

Lunar Phases Worksheet

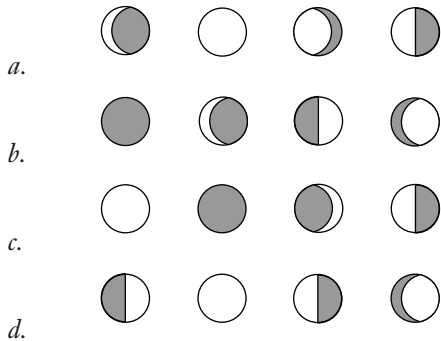
Questions

1. The Sun appears to move approximately 30° each month as Earth revolves counterclockwise in orbit (there are 365.26 days in the year, our orbit has 360°). Draw a circle on the Lunar Orbit Graph just outside the lunar orbit at the position of the next Full Moon. Label it "NEXT Full Moon."

What is the approximate date of this next Full Moon phase? _____

2. How does the lunar orbit compare to a circular path?

3. Which of the following show the correct order of phases for one orbit of the Moon around the Earth?



4. Which of the following allows us to view phases?

- a. Lunar revolution around Earth.
- b. Lunar rotation on its axis.
- c. Lunar revolution around the Sun.
- d. Earth's revolution around the Sun.

5. Label each lunar phase name below for the positions shown in the diagram.

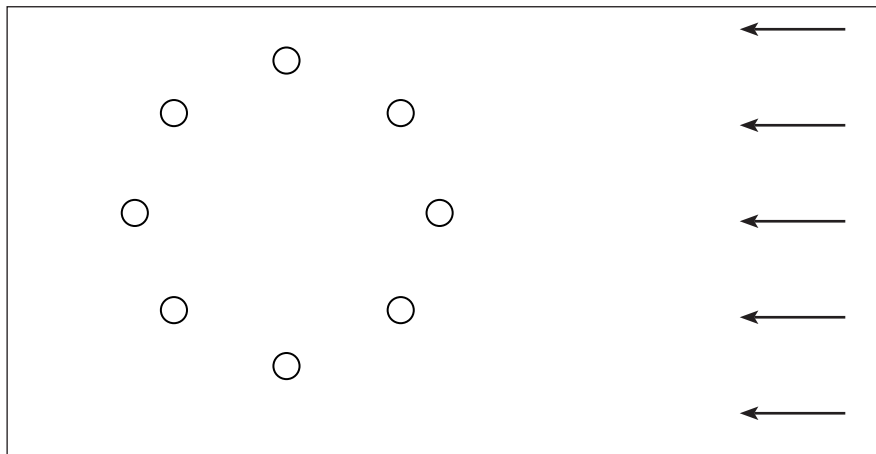


Figure C.

6. On Figure C, shade in the appropriate portion of each circle to represent the appearance of the Moon as it would appear to an observer on Earth.

7. On Figure C, draw an arrow between each lunar position showing the direction of revolution.
8. Since *half of the Moon is always illuminated by the Sun*, why do we not see the Full Moon phase all month long?

9. What is the event called where the Moon is not struck by solar rays at all? _____
10. Explain why a lunar eclipse is not seen every month.

11. What phase position would the Moon have to be in for us to see a lunar eclipse? _____
Place an "X" on this position in Figure C on the previous page.
12. What phase position would the Moon have to be in for us to see a solar eclipse? _____
Place an "S" on this position in Figure C on the previous page.
13. In all diagrams shown (except the Lunar Orbit Graph) the lunar orbit appears to be a perfect circle.
Describe the *eccentricity* (its circular appearance) of the lunar orbit.

Circle the best choices below to complete the statements.

14. What period of time is represented by one period of revolution of the Moon around Earth?
minute/hour/day/week/month/year/century
15. How many days does this average out to be?
60 / 24 / 30 / 365 / 100
16. How many days does it take for the Moon to move from the New Moon to the Full Moon position?
1-3 / 6-8 / 13-15 / 20-22 / 28-31
17. How many days does it take for the Moon to move from the Third Quarter to the New Moon position?
1-3 / 6-8 / 13-15 / 20-22 / 28-31
18. How many days does it take for the Moon to move from the First Quarter to the Third Quarter position?
1-3 / 6-8 / 13-15 / 20-22 / 28-31
19. The period of one month is the time required for the (Sun/Earth/Moon) to (revolve/rotate/remain stationary) once in its orbit around the (Sun/Earth/Moon). In this time, a (cyclic/noncyclic) change occurs called lunar phases.
20. Define the term lunar phase below.