

Even More Periodic Table Trends

Name: _____

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

a.) 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

a.) 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

a.) Explain why you made these choices:

4.) For each of the following groups: Circle the element with the largest atomic radius and put a square around the element with the smallest atomic radius:

a.) O C Be Ne

b.) Na Rb Fr H

c.) Pb C Sn Si

d.) Au W S Fr Ne Zn

6.) For each of the following groups: Circle the element with the highest ionization energy and put a square around the element with the lowest ionization energy:

a.) O C Be Ne

b.) Na Rb Fr H

c.) Pb C Sn Si

d.) Au W S Fr Ne Zn

7.) For each of the following groups: Circle the element with the highest electronegativity and put a square around the element with the lowest electronegativity:

a.) O C Be Ne

b.) Na Rb Fr H

c.) Pb C Sn Si

d.) Au W S Fr Ne Zn

8.) Circle the ions that will have a radius larger than the radius of their neutral parent atom and put a square around the ions that will have a radius smaller than the radius of their neutral parent atom:

Na^+ Sr^{+2} P^{-3} Cr^{+3} O^{-2} C^{-4} C^{+4} Ag^+ Br^-

a.) Explain why you made these choices:

9.) For each of the following groups, circle the ion with the largest ionic radius:

a.) Cu^+ Cu^{+2} b.) Cr^{+3} Cr^{+2} Cr^{+6} Cr^{+4} c.) O^{-2} O^-

10.) Rank the following elements in order of increasing atomic radius: Carbon, Aluminum, Oxygen, Potassium

11.) Rank the following elements in order of increasing electronegativity: Sulphur, Oxygen, Fluorine, Aluminium

12.) Rank the following elements in order of decreasing ionization energy: Lithium, Calcium, Barium, Nitrogen

13.) What is the difference between ionization energy and electronegativity?