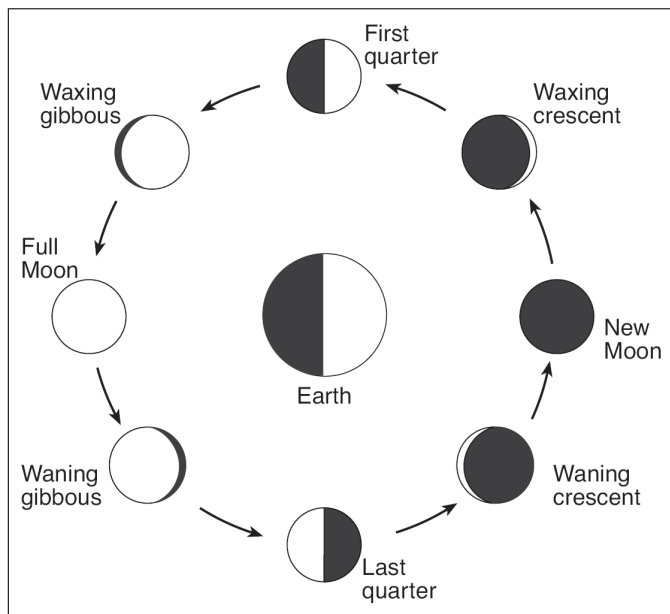


Moon Phases

Base your answers to questions 1 through 4 on

the diagram below, which shows positions of the Moon in its orbit and phases of the Moon as viewed from New York State.

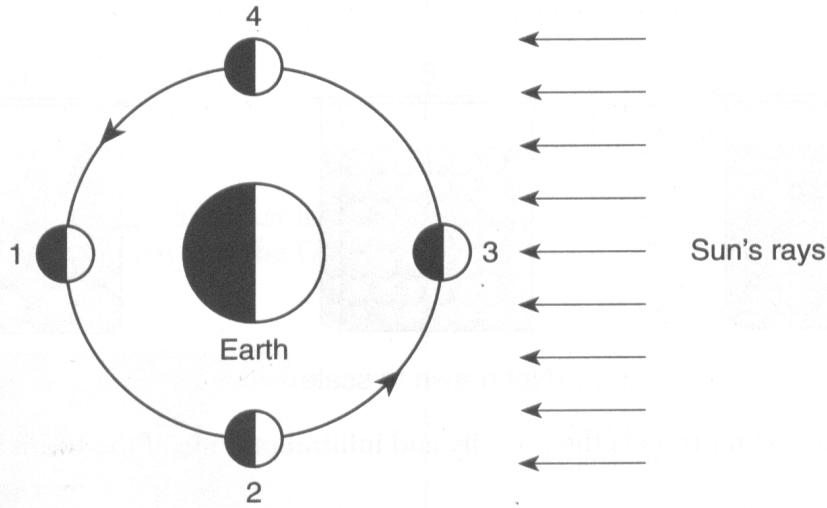


(Not drawn to scale)

1. Which statement best explains why the same side of the Moon is viewed from Earth as the Moon goes through its phases?
 - A) The Moon does not rotate as it revolves around Earth.
 - B) The Moon's period of rotation equals Earth's period of rotation.
 - C) The Moon's period of rotation equals Earth's period of revolution around the Sun.
 - D) The Moon's period of rotation equals the Moon's period of revolution around Earth.
2. Approximately how many days occur between the Moon's first-quarter phase and the Moon's last-quarter phase?
 - A) 7 d
 - B) 15 d
 - C) 29.5 d
 - D) 365.26 d
3. During which Moon phase might a solar eclipse be viewed on Earth?
 - A) new Moon
 - B) first quarter
 - C) full Moon
 - D) last quarter
4. What is the eccentricity of the Moon's orbit?
 - A) 0.017
 - B) 0.055
 - C) 0.386
 - D) 0.723
5. The new-moon phase occurs when the Moon is positioned between the Earth and the Sun. However, these positions do not always cause an eclipse (blocking) of the Sun because the
 - A) Moon's orbit is tilted relative to the Earth's orbit
 - B) new-moon phase is visible only at night
 - C) night side of the Moon faces toward the Earth
 - D) apparent diameter of the Moon is greatest during the new-moon phase

Moon Phases

6. Base your answer to the following question on The diagram below represents the Sun's rays striking Earth and the Moon. Numbers 1 through 4 represent positions of the Moon in its orbit around Earth.

