

PERIODIC TRENDS WORKSHEET

NAME: _____

ATOMIC RADIUS

1. Does atomic radius increase or decrease as you go down a group/family on the periodic table? _____

2. What causes this trend?

3. Does atomic radius increase or decrease as you go across a period/row on the periodic table? _____

4. What causes this trend?

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

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

IONS

6. Define an ion.

7. What is the difference between a cation and an anion?

8. Which is larger, Ca^{2+} or Ca and why?

9. Which is larger, F^{-1} or F and why?

10. How does the ionic radius of a nonmetal compare with its atomic radius?

IONIZATION ENERGY

11. Define ionization energy.
12. What trend in ionization energy do you see as you go down a group/family on the periodic table? _____
13. What causes this trend?
14. What trend in ionization energy do you see as you go across a period/row on the periodic table? _____
15. What causes this trend?
16. Circle the atom *in each pair* that has the greater ionization energy.
- a) Li Be b) Na K c) Cl Si
- d) Ca Ba e) P Ar f) Li K

ELECTRONEGATIVITY

17. Define electronegativity.
18. What trend in electronegativity do you see as you go down a group/family on the periodic table? _____
19. What trend in electronegativity do you see as you go across a period/row on the periodic table? _____
20. Which element has the greatest electronegativity? _____
21. Circle the atom *in each pair* that has the greater electronegativity.
- a) Ca Ga b) Li O c) Cl S
- d) Br As e) Ba Sr f) O S