

M O D E R N E A R T H S C I E N C E

Chapter 29

The Solar System

Read each statement below. If the statement is true, write *T* in the space provided. If the statement is false, write *F* in the space provided.

- _____ 1. Aristotle developed the first accurate model of the solar system.
- _____ 2. The geocentric model of the solar system was proposed by Copernicus.
- _____ 3. The point where an orbit comes closest to the sun is called perihelion.
- _____ 4. Hardened lava in some craters on Mercury suggests that the planet was once volcanic.
- _____ 5. The surface of Venus is probably covered with oceans.
- _____ 6. Mars has polar ice caps.
- _____ 7. Jupiter rotates faster than any other planet in the solar system.
- _____ 8. Neptune is composed largely of ice.
- _____ 9. The tail of a comet usually points toward the sun.
- _____ 10. Fireballs are produced by meteoroids.

Choose the one best response. Write the letter of that choice in the space provided.

- _____ 11. One astronomical unit is equal to the distance between the earth and:
a. Mercury. b. the moon. c. Pluto. d. the sun.
- _____ 12. The first astronomer to mathematically model most aspects of planetary motion was:
a. Galileo. b. Brahe. c. Copernicus. d. Kepler.
- _____ 13. Which of the following is a terrestrial planet?
a. Pluto b. Uranus c. Mars d. Jupiter
- _____ 14. Which of the following is hypothesized to originate in the Oort cloud?
a. comets b. fireballs c. meteoroids d. asteroids
- _____ 15. Clouds in the atmosphere of Venus are composed of droplets of:
a. liquid hydrogen. b. water vapor.
c. carbon dioxide. d. sulfuric acid.

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Choose the one best response. Write the letter of that choice in the space provided.

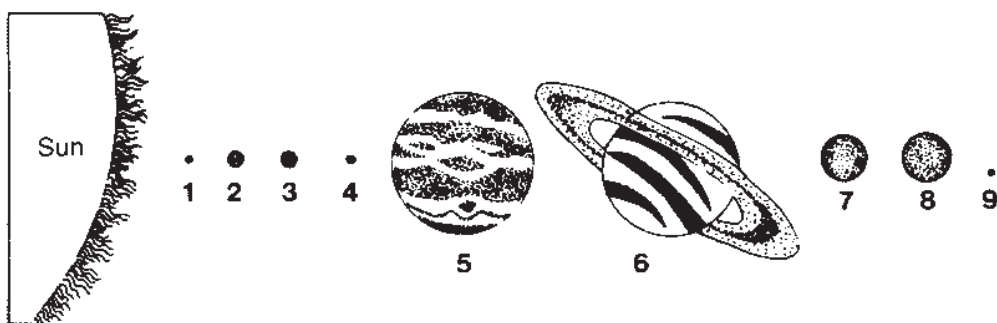
_____ 16. The largest volcanoes in the solar system are most likely on:

- a. Mars. b. Jupiter. c. Earth. d. Pluto.

_____ 17. The first planet whose existence was predicted before it was discovered was:

- a. Venus. b. Neptune. c. Uranus. d. Pluto.

Use the diagram below to answer questions 18-20.



_____ 18. The bands on planet 5 are caused by:

- a. volcanic activity. b. rotating moons.
c. swirling gases. d. nuclear fusion.

_____ 19. What is the name of planet 7?

- a. Pluto b. Venus c. Neptune d. Uranus

_____ 20. Which planet has the lowest density?

- a. 2 b. 4 c. 6 d. 8

Read each question and answer it in the space provided.

21. Who first used a telescope to observe celestial objects?

22. What is the shape of the path followed by each planet as it orbits the sun?

23. What are the bowl-shaped depressions that result from the collision of a planet with meteors?

24. What is another name for the outer planets?

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Read each question and answer it in the space provided.

25. What is the name for the asteroids that are concentrated ahead of and behind Jupiter?

26. What is visible when large numbers of small meteoroids enter the earth's atmosphere during a short time?

27. Which astronomer proposed planetary motions called epicycles?

28. What type of comet completes its orbit in less than 100 years?

29. What U.S. spacecraft transmitted the first images of Uranus?

30. What is a meteoroid called after it hits the earth?

Read each question or statement and answer it in the space provided.

31. Describe the law of equal areas.

32. Give two explanations for Mercury's lack of an atmosphere.

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Read each question or statement and answer it in the space provided.

33. How does the earth's distance from the sun make it more suitable for life than the other planets?

34. What is distinctive about the rotation of Uranus?

35. Describe the effects of inertia on a moving and a stationary object.
