

## Shell Game HW

Read and outline (Cornell style) **Section 5.3 AND 6.2** in your chemistry textbook. Then answer the following assessment questions:

1. Explain why elements in the same group on the periodic table (such as Na and Rb) have similar chemical properties.
2. What is a valence electron and how can you identify the number of valence electrons an atom has using the periodic table?
3. What is the outermost subshell for Bromine, Br?
4. How many valence electrons does element 13 have?
5. How many core electrons does element 13 have?
6. Write the electron configurations for the following elements:
  - a. Br
  - b. P
  - c. Ni
  - d. Au
7. Identify the following elements from their electron configurations:
  - a.  $1s^2 2s^2 2p^6 3s^2 3p^1$
  - b.  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^2$
  - c.  $1s^2 2s^2 2p^6 3s^1$