

6.1

ORGANIZING THE ELEMENTS

Section Review

Objectives

- Explain how elements are organized in a periodic table
- Compare early and modern periodic tables
- Identify three broad classes of elements

Vocabulary

- periodic law
- metals
- nonmetals
- metalloids

Part A Completion

Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.

Chemists used the 1 of elements to sort them into groups. **1.** _____

The periodic table organizes the elements into vertical 2 **2.** _____

and horizontal 3 in order of increasing 4 . The table is **3.** _____

constructed so that elements that have similar chemical properties **4.** _____

are in the same 5 . 6 have a high luster, or sheen, **5.** _____

when cut. Most nonmetals are 7 at room temperature. **6.** _____

Elements with properties that are similar to those of metals **7.** _____

and nonmetals are called 8 . Across the periodic table, **8.** _____

the properties of elements become 9 metallic and **9.** _____

 10 nonmetallic. **10.** _____

Part B True-False

Classify each of these statements as always true, AT; sometimes true, ST; or never true, NT.

- _____ 10. In his periodic table, Mendeleev arranged the elements in order of atomic number.
- _____ 11. There are six periods in a periodic table.
- _____ 12. Most of the elements in the periodic table are metals.
- _____ 13. The elements within a period have similar properties.

Part C Matching

Match each description in Column B to the correct term in Column A

Column A	Column B
_____ 14. metals	a. a vertical column of elements in the periodic table
_____ 15. periods	b. good conductors of heat and electric current
_____ 16. group	c. poor conductors of heat and electric current
_____ 17. nonmetals	d. have properties that are similar to those of metals and nonmetals
_____ 18. metalloids	e. the horizontal rows of the periodic table

Part D Questions and Problems

Answer the following questions in the space provided.

19. List the elements of Group 5A. Tell whether each is a metal, nonmetal, or metalloid.

20. List three properties of metals.

21. Name two elements that have similar properties to those of chlorine.
