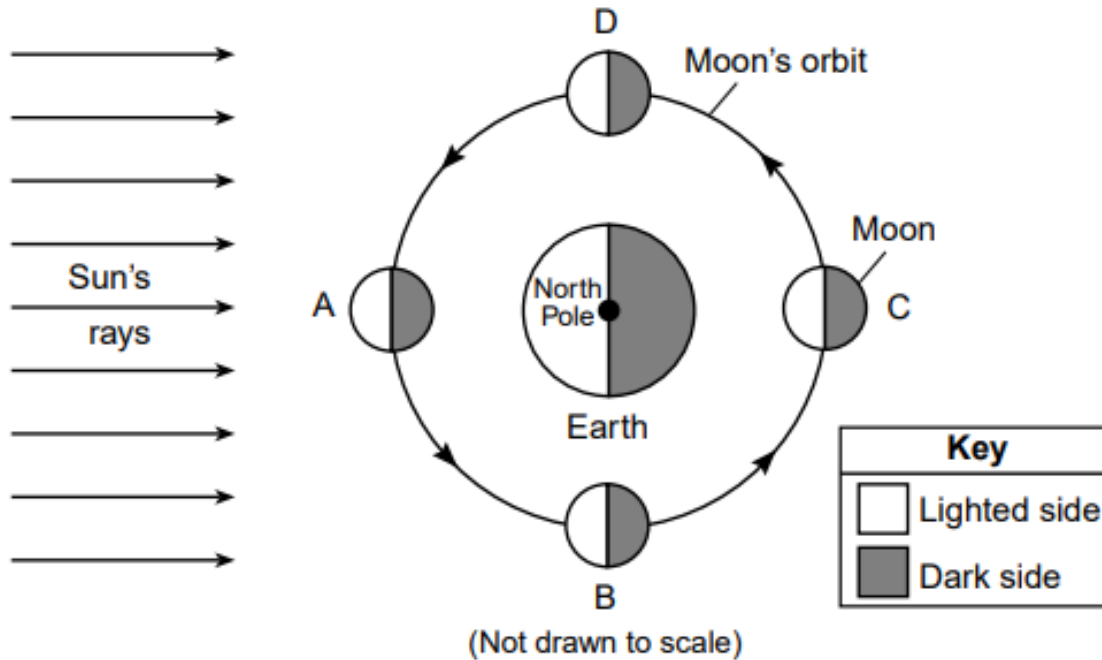


What motion of Earth is represented by the arrow in the diagram?

- a.** rotation
- b.** revolution

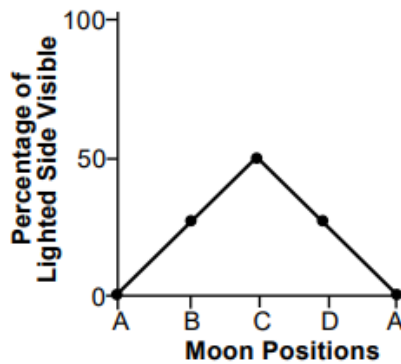
Use the information below to answer questions **20-21**.

The diagram represents the Moon at positions A, B, C, and D, in its orbit around Earth.

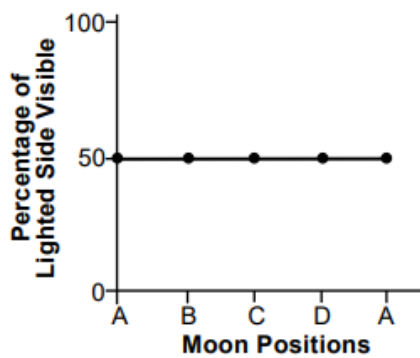


20. Which graph best represents the percentage of the lighted side of the Moon that can be seen by an observer in the northern hemisphere when the Moon is at the positions shown?

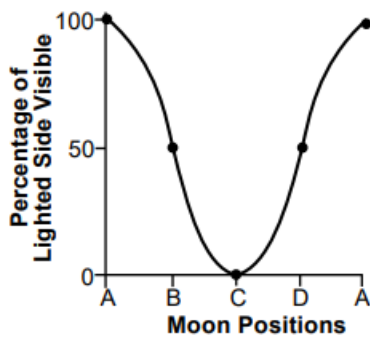
1.



