STOICHIOMETRY:
LIMITING REAGENT

1. \( \text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3 \)
   How many grams of \( \text{NH}_3 \) can be produced from the reaction of 28 g of \( \text{N}_2 \) and 25 g of \( \text{H}_2 \)?

2. How much of the excess reagent in Problem 1 is left over?

3. \( \text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2 \)
   What volume of hydrogen at STP is produced from the reaction of 50.0 g of Mg and the equivalent of 75 g of HCl?

4. How much of the excess reagent in Problem 3 is left over?

5. \( 3\text{AgNO}_3 + \text{Na}_3\text{PO}_4 \rightarrow \text{Ag}_3\text{PO}_4 + 3\text{NaNO}_3 \)
   Silver nitrate and sodium phosphate are reacted in equal amounts of 200. g each. How many grams of silver phosphate are produced?

6. How much of the excess reagent in Problem 5 is left?