

SOL 4.7 SOLAR SYSTEM

Key concepts include

- the planets in the solar system;
- the order of the planets in the solar system; and
- the relative sizes of the planets.

IMPORTANT:

SOL 4.7 has recently changed from a focus on the Earth-Moon relationship to a focus on our Solar System.

The released questions below tested the old standards. Only the first questions on planets apply to the new content.

PLANETS

- If the Earth moved farther away from the sun, which of these would probably happen?

(2005 test – question 1)

- There would be no moon.
- There would be more solar eclipses.
- There would be colder weather.**
- There would be more seasons.

- How is the Earth different from all of the other planets?

(2005 test – question 15)

- It has a breathable atmosphere.**
- It has a rocky surface.
- It is warmed by the sun.
- It rotates on its axis.

- The Earth is very different from other planets in the solar system because it has the most —

(2003 test – question 39)

- solid rock
- volcanoes
- liquid water**
- high winds

MOON PHASES



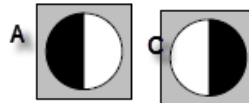
- The phases of the Moon occur in a certain order. Three phases are shown here. Which is the next phase in the sequence? ©

(2008 test – question 17)



- Which of the following is the next phase of the moon? (d)

(2004 test – question 26)



- Which of these is the next phase of the moon? ©

(2002 test – question 14)



MOON CHARACTERISTICS

7. The surface of the **Moon** is made up of —
(2011 test – question 35)

- a. **craters, highlands, and flat areas**
- b. swirling gases
- c. large bodies of water
- d. a mixture of gases and water

8. Which of these best describes the Moon?
(2009 test – question 8)

- a. Older than Earth
- b. **Smaller than Earth**
- c. Having the same climate as Earth
- d. Having the same atmosphere as Earth

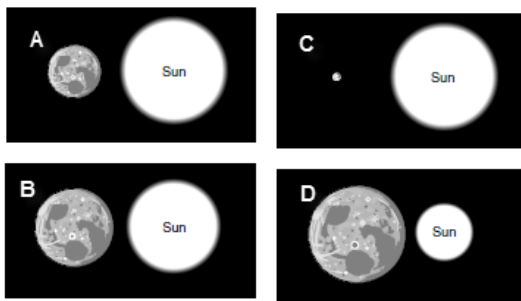
9. About 400 years ago, Galileo became the first person to record what the moon looked like through a telescope. He was able to tell that the moon had —

(2006 test – question 35)

- a. **many craters**
- b. plants but no animals
- c. active volcanoes
- d. polar ice caps

10. Sometimes you can see the moon during the daytime. The moon looks the same size as the sun, but the moon is 1/400 the size of the sun. Which of these best shows the size of the moon relative to the sun? ©

(2006 test – question 40)



EARTH – MOON RELATIONSHIP

11. Which of these objects in the solar system has been visited by people from Earth?
(2010 test – question 10)

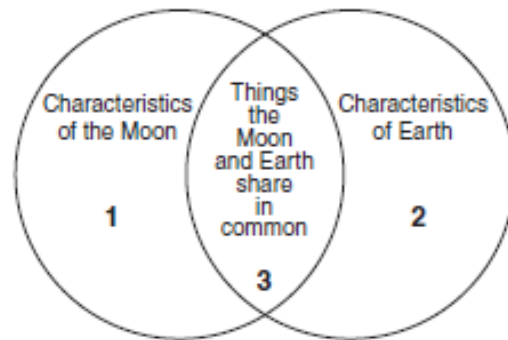
- a. **Moon**
- b. Sun
- c. Mars
- d. Asteroid

12. The Apollo 11 mission was able to retrieve samples of the Moon's surface because it was the first mission to have astronauts —
(2009 test – question 3)

- a. **land on the Moon**
- b. orbit a planet
- c. return to Earth
- d. walk in space

13. The moon revolves around —
(2001 test – question 8)

- a. itself
- b. **the Earth**
- c. the sun
- d. the solar system



14. Which of these would fit best in area 3 of this Venn diagram?
(2007 test – question 32)

- a. **Rocky surface**
- b. Active volcanoes
- c. Liquid water present
- d. **Oxygen in atmosphere**

15. The distance between which of these is the shortest?
(2003 test – question 30)

- a. Earth and sun
- b. Moon and sun
- c. Earth and Mars
- d. **Earth and moon**

ROTATION AND REVOLUTION

16. Which of these is the most responsible for the changes of the seasons on Earth?
(2010 test – question -25)

- a. Position of the Moon
- b. **Tilt of Earth on its axis**
- c. Temperature of the Sun
- d. Distance to Mars

17. Which of these takes about one year to complete?

(2010 test – question 32)

- a. **Earth to orbit the Sun**
- b. The Sun to orbit Earth
- c. Earth to rotate on its axis
- d. The Moon to orbit Earth

18. Earth makes a complete revolution around the Sun about once every —

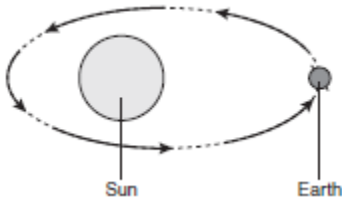
(2008 test – question 9)

- a. day
- b. **year**
- c. season
- d. minute

19. Which of these describes rotation?

(2009 test – question 22)

- a. Mercury goes around the Sun every 88 days.
- b. The Moon goes around Earth every 28 days.
- c. Earth orbits the Sun about every 365 days.
- d. **Earth makes one turn on its axis every 24 hours.**



20. The motion of Earth around the Sun most affects the —

(2007 test – question 14)

- a. timing of tides
- b. length of a month
- c. **cycle of the seasons**
- d. phases of the Moon

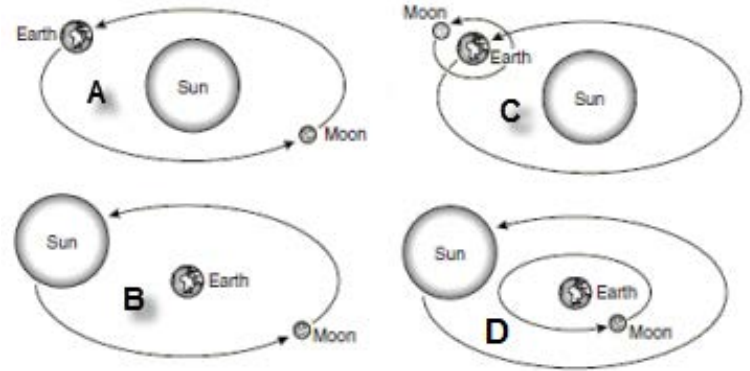
21. The time between today's sunrise and tomorrow's sunrise would be about —

(2003 test – question 4)

- a. 12 hours
- b. **24 hours**
- c. 36 hours
- d. 48 hours

22. Which of these best shows that the Earth revolves around the sun as the moon revolves around the Earth? ©

(2004 test – question 30)



23. The rotation of the Earth on its axis causes —

(2002 test – question 21)

- a. seasons
- b. years
- c. months
- d. **days**