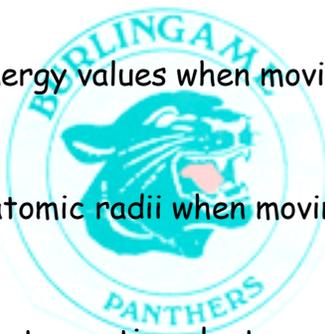


Name _____ Date _____

Periodic Trends Ws #3: Trends

1. When an electron is added to a neutral atom, energy is _____.
 - a. always absorbed
 - b. always released
 - c. either absorbed or released
 - d. burned away
2. The energy required to remove an electron from an atom is called the atom's _____.
 - a. electron affinity
 - b. electron energy
 - c. electronegativity
 - d. ionization energy
3. Define electronegativity
4. Define valence electron
5. What happens to electron affinity values when moving from left to right across the period on the periodic table?
6. What happens to ionization energy values when moving from left to right across the period on the periodic table?
7. What happens to the size of atomic radii when moving from left to right across the period on the periodic table?
8. Name the halogen with the least-negative electron affinity.
9. Name the alkali metal with the highest ionization energy
10. Name the element in period 3 with the smallest atomic radius.
11. Compare the size of the radius of a positive ion to its neutral atom.
12. Compare the size of the radius of a negative ion to its neutral atom.
13. Do metals or non-metals tend to form positive ions?
14. Do metals or non-metals tend to form negative ions?
15. Explain the role of valence electrons in the formation of chemical compound.
16. Which element has greater IE? a) Ca or Mg b) Te or I



17. Compare and explain relationships between atomic radius and ionization energy.
18. What is shielding effect and does it increase or decrease as you move down a group?
19. Compare the size of ion of Na with neutral atom of Na.
20. Compare the size of ion of I with neutral atom of I.
21. Which element has greater electronegativity? a) Cl or S b) Si or C
22. Order the following atoms from smallest to largest atomic radius. C, N, P
23. Name two families containing both metals and non-metals.

Write the electron configuration of each of the following

24. Na _____
25. Na⁺ _____
26. O _____
27. O²⁻ _____
28. Cl _____
29. Cl⁻ _____
30. Ca _____
31. Ca²⁺ _____
32. K⁺ _____



33. Compare the electron configuration of F⁻, Ne and K⁺
34. Compare the electron configuration of S²⁻, Cl⁻ and Ca²⁺
35. Name two ions with the same electron configuration as the noble gas Krypton.
36. Why do ions have electron configurations that are the same as a noble gas?