

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 electronegativity and put a square around the element with the lowest electronegativity: Cu K Ni Br

Explain why you made these choices.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

14. 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.

15. 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.

16. 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<sup>+</sup> Sr<sup>2+</sup> P<sup>3-</sup> Cr<sup>3+</sup> O<sup>2-</sup> C<sup>4-</sup> C<sup>4+</sup> Ag<sup>+</sup> Br<sup>-</sup>

Explain why you made these choices.

17. 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<sup>+</sup> Cu<sup>2+</sup>

b. Cr<sup>3+</sup> Cr<sup>2+</sup> Cr<sup>6+</sup> Cr<sup>4+</sup>