**Oxford High School**

**Chemistry**

**Chapter 1-12 Cumulative Review**

1. Calculate the % composition of each element in the following compounds
2. H2S C. (NH4)2C2O4
3. Mg(OH)2 D. Na3PO4
4. Using the % calculated in #1, answer the following
5. How many grams of sulfur are in 3.54 g of H2S?
6. How many grams of magnesium are in 97.4 g of Mg(OH)2?
7. How many grams of nitrogen are in 25.0 g of (NH4)2C2O4?
8. How many grams of phosphorous are in 804 g of Na3PO4?
9. Which of the following compounds has the highest iron content?
10. FeCl2
11. Fe(C2H3O2)3
12. Fe(OH)3
13. FeO
14. Calculate the heat required to change 15.00 g of ice to water if the temperature of the water increased from -10oC to 15oC?
15. Calculate the heat released when 4.79 g of C2H4 reacts with oxygen

C2H4 + 3O2 → 2CO2 + 2H2O ∆H= -1.39 x 103J

1. Using 4NH3 + 3O2 → 2N2 + 6H2O ∆H= -1530 kJ

4NH3 + 5O2 → 4NO + 6H2O ∆H=-1170kJ

Find the enthalpy for

N2 + O2 → 2NO

1. Using Zn + 2HCl → ZnCl2  + H2
2. Identify this equation
3. If .75 mol of hydrochloric acid are used, how many moles of zinc chloride form?
4. If 2.5 L of H2 gas is released, how many grams of zinc where used?