Chemistry 150 Worksheet on Stoichiometry (Gram to Gram problems)

1. How many grams of iron(III) hydroxide will be obtained if 23.7 g of sodium hydroxide is reacted with iron(III) chloride ?
2. Sodium hydroxide is neutralized by phosphoric acid.
   1. How many grams of the salt will result if 3.65 g of sodium hydroxide reacts?

* 1. How many grams of phosphoric acid is necessary to produce 84.8 g of water?

Answers: (1) 21.1 g Fe(OH)3 (2) a. 4.99 g Na3PO4 b.154 g H3PO4

1. Silver nitrate (aq) reacts with copper metal in a single replacement reaction. Copper (II) nitrate is one product formed. If 67.2 grams of silver(s) is obtained, what mass of copper(s) was used?
2. If 0.126 g of a metal, M, reacts with excess hydrochloric acid to form 7.00 x 10-3 mole of hydrogen and a solution of MCl3 (aq) , what is the atomic mass of the metal, M ?

(3) 19.8 g Cu (4) 27.0 g/mole - Al