

REVIEW

3 SECTION 3.3**Families of Elements**

1. **Classify** each of the following elements as an alkali metal, alkaline-earth metal, transition metal, or semiconductor based on its position in the periodic table.

_____ a. rubidium, Rb
_____ b. silicon, Si
_____ c. silver, Ag
_____ d. barium, Ba
_____ e. titanium, Ti
_____ f. germanium, Ge

2. **Classify** each of the following elements as a halogen, noble gas, or other nonmetal based on its position in the periodic table.

_____ a. carbon, C
_____ b. chlorine, Cl
_____ c. radon, Rn
_____ d. phosphorus, P
_____ e. xenon, Xe
_____ f. iodine, I

3. **Predict** which of the following ions would be likely to form:

_____ a. Na^{2+} _____ d. Br^-
_____ b. Cl^+ _____ e. Ne^-
_____ c. Ca^{2+} _____ f. Ne^+

4. **Explain** why chlorine, Cl, is very reactive, while argon, Ar, is unreactive.

5. **Analyze** the following pairs of elements, and determine whether each pair has similar or different reactivities.

_____ a. potassium, K, and rubidium, Rb
_____ b. calcium, Ca, and barium, Ba
_____ c. sodium, Na, and chlorine, Cl
_____ d. helium, He, and krypton, Kr
_____ e. hydrogen, H, and oxygen, O