

Phases of the Moon

Label each phase of the moon. Use words from the box below.

full moon	new moon	waxing crescent	waning crescent
first quarter	last quarter	waxing gibbous	waning gibbous

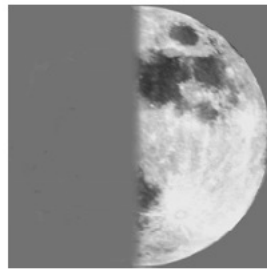
A little trick to help you remember whether a moon is waxing (getting bigger) or waning (getting smaller) is to mentally draw a line between the dark and light parts of the moon. If the lighted part forms a lower case b the moon is being “born” or waxing. If the lighted part forms a lower case d the moon is “dying” or waning.



1. _____



2. _____



3. _____



4. _____



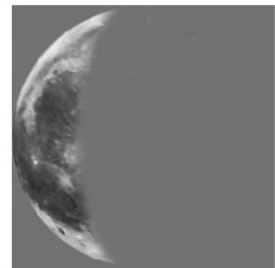
5. _____



6. _____



7. _____

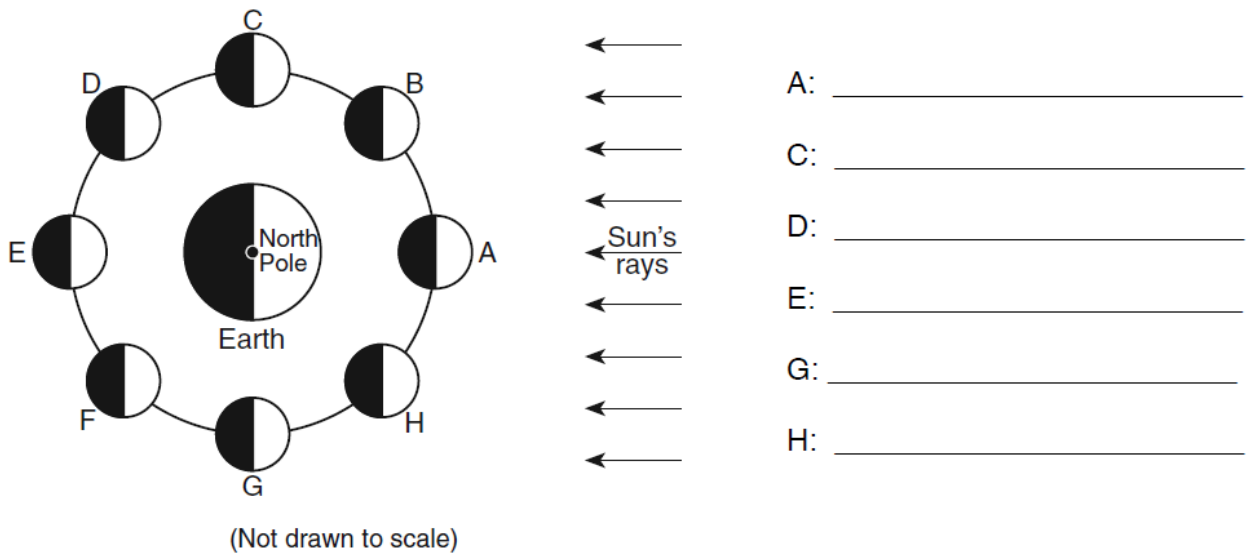


8. _____

FUN FACT

The first full moon after the autumn equinox, September 21-23, is called the Harvest Moon. The next full moon is called the Hunter’s Moon. The occurrence of 2 full moons in the same month is called a “BLUE” moon!

Use the diagram below to fill in the name of the moon phases for the position indicated by the letter

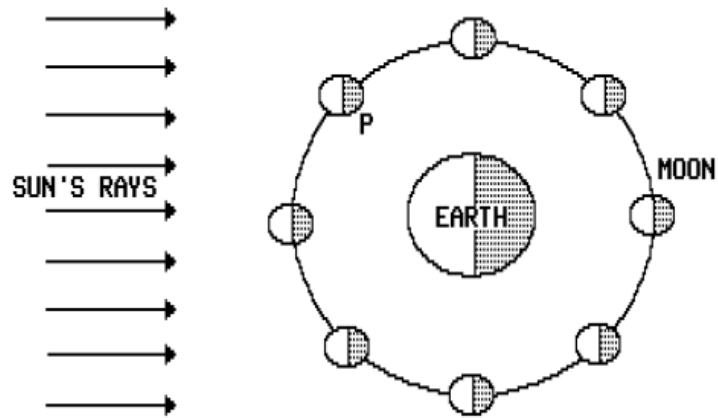


In the space below, draw a diagram with the Sun on the right, representing the position of the sun, moon and earth when we would see a waning crescent moon.

