Mass to Mass Stoichiometry Problems – Answer Key

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? **36.3 grams LiBr**

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? **141.4 grams CO_2**

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? **4.1 grams MgF_2**

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? **26.9 grams**

Solutions for the Stoichiometry Practice Worksheet:

For both of the problems on this worksheet, the method for solving them can be found elsewhere in the "Mr. Guch's Helpdesk" section of my website (http://www.chemfiesta.com). If you're having problems with stoichiometry problems, I would highly suggest consulting this section of the site before answering these questions.

When doing stoichiometry problems, people are frequently worried by statements such as "if you have an excess of (compound X)". This statement shouldn't worry you… what it really means is that this isn't a limiting reagent problem, so you can totally ignore whatever reagent you have an excess of. Don't even give it a second thought, because if you do, you'll run into trouble.

1) 355.3 grams of Na_2SO_4

2) 313.6 grams of $LiNO_3$