RQ on Chemical Bonds

Name: _____ **Date:** _____

1. Which compound is *most likely* formed using covalent bonds?

   A. CO_2 B. K_2O C. KBr D. $CaBr_2$

2. How can two different nonmetals form a compound?

   A. by sharing protons

   B. by sharing electrons

   C. by transferring protons

   D. by transferring electrons

3. When cations and anions join, they form what kind of chemical bond?

   A. ionic B. hydrogen

   C. metallic D. covalent

4. In potassium fluoride, the potassium atom donates an electron and the fluorine atom takes an electron. When the compound potassium fluoride is formed, which of the following are formed?

   A. covalent bonds B. ionic bonds

   C. magnetic forces D. nuclear forces

5. Which of the following statements *best* explains why atoms bond?

   A. Atoms bond to make new substances.

   B. Atoms bond to become less chemically stable.

   C. Atoms bond to change from a liquid to a solid.

   D. Atoms bond to become more chemically stable.

6. Which of the following occurs in an ionic bond?

   A. Two ions share protons.

   B. Two ions share electrons.

   C. Similarly charged ions attract.

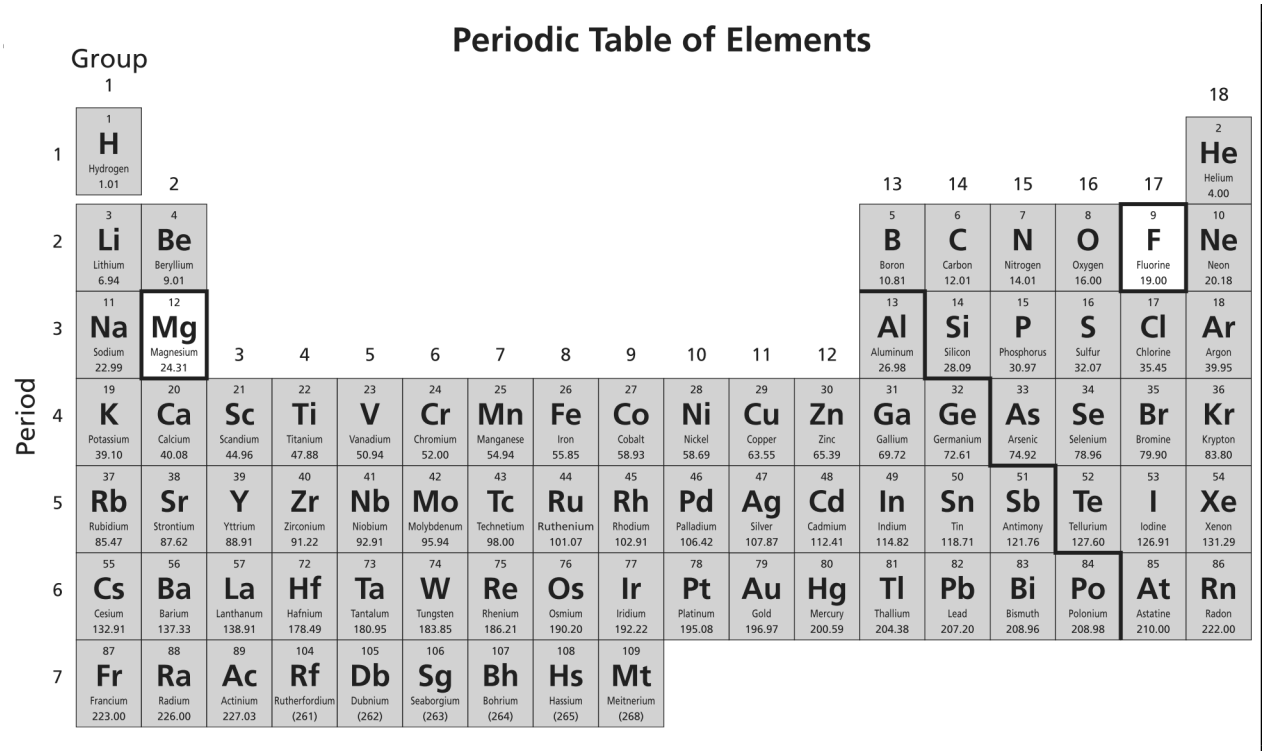
   D. Oppositely charged ions attract.

7. Which of the following are most directly involved in chemical bonding?

   A. protons B. neutrons

   C. alpha particles D. valence electrons

8.



Leroy combines magnesium (Mg) and fluorine (F).

Based on the periodic table, which statement describes the interaction of these two elements?

A. Mg is a metal and F is a nonmetal that forms an ionic bond.

B. Mg is a nonmetal and F is a metal that forms an ionic bond.

C. Mg is a metal and F is a metal that forms a covalent bond.

D. Mg is a metalloid and F is a nonmetal that forms a covalent bond.

9. Which type of bond is responsible for atoms of pure gold to remain bonded?

A. covalent

B. hydrogen

C. ionic

D. metallic

10. Which is a unique characteristic of the bonding between metal atoms?

A. Atoms require additional electrons to reach a stable octet.

B. Atoms must give away electrons to reach a stable octet.

C. Atoms share valence electrons only with neighboring atoms to reach a stable octet.

D. Delocalized electrons move among many atoms creating a sea of electrons.