

# Periodic Trends Worksheet

Name: ..... Grade: ..... ID: .....

**Directions:** Use your notes to answer the following questions.

**1** Rank the following elements by increasing atomic radius: carbon, aluminum, oxygen, potassium.

**Ans:**

**2** Rank the following elements by increasing electronegativity: sulfur, oxygen, neon, aluminum.

**Ans:**

**3** Why does fluorine have a higher ionization energy than iodine?

**Ans:**

**4** Why do elements in the same family generally have similar properties?

**Ans:**

**5** 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

**6** What trend in atomic radius occurs across the periodic table? What causes this trend?

**Ans:**

**7** What trend in ionization energy occurs across a period on the periodic table? What causes this trend?

**Ans:**

**8** Circle the atom in each pair that has the largest radius.

- |             |             |
|-------------|-------------|
| a. Al or B  | d. O or F   |
| b. Na or Al | e. Br or Cl |
| c. S or O   | f. Mg or Ca |