

Concept Review

Section: Families of Elements

1. **Explain** why elements in the same family have similar physical and chemical properties.

2. **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

3. **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

4. **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

5. **Explain** why chlorine, Cl, is very reactive, whereas argon, Ar, is unreactive.
