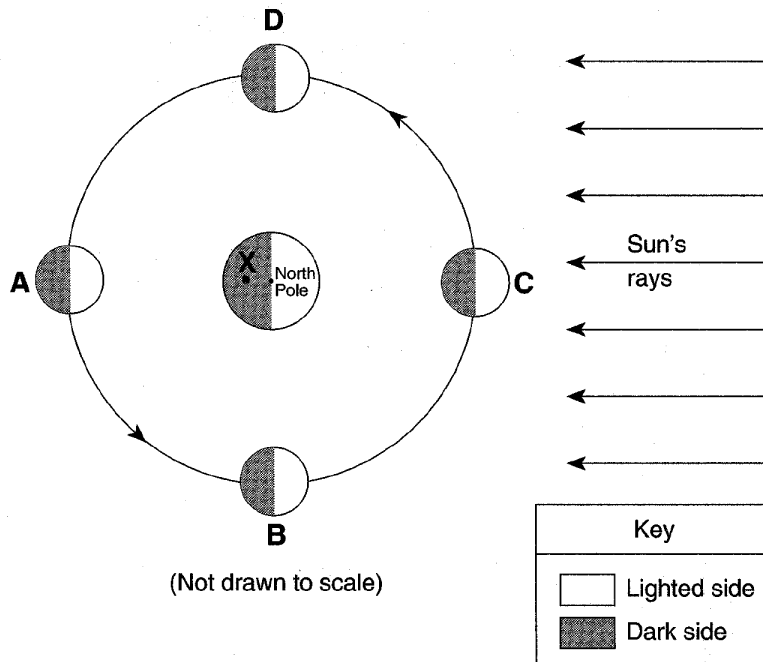


Moon phases eclipses and tides Practice

Name _____

Base your answer to questions 1 and 2 on the diagram below, which shows Earth and the Moon in relation to the Sun. Positions *A*, *B*, *C*, and *D* show the Moon at specific locations in its orbit. Point *X* is a location on Earth's surface.



1. A solar eclipse might occur when the Moon is at location

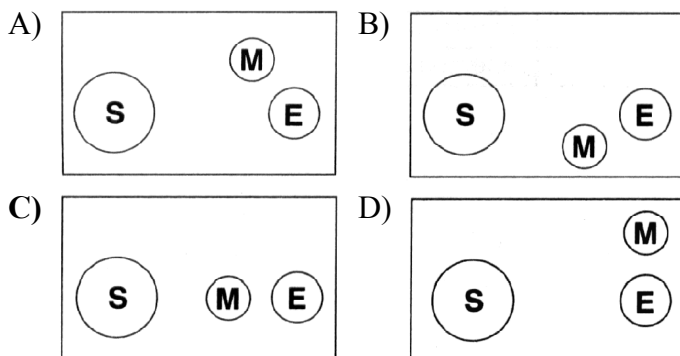
- A) *A* B) *B* C) *C* D) *D*

2. Which phase of the Moon would be observed on Earth when the Moon is at location *A*?

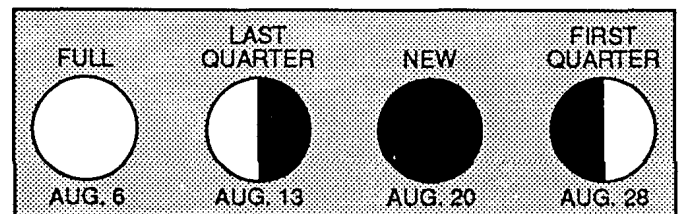
3. How many days are required for the Moon to go from one full-Moon phase to the next full-Moon phase when viewed from Earth?

- A) 24 B) 27.3 C) 29.5 D) 365

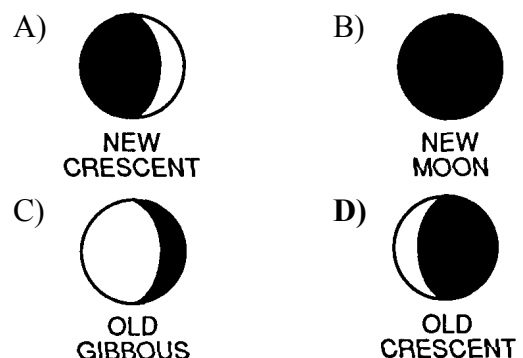
4. Which arrangement of the Sun, the Moon, and Earth results in the highest high tides, and the lowest low tides on Earth? (Diagrams are not drawn to scale.)