In the space below, draw a diagram with the Sun on the right, representing the position of the sun, moon and earth when we would see a third quarter moon.

- The phases of the Moon are caused by the
 - Sun's varying distance from the Moon
 - Moon's revolution around the Earth
 - Moon's varying distance from the Earth
 - Earth's revolution around the Sun

2. The diagram below represents a model of the orbit of a moon around a planet.

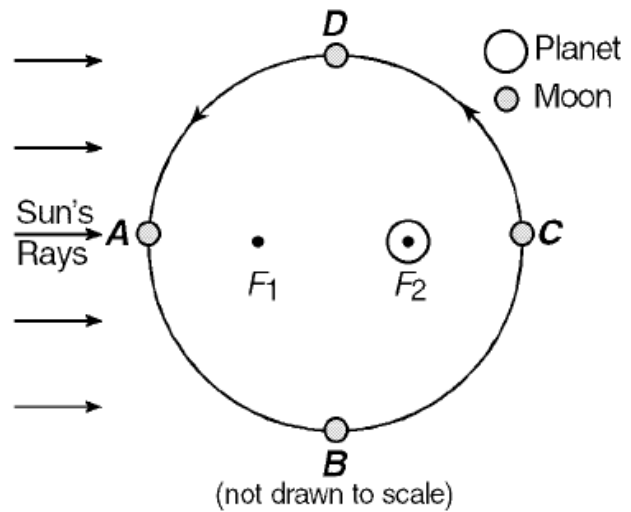


Points *A*, *B*, *C*, and *D* indicate four positions of the moon in its orbit. Points *F*₁ and *F*₂ are focal points of the orbit. For an observer on the planet, at which position in the moon's orbit does the full-moon phase occur?

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

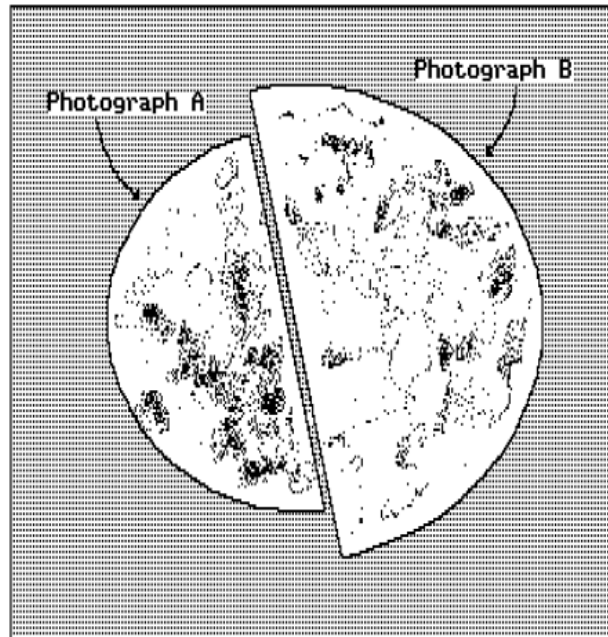
The diagram below shows the relative positions of the Earth, Moon, and Sun for a 1-month period.

- Which diagram best represents the appearance of the Moon at position *P* when viewed from the Earth?



- A)  C) 
- B)  D) 

The diagram below represents two photographs of the moon, *A* and *B*, taken at full moon phase several months apart. The photographs were taken using the same magnification. Each photograph was cut in half and the halves placed next to each other.



4. What most likely caused the difference in the apparent size of the Moon in photographs *A* and *B*?
 - A) The phases of the Moon changed.
 - B) The Moon expanded.
 - C) The Moon rotated.
 - D) The distance from the Earth to the Moon changed.

5. The Moon has more surface craters than Earth does because the Moon has
 - A) a surface more sensitive to impacts
 - B) no significant atmosphere
 - C) a stronger gravitational force
 - D) a smaller diameter than Earth

6. Which motion causes the Moon to show phases when viewed from the Earth?
 - A) the rotation of the Earth on its axis
 - B) the revolution of the Moon around the Earth
 - C) the rotation of the Sun on its axis
 - D) the revolution of the Sun around the Moon