Name_____

Periodic Trends & Electron Configuration Worksheet
Chem II

1. Place the following in order of INCREASING atomic radius
   a. Cs, Li, Na, K, H
   b. Pb, C, Si, Sn, Ge
   c. K, Br, As, Kr, Ga
   d. Ar, Na, P, S, Cl

2. Place the following in order in DECREASING atomic radius
   a. Na, Na^{+}
   b. Mg, Mg^{+2}
   c. Cl, Cl^{-}
   d. O, O^{2-}

3. Place the following in order of INCREASING ionization energy
   a. Cs, Li, Na, K, H
   b. Pb, C, Si, Sn, Ge
   c. K, Br, As, Kr, Ga
   d. Ar, Na, P, S, Cl

4. Place the following in order in DECREASING electronegativity
   a. F, At, Cl, Br, I
   b. In, Ga, B, Al, Tl
   c. Zn, Co, Ni, K, Ca
   d. Mg, Na, Cl, S, P

5. Place the following in order on INCREASING metallic character
   a. Mg, Na, Cl, S, P
   b. Zn, Co, Ni, K, Ca
   c. F, At, Cl, Br, I
   d. In, Ga, B, Al, Tl

6. Determine the elements with the following electron configurations.
   a. $[He]2s^2 2p^4$

   b. $[Xe]6s^1$

   c. $[Ar]4s^2 3d^{10} 4p^2$

7. Write the full electron configuration of the element using each of the following descriptions
   a. Group 8A element in the 3rd period

   b. Group 4A element in the 4th period

   c. Hallogen in the 2nd period

   d. Group 1A element in the 4th period

8. Draw the arrow diagrams for the elements above

9. Write the noble gas configuration for the elements in Question # 7

10. Write the final entry configuration for the elements in Question #7