

REINFORCEMENT

Why Atoms Combine

Each statement below contains a pair of terms or phrases in parentheses. Circle the term or phrase that makes each statement true.

1. Most of the matter around you is in the form of (elements, compounds).
2. The properties of a compound are (the same as, different from) the properties of the elements that make up the compound.
3. Na and Cl are (chemical symbols, chemical formulas).
4. NaCl and NaOH are (chemical symbols, chemical formulas).
5. H₂O is the formula for (salt, water).
6. In the formula H₂O, the number 2 is a (subscript, superscript).
7. In the formula HCl, the ratio of hydrogen atoms to oxygen atoms is (1:1, 2:1).
8. The number 2 in the formula H₂O tells you that each unit of this compound contains (2 hydrogen atoms, 2 oxygen atoms).
9. If a symbol in a chemical formula does not have a subscript after it, a unit of that compound contains (0 atoms, 1 atom) of that element.
10. In the formula Fe₂O₃, the ratio of iron atoms to oxygen atoms is (3:2, 2:3).
11. An atom is chemically stable if its outer energy level (is filled with, contains no) electrons.
12. For atoms of most elements, the outer energy level is filled when it has (3, 8) electrons.
13. The noble gases do not readily form compounds because they (are, are not) chemically stable.
14. A chemical bond is a (force, chemical) that holds together the atoms in a compound.
15. Chemical bonds form when atoms lose, gain, or (share, multiply) electrons.

Complete the table below by using the formula of each compound to identify the elements that each compound contains and the ratios of those elements. The first one has been done for you as an example.

Formula	Elements in Compound	Ratios
H ₂ O	hydrogen, oxygen	2:1
NaOH		
NaCl		
NH ₃		
H ₂ SO ₄		
SiO ₂		