

Self-Assessment**Chapter 2****BLM 2-1****Pre-Chapter Quiz****Goal**

Assess your recall and understanding of ideas about the atom and the periodic table from earlier grades.

True or False?

Each of the statements below is either true or false. If the statement is true, write the letter T. If false, write the letter F and rewrite the statement so that it is true.

1. A negatively charged particle is called a cation.
2. The symbol ${}_{13}^{27}\text{Al}$ represents an atom that has 27 protons and 13 neutrons.
3. Elements that have the same number of valence electrons have similar chemical properties.
4. The Lewis structure for an atom of neon, Ne, has 8 dots around the element symbol.
5. The atom has a sharply defined outer boundary.
6. Elements in the periodic table are arranged according to their atomic mass.
7. In the periodic table, elements that have similar properties are grouped in horizontal rows.
8. Of the elements, helium, iron, sulfur, calcium, and potassium, the one that would react in a way that is most like sodium is calcium.
9. Neutrons and electrons have nearly identical masses.
10. In the chemical notation ${}^A_Z\text{X}$, A is the atomic symbol and Z is the mass number.
11. Neutral atoms have equal numbers of protons and electrons.
12. There is no limit to the number of electrons that can occupy each energy level surrounding an atom.
13. Given the choice of aluminum, magnesium, oxygen, helium, and hydrogen, the element that is least reactive is oxygen.
14. Hydrogen-1, hydrogen-2, and hydrogen-3 are isotopes that have the same number of protons but different numbers of electrons.
15. The Lewis structure for an element that has an atomic number of 12 would have 2 dots.
16. The most common fluoride ion has 7 valence electrons.