LIMITING REACTANT (LIMITING REAGENT) PRACTICE (#5)
From Bauck and ChemTeam

1) Potassium reacts with iodine to form potassium iodide.
   6.70 mol of potassium and 3.20 mol of iodine are available in lab.

   a) Write the balanced equation.
   b) Find the limiting reactant.
   c) Identify the excess reactant.
   d) How many moles of product form?
   e) How many moles of excess reactant are left over?

2) Phosphorus reacts with oxygen to form diphosphorus pentoxide.
   7.00 mol of phosphorus and 8.00 mol of oxygen are available in lab.

   a) Write the balanced equation.
   b) Find the limiting reagent.
   c) Identify the excess reagent.
   d) How many moles of product form?
   e) How many moles of excess reagent are left over?

3) Carbon with hydrogen gas to form methane gas (CH_4).
   7.0 moles of hydrogen and 5.0 moles of carbon are available.

   a) Write the balanced equation.
   b) Find the limiting reactant.
   c) Identify the excess reactant.
   d) How many moles of product form?
   e) How many moles of excess reactant are left over?

4) For the complete combustion of sucrose: $C_{12}H_{22}O_{11} + \underline{12}O_2 \rightarrow \underline{12}CO_2 + \underline{11}H_2O$
   10.0 g of sucrose and 10.0 g of oxygen react.

   a) Find the limiting reagent. (hint: convert to moles first)
   b) Identify the excess reagent.
   c) How many moles of product form?
   d) How many moles of excess reagent are left over?