

**Ch. 5 Worksheet****Diagonal Rule/Electron Configuration**

1. Draw the diagonal rule developed by the Aufbau principle.

2. Write the electron configuration for the following elements:

a. Se #34

b. Ag #47

c. Sm #62

3. Complete the orbital notation for the following elements according to the Pauli exclusion principle and Hund's rule.

a. Be #4       $\begin{array}{cccccccc} \underline{1s} & \underline{2s} & \underline{\underline{2p}} & \underline{3s} & \underline{\underline{3p}} & & \underline{\underline{3d}} & \underline{4s} \end{array}$

b. P #15       $\begin{array}{cccccccc} \underline{1s} & \underline{2s} & \underline{\underline{2p}} & \underline{3s} & \underline{\underline{3p}} & & \underline{\underline{3d}} & \underline{4s} \end{array}$

c. Ti #22       $\begin{array}{cccccccc} \underline{1s} & \underline{2s} & \underline{\underline{2p}} & \underline{3s} & \underline{\underline{3p}} & & \underline{\underline{3d}} & \underline{4s} \end{array}$

4. Draw the electron dot diagram for the elements listed above.

a. Be

b. P

c. Ti

d. Se

e. Ag

f. Sm