Name _____ Date _____

Periodic Trends Worksheet

Directions: Use your notes to answer the following questions.

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

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

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

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

5. Indicate whether the following properties increase or decrease from left to right across the periodic table.
   a. atomic radius (excluding noble gases)
   b. first ionization energy
   c. electronegativity

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

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

8. Circle the atom in each pair that has the largest radius.
   a. Al or B
   b. Na or Al
   c. S or O
   d. O or F
   e. Br or Cl
   f. Mg or Ca

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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