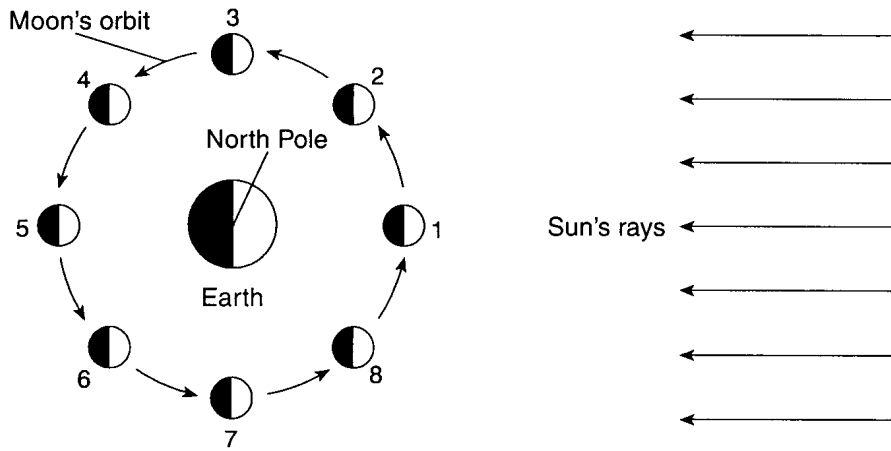


(Not drawn to scale)

The highest tides on Earth occur when the Moon is in positions

- A) 1 and 3 B) 2 and 4 C) 3 and 2 D) 4 and 1

Base your answers to questions 7 through 11 on the diagram below, which represents the Moon orbiting Earth as viewed from space above the North Pole. The Moon is shown at eight different positions in its orbit.



(Not drawn to scale)

Key	
◻	Lighted, visible part of the Moon
◼	Dark, invisible part of the Moon

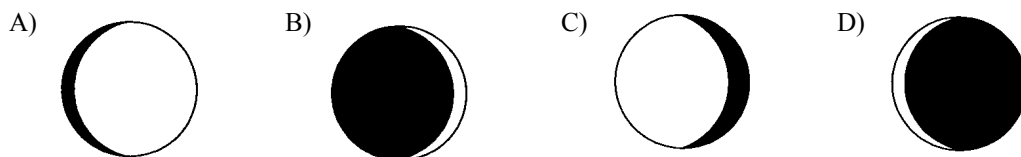
7. The approximate time required for the Moon to move from position 3 to position 7 is
- A) 1 hour B) 2 weeks C) 3 months D) 4 days
8. As the Moon changes location from position 2 to position 6, the visible portion of the Moon as observed from Earth
- A) decreases, only B) increases, only
 C) decreases, then increases D) increases, then decreases
9. Which motion causes the Moon to show phases when viewed from Earth?
- A) rotation of Earth B) rotation of the Sun
 C) revolution of Earth D) revolution of the Moon

Moon Phases

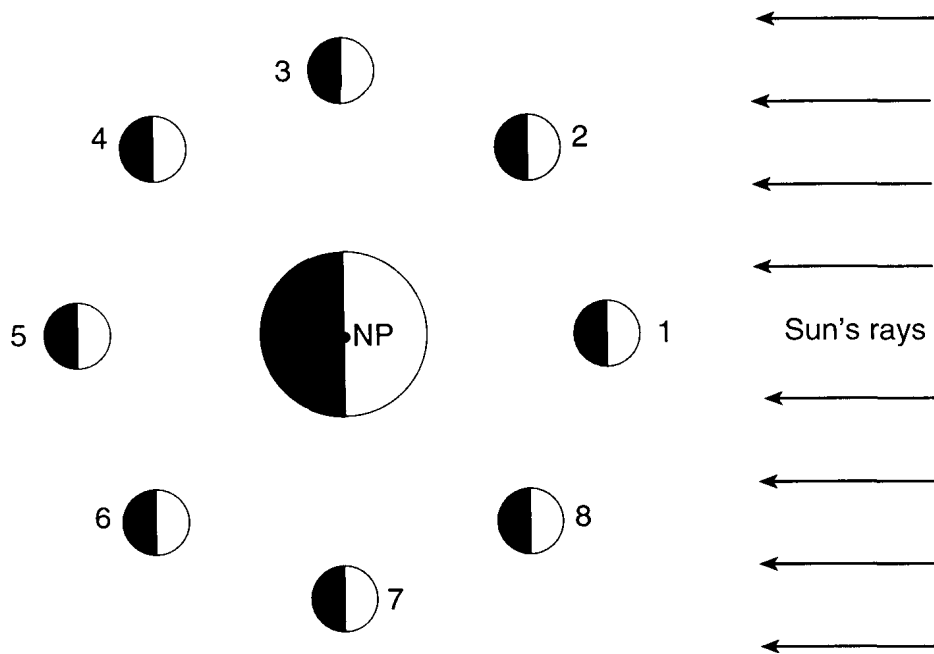
10. Which device when placed on the Moon would provide evidence of Moon rotation?

