

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Block: \_\_\_\_\_

**Periodic Trends: Electronegativity & Ionic Radius**

1. What is electronegativity?
2. As you go **DOWN** a group the electronegativity will \_\_\_\_\_.  
Why?
3. As you do **ACROSS** a row (from left to right) the electronegativity will \_\_\_\_\_.  
Why?
4. Why do Noble Gases have an electronegativity of ZERO?
5. Which element has the **most** electronegative in **Group 5A**? \_\_\_\_\_
6. Which element has the **least** electronegative in **Row 4**? \_\_\_\_\_
7. Circle the atom in each pair that has the **largest** electronegativity.
  - a) S or F
  - b) P or Al
  - c) Cs or Be
  - d) He or Br
8. What is an ion?
9. Why do atoms become ions? What rule are they trying to follow?

10. A positive ion has **lost / gained (circle one)** an electron. It is called a \_\_\_\_\_.

11. A negative ion has **lost / gained (circle one)** an electron. It is called an \_\_\_\_\_.

12. What happens to the radius when an electron is gained? Explain why.

13. What happens to the radius when an electron is lost? Explain why.

14. Which types of element like to lose electrons? \_\_\_\_\_

15. Which types of elements like to gain electrons? \_\_\_\_\_

16. Circle the atom in each pair that has the **smaller** radius.

a) P or  $P^{3-}$

c) Cl or  $Cl^-$

b) Li or  $Li^+$

d)  $Ba^{2+}$  or Ba