

Problem Solving**Chapter 7****BLM 7-8****Limiting Reactant and Percentage Yield****Goal**

Solve problems involving limiting reactants and percentage yield.

What To Do

Answer the following problems in the space provided.

Practice Problems

1. When ferric oxide reacts with hydrogen gas, two products — iron and water are formed.
 - (a) If 27.34 g of ferric oxide are combined with 3.2 g of hydrogen gas, what mass of iron would be formed?

 - (b) When the reaction is carried out in the lab, 10.00 g of iron is formed. What is the percentage yield of this reaction?

2. Ethene, or ethylene, is a very important hydrocarbon, which is used as a starting material for the synthesis of many industrial compounds. Ethylene is prepared by the dehydration of ethanol. The balanced equation for this reaction is: $\text{C}_2\text{H}_5\text{OH} \rightarrow \text{H}_2\text{O} + \text{C}_2\text{H}_4$
If the yield of ethylene production is 68.5%, what mass of ethanol must be reacted to produce 500 g of ethylene?