- A) Foucault pendulum B) seismograph C) thermometer D) wind vane

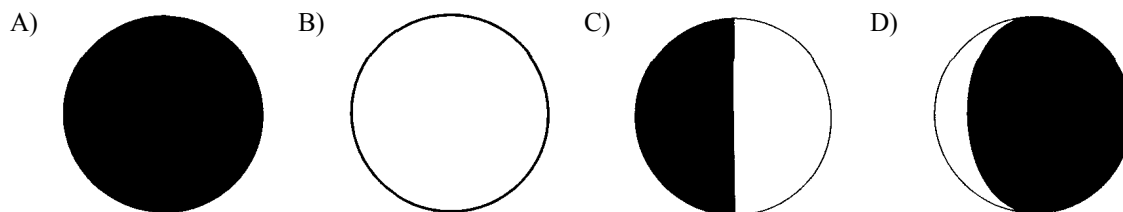
11. When the Moon is in position 2, which phase would be visible to an observer in Maine?



12. The diagram below shows the Moon in different positions as it revolves around Earth, as observed from above the North Pole (NP).

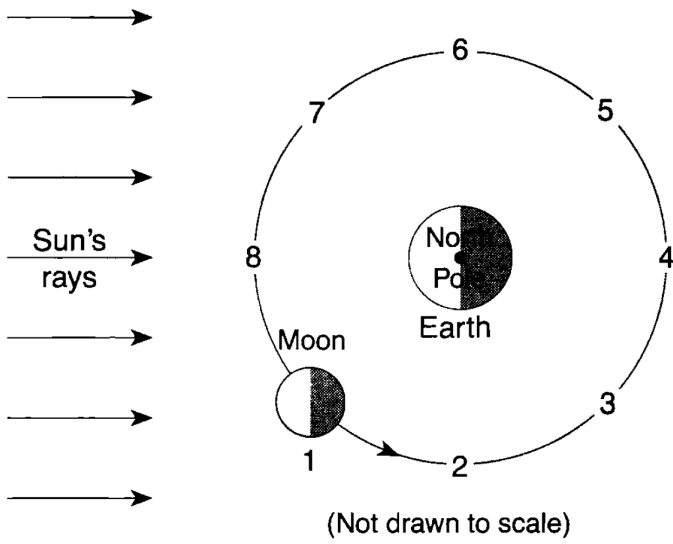


Which image correctly represents the Moon at position 8, as observed from Earth?

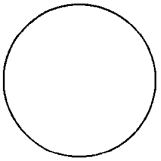


Moon Phases

Base your answers to questions 13 through 15 on the diagram below, which shows the Moon at position 1 in its orbit around Earth. Numbers 2 through 8 represent other positions in the Moon's orbit.



13. A solar eclipse could occur when the Moon is located at which numbered position?
14. How many days does it take the Moon to go from one full-Moon phase to the next full-Moon phase when viewed from Earth?
15. On the diagram below, shade the portion of the Moon that is in darkness as viewed from New York State when the Moon is at position 1.



Answer Key

Moon

1. D

2. B

3. A

4. B

5. A

6. A

7. B

8. D

9. D

10. A

11. B

12. D

13. 8

14. 29 d to 30 d

15.

