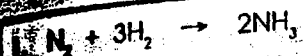


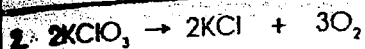
Topic: Gas Laws Stoichiometry	Name:	Date:
<b>Questions/Main Ideas:</b>	<b>Notes:</b>	
What is the molar volume of a gas at STP		
What can a balanced chemical equation tell us about a gas?	If temperature and pressure don't change, though, _____ from the _____ of the <b>Balanced Chemical Equation</b> will <b>also apply to volumes.</b>	
What are the steps to solving a stoichiometry problem?		
<b>Example Problem #1</b>	Assume that 8.5 L of iodine gas are produced at STP according to the following balanced equation:, How many moles of KCl are produced? $2 \text{KI (aq)} + \text{Cl}_2 \text{ (g)} \rightarrow 2 \text{KCl (aq)} + \text{I}_2 \text{ (g)}$	
<b>Example Problem #2</b>	Carbon monoxide reacts with oxygen to produce carbon dioxide. If 1.0L of carbon monoxide reacts with oxygen at STP, how many liters of carbon dioxide are produced? $\text{CO} + \text{O}_2 \rightarrow \text{CO}_2$	
<b>Example Problem #3</b>	Assume that 5.60 L of hydrogen gas at STP reacts with copper(II)oxide, how many grams of solid copper metal will be produced? $\text{CuO (s)} + \text{H}_2 \text{ (g)} \rightarrow \text{Cu (s)} + \text{H}_2\text{O (g)}$	
<b>Summary and Question(s) I have:</b>		

Name \_\_\_\_\_

## STOICHIOMETRY: MIXED PROBLEMS



What volume of  $\text{NH}_3$  at STP is produced if 25.0 g of  $\text{N}_2$  is reacted with an excess of  $\text{H}_2$ ?

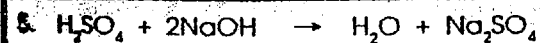


If 5.0 g of  $\text{KClO}_3$  is decomposed, what volume of  $\text{O}_2$  is produced at STP?

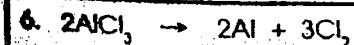
3. How many grams of  $\text{KCl}$  are produced in Problem 2?



What volume of hydrogen at STP is produced when 2.5 g of zinc react with an excess of hydrochloric acid?



How many molecules of water are produced if 2.0 g of sodium sulfate are produced in the above reaction?



If 10.0 g of aluminum chloride are decomposed, how many molecules of  $\text{Cl}_2$  are produced?