**Honors Chemistry**

**Sections 4-6 Worksheet**

1. Which of the following are unlikely to form covalent bonds: S, H, K, Ar, and Si.
2. The C to S bonds in carbon disulfide are shorter than single bonds. Draw a Lewis structure to explain this.
3. (a) What is the trend in electronegativity as you go from left to right?

(b) What is the trend as you go down a group?

(c) How are these patterns in comparison to electron affinity and first ionization energy?

1. (a) What is the most electronegative chalcogen?

(b) What is the least electronegative of Al, Si, and P?

(c) What is the most electronegative of Ga, P, Cl, and Na?

(d) Which is most likely to form an ionic bond with Ba: K, C, Zn, or F?

1. Arrange these bonds by increasing polarity: C—F, O—F, Be—F
2. Draw Lewis structures for:
3. H2CO (hint both Hs are bonded to C)
4. H2O2 (hint it is symmetrical)
5. C2F6 (hint there is a C—C bond)
6. AsO3 3- (hint add three electrons because of its charge)
7. H2SO3 (hint the Hs are bonded to the Os)
8. C2H2
9. Draw Lewis structures for the following:
10. SO2
11. SO3
12. SO3 2-
13. SO4 2-