

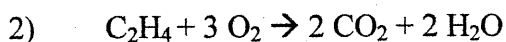
Mass to Mass Stoichiometry Problems-Worksheet Two

Carefully read each question and then answer. Be sure to show your work and include units.



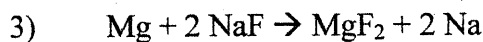
If you start with 10.00 grams of lithium hydroxide, how many grams of lithium bromide will be produced?

$$\frac{10.00 \text{ g LiOH}}{23.95 \text{ g LiOH}} \left| \frac{1 \text{ mol LiOH}}{1 \text{ mol LiOH}} \right| \frac{1 \text{ mol LiBr}}{1 \text{ mol LiOH}} \left| \frac{86.84 \text{ g}}{1 \text{ mol}} \right|$$
$$= \boxed{36.26 \text{ g LiBr}}$$



If you start with 45.00 grams of ethene (C_2H_4), how many grams of carbon dioxide will be produced?

$$\frac{45.00 \text{ g C}_2\text{H}_4}{28.06 \text{ g C}_2\text{H}_4} \left| \frac{1 \text{ mol C}_2\text{H}_4}{1 \text{ mol C}_2\text{H}_4} \right| \frac{2 \text{ mol CO}_2}{1 \text{ mol C}_2\text{H}_4} \left| \frac{44.01 \text{ g CO}_2}{1 \text{ mol CO}_2} \right|$$
$$= \boxed{141.2 \text{ g CO}_2}$$



If you start with 5.50 grams of sodium fluoride, how many grams of magnesium fluoride will be produced?

$$\frac{5.50 \text{ g NaF}}{41.99 \text{ g NaF}} \left| \frac{1 \text{ mol NaF}}{2 \text{ mol NaF}} \right| \frac{1 \text{ mol MgF}_2}{1 \text{ mol MgF}_2} \left| \frac{62.31 \text{ g MgF}_2}{1 \text{ mol MgF}_2} \right|$$
$$= \boxed{4.08 \text{ g MgF}_2}$$



If you start with 20.00 grams of hydrochloric acid, how many grams of sulfuric acid will be produced?

$$\frac{20.00 \text{ g HCl}}{36.46 \text{ g HCl}} \left| \frac{1 \text{ mol HCl}}{2 \text{ mol HCl}} \right| \frac{1 \text{ mol H}_2\text{SO}_4}{1 \text{ mol H}_2\text{SO}_4} \left| \frac{98.09 \text{ g H}_2\text{SO}_4}{1 \text{ mol H}_2\text{SO}_4} \right|$$
$$= \boxed{26.90 \text{ g H}_2\text{SO}_4}$$