

## PERIODIC TRENDS WORKSHEET AND HOMEWORK

Define the periodic trends below:

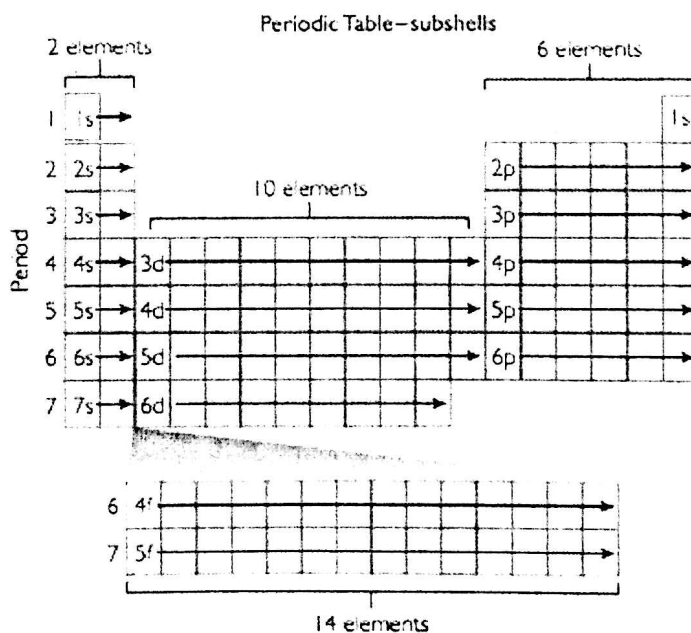
Atomic radius:

Ionization Energy:

Electron Affinity

Electronegativity:

Summarize the periodic trends on the table below



Answer the questions below:

1. Where are the most active metals located? \_\_\_\_\_
2. Where are the most active nonmetals located? \_\_\_\_\_
3. As you go from left to right across a period the atomic size \_\_\_\_\_. Why?  
\_\_\_\_\_
4. As you travel down a group the atomic size \_\_\_\_\_. Why?  
\_\_\_\_\_
5. As you go from left to right across a period the first ionization energy generally \_\_\_\_\_. Why? \_\_\_\_\_
6. As you go down a group the first ionization energy generally \_\_\_\_\_. Why? \_\_\_\_\_
7. What element has the highest electronegativity? \_\_\_\_\_ lowest? \_\_\_\_\_
8. What subshells are filling across the transition metals? \_\_\_\_\_
9. Elements within a group have similar number of \_\_\_\_\_.
10. Elements across a series have similar number of \_\_\_\_\_.
11. Circle the most electronegative of each pair of elements:
  - a. fluorine and calcium
  - b. sodium and magnesium
  - c. nitrogen and arsenic
12. Select the element with the lower electron affinity:
  - a. oxygen and boron
  - b. chlorine and iodine
13. Select the element with the higher ionization energy:
  - a. bromine and barium
  - b. oxygen and lithium
14. Select the element with the larger atomic radius:
  - a. potassium and arsenic
  - b. aluminum and thallium