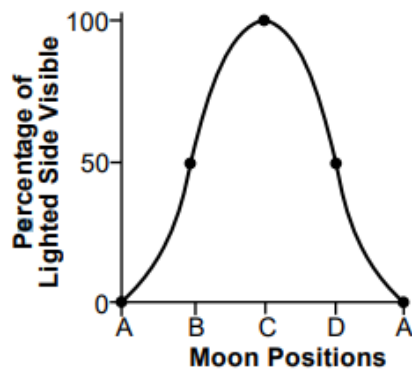
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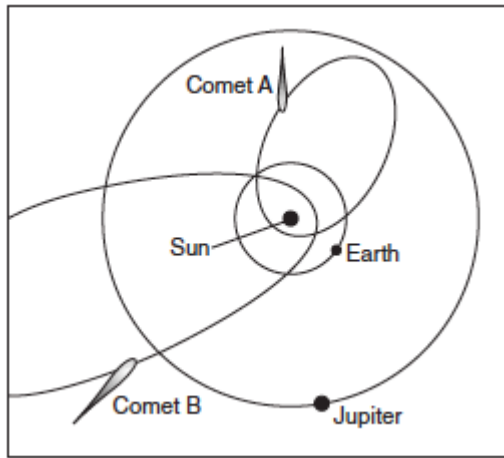
3.



4.



- 21.** Approximately how long does it take for an observer on Earth to view a complete cycle of Moon phases?
- 1.** 12 hours
 - 2.** 24 hours
 - 3.** 1 month
 - 4.** 1 year
- 22.** The diagram below shows four objects and their orbits around the Sun, as seen from space.



Which statement is true about all of the objects shown in the diagram?

- 1.** They produce their own light.
- 2.** They belong to our solar system.
- 3.** They are composed mostly of gases.
- 4.** They are the same distance from the Sun.

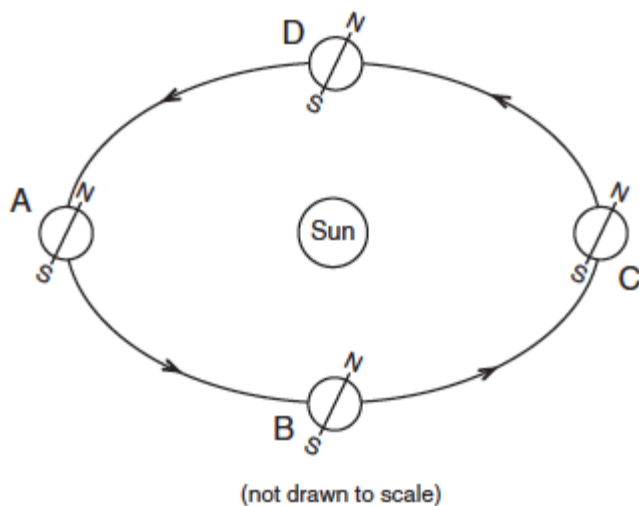
- 23.** The data table below shows the sunrise and sunset times for the first day of each season at a location in New York State. The times for the first day of fall are shown. Complete the table by identifying the season that matches the remaining sunrise and sunset times. [1]

Data Table

Season	Sunrise	Sunset
fall	6:43 a.m.	6:54 p.m.
	5:42 a.m.	8:30 p.m.
	7:16 a.m.	4:31 p.m.
	6:59 a.m.	7:07 p.m.

Use the information below to answer questions **24-26**.

Base your answers to the following questions on the diagram below. The diagram shows Earth's revolution around the Sun as viewed from space. Positions A, B, C, and D represent the beginning of each season on Earth.




- 24.** What is one reason the Earth has seasons?
- a.** closeness to the Sun
 - b.** tilt of the Earth's axis

- 25.** If Earth were at position D, how much time would it take to return to position D?
- 1 day
 - 1 month
 - 6 months
 - 1 year
- 26.** Which season begins in the Northern Hemisphere when Earth is at position A?
- winter
 - spring
 - summer
 - fall

Use the information below to answer question **27**.

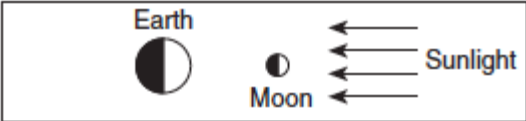
Base your answers to the following questions on the chart below, which shows various data collected and predicted for Albany, New York, on March 9, 2001.


Updated: 05:51 AM EST on March 09, 2001	
Observed at	Albany, New York
Temperature	34°F
Windchill	26°F
Humidity	81%
Dewpoint	28°F
Wind	SE at 7 mph
Pressure	29.88 in
Conditions	Overcast
Visibility	10 miles
Clouds	Overcast (OVC): 1800 ft
Sunrise	6:17 AM (EST)
Sunset	5:51 PM (EST)
Moon Rise	6:02 PM (EST)
Moon Set	6:37 AM (EST)
Moon Phase	 Mar. 09 Mar. 16 Mar. 25


Source: www.accuweather.com

27. Which diagram correctly shows the position of the Moon with respect to Earth on March 9, 2001?

- 1.**


- 2.**


- 3.**


- 4.**

