

SECTION**Reinforcement****Why do atoms combine?**

Directions: Complete the sentences below using the following terms. Some of the terms may not be used.

atomic structure**electron dot diagram****outer energy level****electron****element families****proton****electron cloud****nucleus****period**

1. An element is stable with eight electrons in its _____.
2. The closer a(n) _____ is to the nucleus, the stronger the attractive force.
3. An atom's _____ contains its protons and neutrons.
4. A(n) _____ model with dark bands representing energy levels shows where an atom's electrons are most likely to be.
5. The chemical symbol for an element surrounded by as many dots as there are electrons in its outer energy level is called a(n) _____.
6. Columns in the periodic table are known as _____.
7. The number of electrons in a neutral atom increases by one as you go from left to right across a _____ in the periodic table.
8. Each element has a different number of protons and electrons, so each has a different _____.

Directions: Answer the following questions.

9. Explain how the arrangement of electrons in an atom is related to the periodic table.

10. Use the periodic table to construct electron dot diagrams for the following elements: aluminum, magnesium, sulfur, and bromine.