Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

**WEEK 15 AGENDA: Unit 4 course website: kachemistry.weebly.com**

|  |  |  |
| --- | --- | --- |
| **Date** | **Topic** | **Homework** |
| **CB** | **H** |
| M – Dec 8 | POGIL: Electron ConfigurationElectron Configuration Notes | 1-3; 4a, 4b, 5-6 | 1-6 |
| T – Dec 9 | Electron Configuration Practice  | 7-11a-c | 7-13Textbook Reading Due FRIDAY!! |
| W – Dec 10 | Columbic Attraction | 14-17 | 14-17 |
| Th – Dec 11 | **QUIZ**Periodic Trends: Atomic Radius | TBA | TBAReading Due Tomorrow |
| F – Dec 12 | Periodic Trends: Electronegativity | TBA | TBA |

**\*To receive credit for your homework, your answers MUST BE WRITTEN IN YOUR NOTEBOOK!**

1. How did Mendeleev organize the first periodic table?
2. Columns going up and down the periodic table are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Rows going across the periodic table are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Name at least 3 things each of the groups below have in common
	1. Alkali Metals b. Alkaline Earth Metals
	2. Halogen d. Noble Gases
5. In an electron configuration, what does the sum of the superscripts equal?
6. Fill in the following table. \***You may write in this table!**

|  |
| --- |
| Electron Configurations for Some Selected Elements |
| **Element** | **Orbital Box** | **Electron Configuration** |
| H |  \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_1s 2s 2p 3s | 1s1 |
| He | \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1s 2s 2p 3s  |  |
|  | \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1s 2s 2p 3s  | 1s22s1 |
| C | \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1s 2s 2p 3s  |  |
|  | \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1s 2s 2p 3s  | 1s22s22p3 |
| O | \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1s 2s 2p 3s |  |
|  | \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1s 2s 2p 3s | 1s22s22p6 |
|  | \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ 1s 2s 2p 3s |  |

1. Label s-block, p-block, d-block, and f-block on the periodic table below. Color in each block a different color or use a different pattern to show each block.



1. Which atom ends in an electron configuration of 2p2?
2. Which atom ends in an electron configuration of 3s2?
3. What electron configuration should Alkali Earth metals end in?
4. Write the electron configuration for each of the following atoms. (HONORS: write in long form and noble gas notation)
	1. Beryllium
	2. Phosphorus
	3. Bromine
	4. Silver
	5. Uranium (CHALLENGE!)
5. Why do some atoms NOT obey the Aufbau principle?
6. Name two atoms that have electrons configurations that do not obey the Aufbau principle?
7. What is Coulombic attraction?
8. What is the relationship between the number of protons in the nucleus and attractive force?
9. Compared to boron, in which of the following elements will attractive force be strongest: calcium, neon, or chlorine?
10. Why, as **Coulombic attraction** increases, does **atomic radii** also increase?