Extra practice on Stoichiometry

How many moles of NH_3 form given 65.3 grams of N_2H_4?

$$3N_2H_4 \rightarrow 4NH_3 + N_2$$

Iron (III) oxide reacts with carbon monoxide. If a reaction mixture contains 22.55 grams of Fe_2O_3 and 14.78 grams of CO. Once the reaction is complete, how much excess reactant remains?

What is the minimum amount of 6.0 M H_2SO_4 necessary to produce a 25.0 gram sample of H_2 according to the balanced reaction?

$$2Al_{(s)} + 3H_2SO_{4(aq)} \rightarrow Al_2(SO_4)_{3(aq)} + 3H_{2(g)}$$

What volume of 0.150 M Li_sS solution is required to completely react with 125 mL of 0.150 M $Co(NO_3)_2$

$$Li_2S_{(aq)} + Co(NO_3)_{2(aq)} \text{ --. } 2LiNO_{3(aq)} + CoS_{(s)}$$

A 25 mL sample of 1.20 M potassium chloride solution is mixed with 14.0 mL of 0.900 M lead (II) nitrate solution and this precipitation reaction occurs:

$$2KCl_{(aq)} + Pb(NO_3)_{2(aq)} \rightarrow PbCl_{2(s)} + 2KNO_{3(aq)}$$

Determine the theoretical and percent yield if 2.45 grams of precipitate is collected.

A 55 mL sample of 0.102 M potassium sulfate solution is mixed with 35.0 mL of 0.114 M lead (II) acetate solution. The solid is collected, dried, and found to have a mass of 1.01 g. Determine the limiting reactant, theoretical yield, and the percent yield.