

# Limiting Reactant Stoichiometry

**Q#1:** Plants use carbon dioxide and water vapors to generate glucose by photosynthesis. If a plant absorbs 440 grams of  $\text{CO}_2$  and 360 grams of  $\text{H}_2\text{O}$  in one hour, then how much glucose plant will produce?

$6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$		
1. Moles of reactants	$\text{CO}_2 = \frac{—}{44} =$	$\text{H}_2\text{O} = \frac{—}{18} =$
2. Divide moles on coefficient of reactant.	$\text{CO}_2 = — =$	$\text{H}_2\text{O} = —$
3. Limiting Reactant		
4. Moles of glucose	$— \times =$	
5. Mass of glucose		