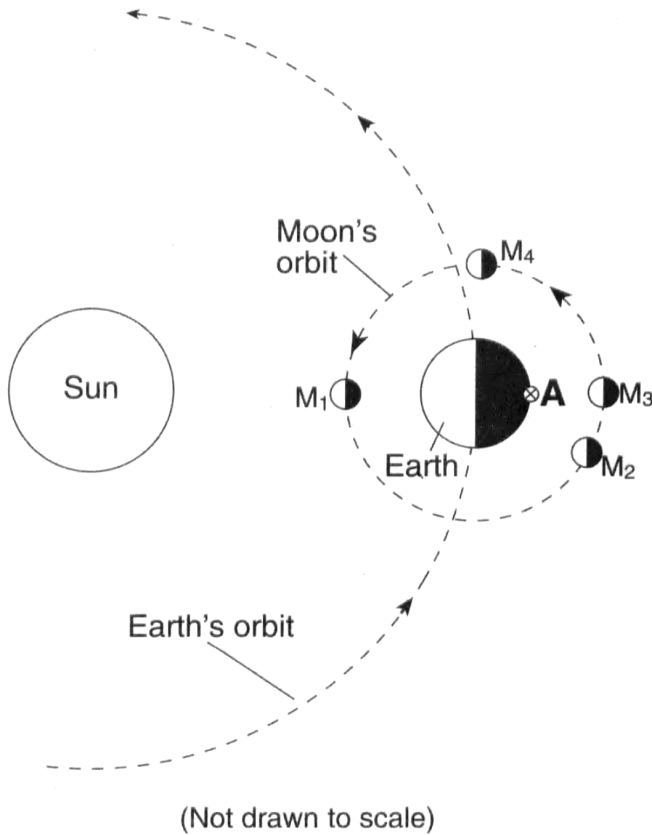
5. The diagrams below show the phases of the Moon as viewed by an observer in New York State at different times in August.



Which phase could have been observed on August 17?





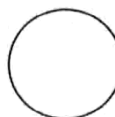

Base your answer to questions 6 through 8 on the diagram below, which shows Earth in orbit around the Sun, and the Moon in orbit around Earth. M_1 , M_2 , M_3 , and M_4 indicate positions of the Moon in its orbit. Letter A indicates a location on Earth's surface.



6. At which Moon position could a solar eclipse be seen from Earth?

- A) M_1 B) M_2 C) M_3 D) M_4

7. An observer at location A on Earth views the Moon when it is at position M_3 . Which phase of the Moon will the observer see?

- A)  B) 
 C)  D) 

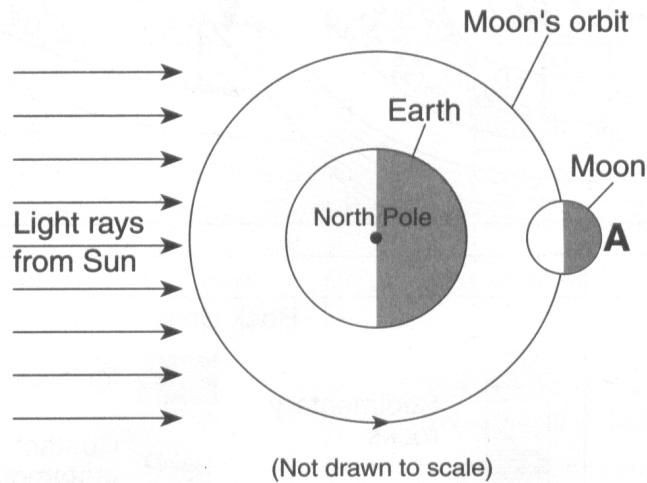
8. An observer at location A noticed that the apparent size of the Moon varied slightly from month to month when the Moon was at position M_4 in its orbit. Which statement best explains this variation in the apparent size of the Moon?

