Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blk: \_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chemistry 11 – Electron Configuration Worksheet**

1. *Why is the subshell,* ***3d****, not referred to as* ***4d*** *instead since its apart of the 4th period?*
2. *Give the full electronic configuration for the following particles:*

**Be:**

**S:**

**Kr:**

**V:**

**Mo:**

**Ga:**

**Ga3+:**

**bromide:**

1. *Give the* ***core notation*** *for the following particles:*

**Al:**

**Li:**

**I:**

**P:**

**Kr:**

**Cu+1:**

***core notation continued…***

**Hf:**

**Es:**

**Ce:**

**K+1:**

**N3-:**

**Sn+4:**

1. *Determine the number of* ***valence electrons*** *in the following particles. Show work by completing the electron structure and circle the electrons that make up your answer.*

**phosphorus:**

**Selenium:**

**Indium(III) ion:**

1. *Identify the following elements or ions:*
2. 1s2 2s2 2p3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 1s2 2s2 2p6 3s2 3p1: \_\_\_\_\_\_\_\_\_\_\_
4. 1s2 2s2 2p6: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (9 protons)
5. 1s2 2s2 2p6 3s2 3p6 3d10 4s2: \_\_\_\_\_\_\_\_\_\_\_
6. 1s2 2s2 2p6 3s2 3p6 3d10 4s0: \_\_\_\_\_\_\_\_\_\_\_
7. 1s2 2s2 2p6 3s2 3p6 3d9 4s0: \_\_\_\_\_\_\_\_\_\_\_\_
8. 1s2 2s2 2p6 3s2 3p6 3d10 4s2 4p6 5s0 4d 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. 1s2 2s2 2p6 3s2 3p6 3d10 4s2 4p6 5s0 4d 4: \_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. 1s2 2s2 2p6 3s2 3p6 3d10 4s2 4p6 5s2 4d7: \_\_\_\_\_\_\_\_\_\_\_\_\_
11. 1s2 2s2 2p6 3s2 3p1: \_\_\_\_\_\_\_\_\_\_\_\_\_