Directions: Use the mole highway and dimensional analysis to solve. Show all your work!

1) \( __\text{LiOH} + __\text{HBr} \rightarrow __\text{LiBr} + __\text{H}_2\text{O} \) [unbalanced]
If you start with 10 g of lithium hydroxide, how many grams of lithium bromide will be produced? **Ans: 36.3 g LiBr**

2) \( __\text{C}_2\text{H}_4 + __\text{O}_2 \rightarrow __\text{CO}_2 + __\text{H}_2\text{O} \) [unbalanced]
If you start with 45 grams of ethylene (C\(_2\)H\(_4\)), how many grams of carbon dioxide will be produced? **Ans: 141.4 g CO\(_2\)**

3) \( __\text{LiCl} + __\text{CaF}_2 \rightarrow __\text{LiF} + __\text{CaCl}_2 \) [unbalanced]
If you start with 5.5 grams of lithium chloride, how many grams of calcium chloride will be produced? **Ans: 7.14 g CaCl\(_2\)**

4) \( __\text{HCl} + __\text{Na}_2\text{SO}_4 \rightarrow __\text{NaCl} + __\text{H}_2\text{SO}_4 \) [unbalanced]
If you start with 20 grams of hydrochloric acid, how many grams of sulfuric acid will be produced?