- A) The Moon expands in summer and contracts in winter.
 B) The Moon shows complete cycles of phases throughout the year.
 C) The Moon's period of rotation is equal to its period of revolution.
 D) **The Moon's distance from Earth varies in a cyclic manner.**



9. The passage of the Moon into Earth's shadow causes a

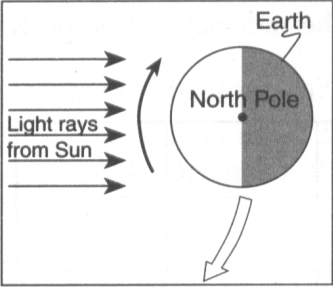
- A) **lunar eclipse** B) solar eclipse
 C) new Moon D) full Moon

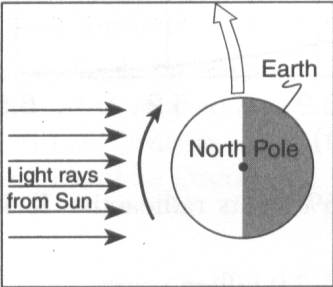
Base your answer to questions **10** and **11** on the diagram below, which shows the Moon, Earth, and the Sun's rays as viewed from space. Letter A indicates a certain position of the Moon in its orbit.

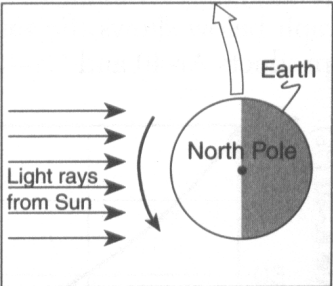


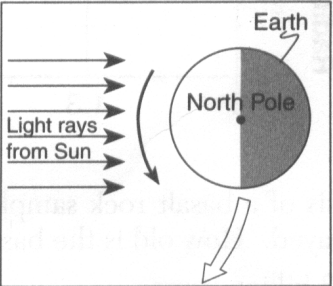
10.Which diagram correctly shows the direction of Earth’s rotation and revolution?

Key	
	Rotation
	Revolution

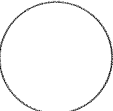
A)



B)



C)


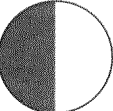
D)


11.Which diagram represents the phase of the Moon, as seen by an observer on Earth, when the Moon is located at position A in its orbit?

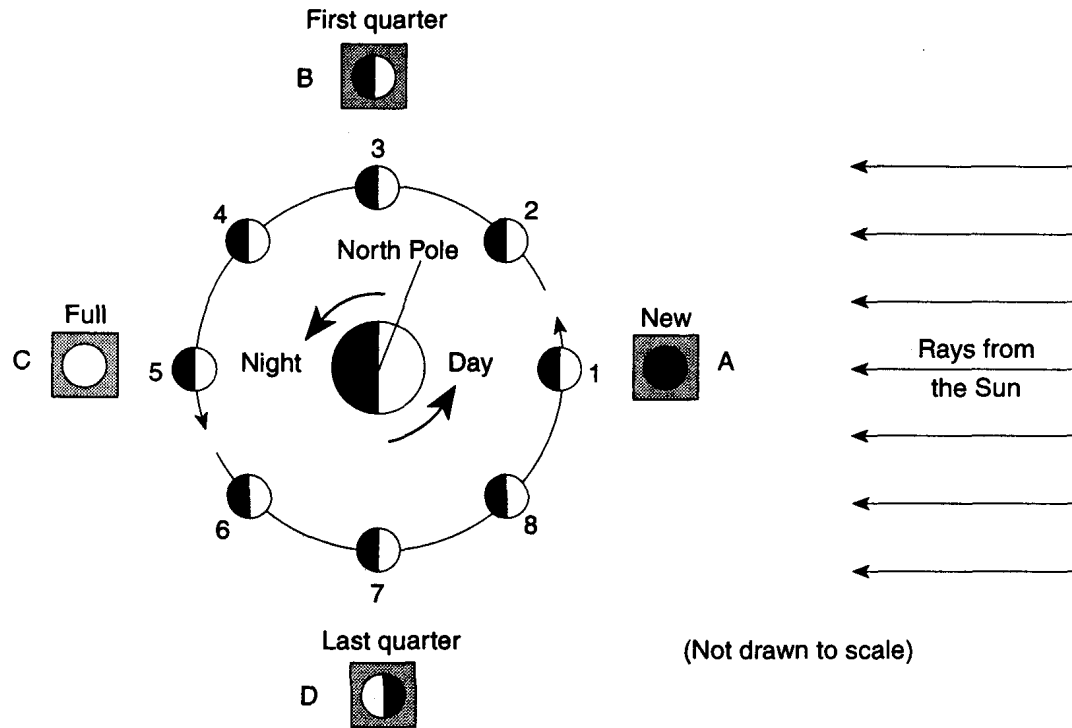
A)


