Chem 1020 Fall 2005
Ch 5 Assignment (Homework 5)
Due Thursday, October 6 at noon

Address an email to andrew.aspaas@anokaramsey.edu (spell carefully) from your MetNet email account, and make the subject “Lastname Chem 1020 Homework 5” using your own last name (and without the quotes).

Answer the following questions in the body of the email message.

1. Name the following compounds:
   a. CaCl$_2$ calcium chloride
   b. Fe$_3$N$_2$ iron (II) nitride
   c. SF$_5$ sulfur pentafluoride
   d. BF$_3$ boron trifluoride

2. Write formulas for the following compounds:
   a. sodium sulfide Na$_2$S
   b. titanium (VI) oxide TiO$_3$
   c. dihydrogen monoxide H$_2$O

3. Identify these bonds as ionic, polar covalent, or covalent.
   a. between O and O  covalent
   b. between O and F  polar covalent
   c. between O and Na  ionic

4. For each pair, identify which has the most polar bond.
   a. Si–F vs Si–Cl
   b. O–N vs O–B
   c. Cl–S vs Cl–P

5. If a polyatomic ion has a negative charge, why do you add extra valence electrons to the total instead of subtracting?

   If it has a negative charge, then it must have extra valence electrons since electrons are negatively charged. So, for instance, if a polyatomic ion has a 2–charge, you must add 2 to the total number of valence electrons before you can draw the Lewis structure.