



## Chapter 3 Structure of Matter

The main body of the periodic table is divided into 18 vertical columns called **groups**. Group 1 is the leftmost column in the table. Group 18 is the rightmost column. Each group contains elements with similar properties. For example, all the elements in Group 17—the column beginning with fluorine (F)—are very reactive. All the elements in Group 18—the column beginning with helium (He)—rarely react at all. Figure 3–9 illustrates how to find a period or a group on the periodic table.

### Reading the Periodic Table

Each square on the periodic table lists four pieces of information about an element. The square contains the element's atomic number, its chemical symbol, its name, and its atomic mass. The **atomic mass** of an element is the average mass of an element's atoms. Atomic mass is expressed in atomic mass units (amu). A proton or a neutron has a mass equal to about one amu.

Figure 3–10 shows the square for the element carbon. At the top of the square is carbon's atomic number, 6. Below the atomic number is carbon's chemical symbol, C. Below the chemical symbol is the element name, carbon. Listed at the bottom is carbon's atomic mass, 12.01 amu.

6
C
Carbon
12.01

**Figure 3–10 Carbon**

The element carbon has an atomic number of 6 and an atomic mass of 12.01 amu.

**Chapter 3 Structure of Matter****Standard 3. f. Check**

**22** What is the chemical symbol for silver?

- A S
- B Si
- C Sr
- D Ag

**23** Which elements combine to form the compound represented by the formula KCl?

- A potassium, carbon, and iodine
- B potassium and calcium
- C potassium and chlorine
- D krypton and chlorine

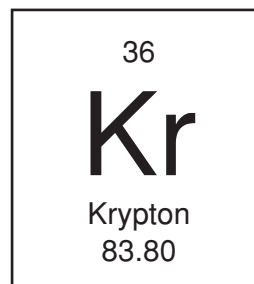
**24** What is the atomic number of copper?

- A 24
- B 27
- C 29
- D 63.55

**25** Which group in the periodic table does the element calcium belong to?

- A Group 1
- B Group 2
- C Group 14
- D Group 17

**26**



What is the atomic mass of krypton?

- A 36 amu
- B 16 amu
- C 83.6 amu
- D 83.80 amu