B)


C)


D)


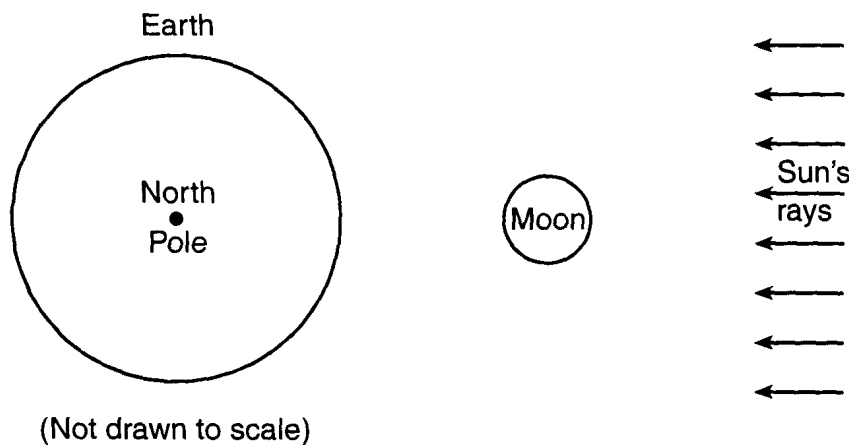
12. Base your answer to the following question on the diagram below, which represents a model of the Earth-Moon system as viewed from above the North Pole. The numbers 1 through 8 represent positions of the Moon as it revolves around Earth. The parts of the diagram lettered A through D show how the Moon's phases appear to an observer in New Jersey.



Which motion causes the Moon to show phases when viewed from Earth?

- A) rotation of Earth
 B) revolution of Earth
 C) rotation of the Moon
 D) **revolution of the Moon**

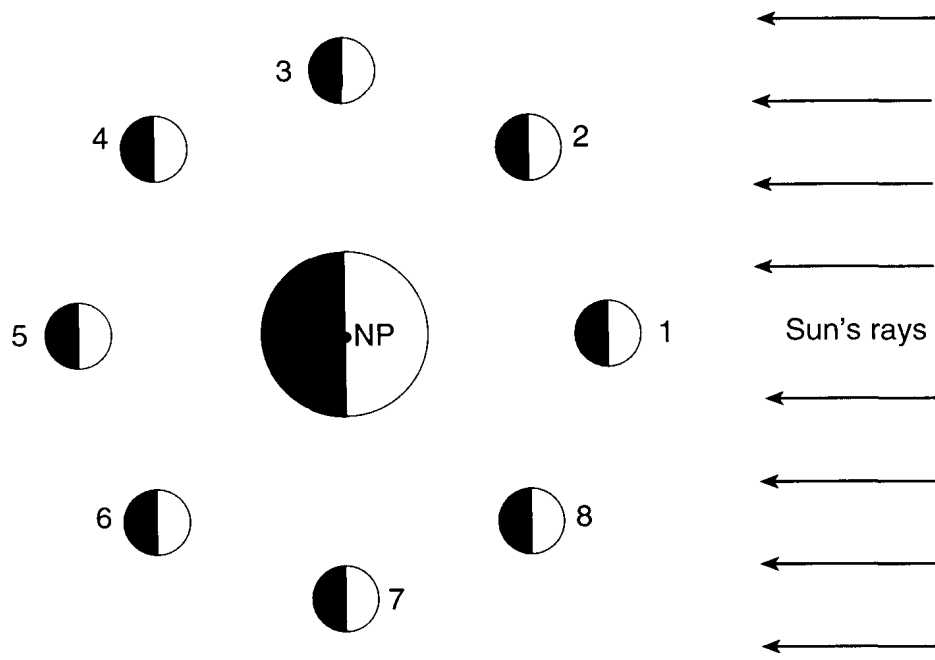
13. The diagram below shows Earth, the Moon, and the Sun's rays as viewed from space.



