

Periodic Trends Worksheet

Directions: Use your notes to answer the following questions.

- Rank the following elements by increasing atomic radius: carbon, aluminum, oxygen, potassium.
- Rank the following elements by increasing electronegativity: sulfur, oxygen, neon, aluminum.
- Why does fluorine have a higher ionization energy than iodine?
- Why do elements in the same family generally have similar properties?
- Indicate whether the following properties increase or decrease from left to right across the periodic table.
 - atomic radius (excluding noble gases)
 - first ionization energy
 - electronegativity
- What trend in atomic radius occurs down a group on the periodic table? What causes this trend?
- What trend in ionization energy occurs across a period on the periodic table? What causes this trend?
- Circle the atom in each pair that has the largest atomic radius.
 - Al or B
 - Na or Al
 - S or O
 - O or F
 - Br or Cl
 - Mg or Ca

9. Circle the atom in each pair that has the greater ionization energy.

- a. Li or Be
- b. Ca or Ba
- c. Na or K
- d. P or Ar
- e. Cl or Si
- f. Li or K

10. Define electronegativity.

11. Circle the atom in each pair that has the greater electronegativity.

- a. Ca or Ga
- b. Br or As
- c. Li or O
- d. Ba or Sr
- e. Cl or S
- f. O or S