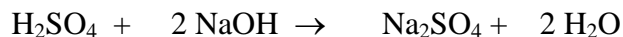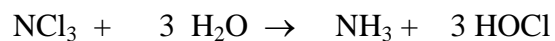# Stoichiometry Calculation Practice Worksheet

1. Calculate the number of moles of NaOH that are needed to react with 500.0 g of H_2SO_4 according to the following equation:

$$H_2SO_4 + 2\ NaOH \rightarrow Na_2SO_4 + 2\ H_2O$$

2. Calculate the mass of NH_3 that can be produced from the reaction of 125 g of NCl_3 according to the following equation:

$$NCl_3 + 3\ H_2O \rightarrow NH_3 + 3\ HOCl$$

3. What mass of CO_2 can be produced from the reaction of 25.0 g of C_3H_8 with 75.0 g of O_2 according to the following equation:

$$C_3H_8 + 5\ O_2 \rightarrow 3\ CO_2 + 4\ H_2O$$
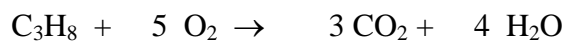
4. How many grams of SO_2 are produced when 152 g of CS_2 react with 48.0 g of O_2 according to the following equation:

$$CS_2 \ + \ 3\,O_2 \ \rightarrow \ CO_2 \ + \ 2\,SO_2$$

5. When 50.0 g of $MgCO_3$ react completely with H_3PO_4, as shown below, 15.8 g of CO_2 are produced. What is the percent yield for this reaction?

$$2\,H_3PO_4 \ + \ 3\,MgCO_3 \ \rightarrow \ Mg_3(PO_4)_2 \ + \ 3\,CO_2 \ + \ 3\,H_2O$$