

Chapter 23 Touring Our Solar System

Section 23.3 The Outer Planets (and Pluto)**(pages 654–659)**


This section describes the features of Jupiter, Saturn, Uranus, Neptune, and Pluto, the dwarf planet.

Reading Strategy (page 654)

Summarizing In the table, write a brief summary of the characteristics of each planet. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Outer Planet	Characteristics
Jupiter	largest, most mass, Great Red Spot
	axis tilted more than 90°


Jupiter: Giant Among Planets (pages 654–656)

1.  Circle the letter of the answer that correctly describes Jupiter's mass.

 - a. the same mass as the sun
 - b. $2\frac{1}{2}$ times greater than the mass of all of the other planets and moons combined
 - c. the same mass as all of the other planets and moons combined
2. Is the following sentence true or false? Jupiter's surface is thought to be a giant ocean of liquid water. _____
3. One of Jupiter's moons, _____, is one of only four volcanically active bodies in the solar system. Circle the correct answer.

Io Europa Callisto

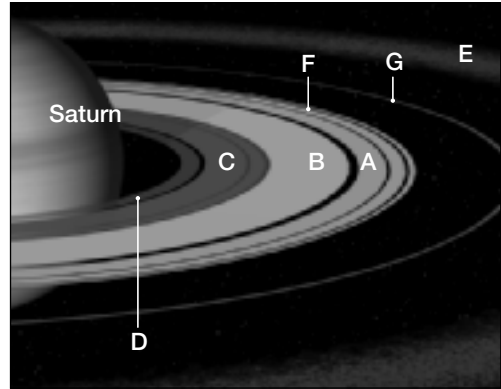
Saturn: The Elegant Planet (pages 656–657)

4.  Circle the letter of Saturn's most prominent feature.

 - a. moon system
 - b. ring system
 - c. liquid oceans

Chapter 23 Touring Our Solar System

5. Describe the features of Saturn’s main rings, labeled A and B in the figure.



6. Describe the features of Saturn’s outer rings, labeled E in the figure.

7. Is the following sentence true or false? Saturn has large cyclonic “storms” similar to Jupiter’s Great Red Spot. _____

Uranus: The Sideways Planet (page 658)

8. Uranus’s axis of rotation is _____ to the plane of its orbit. Circle the correct answer.

- perpendicular nearly parallel at a right angle

9. Is the following sentence true or false? Uranus’s rings were discovered when Uranus passed in front of a distant star and blocked its view.

10. Uranus’s moon Miranda has a greater variety of _____ than any solar system body yet examined. Circle the correct answer.

- a. clouds b. landforms c. rings

Neptune: The Windy Planet (page 658)

11. Is the following sentence true or false? Neptune has winds exceeding 1000 km per hour. _____

12. Circle the letter of the substance that most likely makes up Neptune’s upper cloud layer.

- a. water droplets b. ice crystals c. frozen methane

Pluto: Dwarf Planet (page 659)

13. Pluto is small, dense, and has a solid surface that is a mixture of _____ and rock.