**Bonus Quiz – Honors Chemistry**

Quarter 3

Name the following chemical compounds (1 pt each)

1. Li2CO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. H3SO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. FeSO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. N­2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. NH3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the formulas of the following chemical compounds (1 pt each)

1. zinc chloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. hydrophosphoric acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. oxygen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. methane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. copper (II) phosphate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Explain why covalent compounds have lower melting and boiling points than ionic compounds (5 pt)
7. Convert 84.0 grams of silicon tetrafluoride to moles (3 pt)

For each of the following compounds, do the following:

1. Draw the Lewis structure (4 pt neutral / 8 pt ionic)
2. Indicate whether it’s polar (1 pt)
3. Draw a dipole to indicate the direction of polarity, if relevant (2 pt)
4. Indicate the shape of the molecule (1 pt)
5. Indicate the bond angles around the molecule (1 pt)
6. carbonate ion
7. phosphorus trichloride
8. F2SiS
9. If I were to rank the boiling points of the following compounds, what would be a reasonable ranking? NaOH, OF2, NI3­. Explain why. (8 pt)