Quantitative Analysis ----- Practice Review Quiz

1. An object has mass 14.45 g and volume 10.0 cm^3. Calculate the object's density.

2. Name the following compounds

a. FeO _____ b. Mg_3N_2 _____

c. CCl_4 _____ d. $CoPO_4$ _____

3. Calculate the number of moles of $AgNO_3$ in 15.0 g of $AgNO_3$

4. Calculate the mass in grams of 2.00 moles of N_2O_3

5. Calculate the mass of barium sulfate that will form when 10.0 g of barium chloride reacts completely in the following reaction:

$$BaCl_2\ (aq) + Na_2SO_4\ (aq) \rightarrow 2\ NaCl\ (aq) + BaSO_4\ (s)$$

6. 15.0 g of $Fe(NO_3)_3$ reacts with 15.0g KOH according to the following equation:

$$Fe(NO_3)_3\ (aq)\ +\ 3\ KOH\ (aq)\ \rightarrow\ Fe(OH)_3\ (s)\ +\ 3\ KNO_3\ (aq)$$

a. Calculate the limiting reactant

b. Calculate the theoretical yield of $Fe(OH)_3$

7. Calculate the molarity of 31.35 g of NaCl in 1.50 L of aqueous solution

8. Calculate the final concentration of a HCl solution prepared by diluting 100.0 mL of 12.1 M HCl to 250.0 mL.