Name _____ Pd ____ Date _____

Periodic Trends Worksheet

1. Circle the element with the largest atomic radius and put a square around the element with the smallest atomic radius: Cu K Ni Br
   Explain why you made these choices.

2. Circle the element with the highest ionization energy and put a square around the element with the lowest ionization energy: Cu K Ni Br
   Explain why you made these choices.

3. Circle the element with the highest electron affinity and put a square around the element with the lowest electron affinity: Cu K Ni Br
   Explain why you made these choices.

4. Circle the element with the highest electronegativity and put a square around the element with the lowest electronegativity: Cu K Ni Br
   Explain why you made these choices.

5. Circle the element with the largest atomic radius and put a square around the element with the smallest atomic radius: O C Be Ne
   Explain why you made these choices.

6. Circle the element with the highest ionization energy and put a square around the element with the lowest ionization energy: O C Be Ne
   Explain why you made these choices.

7. Circle the element with the highest electron affinity and put a square around the element with the lowest electron affinity: O C Be Ne
   Explain why you made these choices.

8. Circle the element with the highest electronegativity and put a square around the element with the lowest electronegativity: O C Be Ne
   Explain why you made these choices.

9. Circle the element with the largest atomic radius and put a square around the element with the smallest atomic radius: Na Rb Fr H
   Explain why you made these choices.

10. Circle the element with the highest ionization energy and put a square around the element with the lowest ionization energy: Na Rb Fr H
    Explain why you made these choices.

11. Circle the element with the highest electron affinity and put a square around the element with the lowest electron affinity: Na Rb Fr H
    Explain why you made these choices.

12. Circle the element with the highest electronegativity and put a square around the element with the lowest electronegativity: Na Rb Fr H
    Explain why you made these choices.

13. Circle the element with the largest atomic radius and put a square around the element with the smallest atomic radius: Pb C Sn Si
    Explain why you made these choices.

14. Circle the element with the highest ionization energy and put a square around the element with the lowest ionization energy: Pb C Sn Si
    Explain why you made these choices.

15. Circle the element with the highest electron affinity and put a square around the element with the lowest electron affinity: Pb C Sn Si
    Explain why you made these choices.

16. Circle the element with the highest electronegativity and put a square around the element with the lowest electronegativity: Pb C Sn Si
    Explain why you made these choices.

17. Circle the element with the largest atomic radius and put a square around the element with the smallest atomic radius: Au W S Fr Ne Zn
    Explain why you made these choices.

18. Circle the element with the highest ionization energy and put a square around the element with the lowest ionization energy: Au W S Fr Ne Zn
    Explain why you made these choices.

19. Circle the element with the highest electron affinity and put a square around the element with the lowest electron affinity: Au W S Fr Ne Zn
    Explain why you made these choices.

20. Circle the element with the highest electronegativity and put a square around the element with the lowest electronegativity: Au W S Fr Ne Zn
    Explain why you made these choices.

21. Circle the ions that will have a larger radius than the radius of their neutral atom. Put a square around the ions that will have a smaller radius than the radius of their neutral atom.
    Na^{+} Sr^{2+} P^{3-} Cr^{3+} O^{2-} C^{4-} C^{4+} Ag^{+} Br^{-}
    Explain why you made these choices.

22. Circle the ion in each set below that will have a largest radius. If there are more than two ions in a set, put a square around the ion that will have the smallest radius in the set. Explain why you made these choices.

    a. Cu^{+} Cu^{2+}

    b. Cr^{3+} Cr^{2+} Cr^{6+} Cr^{4+}

    c. Cl^{-} Cl^{7+} Cl^{5+} Cl^{3+}

    d. O^{2-} O^{1-}