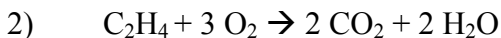# Mass to Mass Stoichiometry Problems

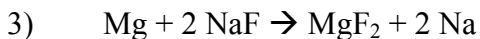*In the following problems, calculate how much of the indicated product is made. Show all your work.*

1) $LiOH + HBr \rightarrow LiBr + H_2O$

   If you start with ten grams of lithium hydroxide, how many grams of lithium bromide will be produced?

2) $C_2H_4 + 3\ O_2 \rightarrow 2\ CO_2 + 2\ H_2O$

   If you start with 45 grams of ethylene (C_2H_4), how many grams of carbon dioxide will be produced?

3) $Mg + 2\ NaF \rightarrow MgF_2 + 2\ Na$

   If you start with 5.5 grams of Sodium Fluoride, how many grams of Magnesium Fluoride will be produced?
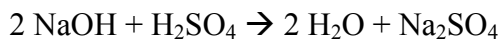
4) $2\ HCl + Na_2SO_4 \rightarrow 2\ NaCl + H_2SO_4$

   If you start with 20 grams of hydrochloric acid, how many grams of sulfuric acid will be produced?

Stoichiometry Practice Worksheet

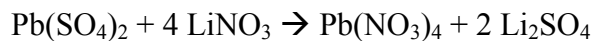*Solve the following stoichiometry grams-grams problems:*

1)   Using the following equation:

$$2 \text{ NaOH} + \text{H}_2\text{SO}_4 \rightarrow 2 \text{ H}_2\text{O} + \text{Na}_2\text{SO}_4$$

How many grams of sodium sulfate will be formed if you start with 200 grams of sodium hydroxide and you have an excess of sulfuric acid?

2)   Using the following equation:

$$\text{Pb(SO}_4)_2 + 4 \text{ LiNO}_3 \rightarrow \text{Pb(NO}_3)_4 + 2 \text{ Li}_2\text{SO}_4$$

How many grams of lithium nitrate will be needed to make 250 grams of lithium sulfate, assuming that you have an adequate amount of lead (IV) sulfate to do the reaction?