

Name: _____ Date: _____ Block: _____

Periodic Trends: Atomic Radius & Ionization Energy

1. What is atomic radius?
2. As you go DOWN a group the atomic radius will _____.
Why?
3. As you do ACROSS a row the atomic radius will _____.
Why?
4. Which element has the largest radius in the **alkaline earth metal** family? _____
5. Which element has the smallest radius in the **halogen family**? _____
6. Circle the atom in each pair that has the **largest** atomic radius.
 - a) C or F
 - b) Na or K
 - c) Ge or O
 - d) B or N
7. What is ionization energy?
8. What is shielding?
9. As you go DOWN a group the ionization energy will _____.
Why? Explain using shielding:

10. As you do ACROSS a row the ionization energy will _____.

Why? Explain using shielding:

11. Which element has the highest ionization energy in **Group 6A**? _____

12. Which element has the lowest ionization energy in **Group 3A**? _____

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

a) P or Ar

c) Cl or Si

b) Li or K

d) Ca or Ba

14. How does the size of an atom (its atomic radius) relate to ionization energy?