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 lithium chloride, how many grams of calcium chloride 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?

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**

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**

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

If you start with 5.5 grams of lithium chloride, how many grams of calcium chloride will be produced? **9.3 grams**

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**