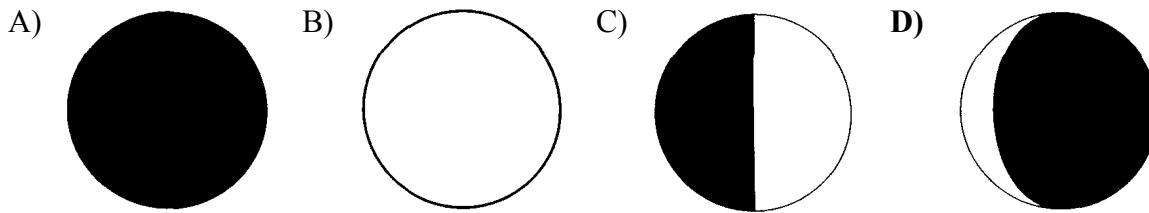
For observers on Earth, which phase of the Moon is represented by the diagram?

- A) **New**
 B) First quarter
 C) Full
 D) Last quarter
- Below each label is a box containing a Moon phase: A) a solid black circle, B) a circle half-black on the left, C) an empty circle, and D) a circle half-black on the right.

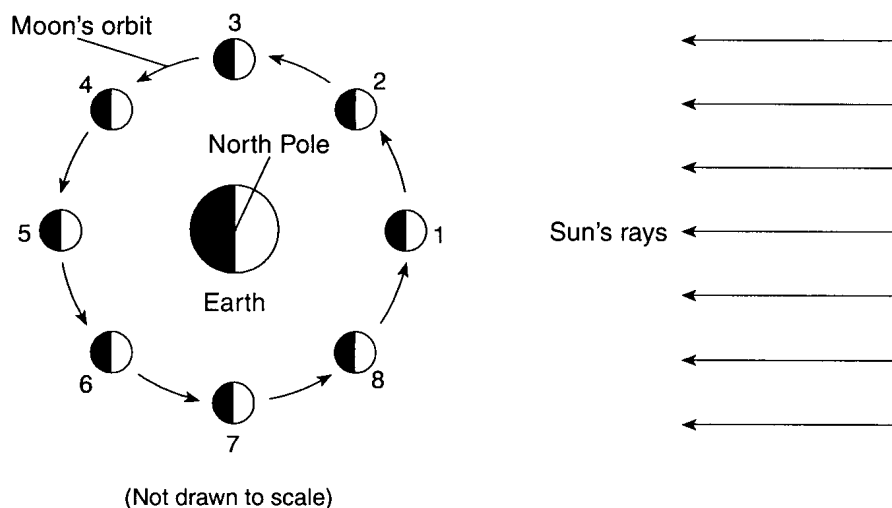
14. The diagram below shows the Moon in different positions as it revolves around Earth, as observed from above the North Pole (NP).





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



15. Base your answer to the following question 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.



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

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

#	QID#	Ans	Thinking Skills	Standards
1	6523	C		
2	6524	n/a		
3	6477	C		
4	6060	C		
5	1896	D		
6	6174	A		
7	6173	C		
8	6175	D		
9	4398	A		
10	5668	C		
11	5669	A		
12	3582	D		
13	4030	A		
14	4391	D		
15	4346	B		

Answer Key
Moon Phases tides practice

1. **C**
- 2.
3. **C**
4. **C**
5. **D**
6. **A**
7. **C**
8. **D**
9. **A**
10. **C**
11. **A**
12. **D**
13. **A**
14. **D**
15. **B**

**Question ID's in
Numerical Order**

5. 1896
12. 3582
13. 4030
15. 4346
14. 4391
9. 4398
10. 5668
11. 5669
4. 6060
7. 6173
6. 6174
8. 6175
3. 6477
1. 6523
2. 6524