

Stoichiometry Problems

Chem Worksheet 12-2

Name _____

This worksheet requires you to calculate the amount of product formed from a reaction. The problems will be addressed based on a chemical reaction and there are boxes on the right side of the worksheet where the equations can be written.



Exercises

Write each of the following balanced equations and solve for the missing values.

1. Hydrogen gas

$H_2 + Cl_2 \rightarrow HCl$

2. Methane gas

$CH_4 + O_2 \rightarrow CO_2 + H_2O$

3. Ethane and chlorine

$C_2H_6 + Cl_2 \rightarrow C_2H_5Cl + HCl$

4. Ammonium sulfide

$(NH_4)_2S + H_2SO_4 \rightarrow NH_4HS + H_2S + H_2O$

5. Nitrogen

$N_2 + O_2 \rightarrow NO + NO_2$

Solve the following equations. Solve the stoichiometric problems.

1. How many molecules of oxygen are required to react with 1.00 g of sulfur dioxide?
_____ Mg = _____ Mg
2. How many liters of oxygen at STP are required for the combustion of 1.00 g of propane?
_____ Lg = _____ Lg
3. What mass of hydrogen gas must decompose to produce 1.00 g of water?
_____ Mg = _____ Mg
4. How many liters of oxygen at STP are required to react with 1.00 g of sulfur dioxide to decompose sulfur?
_____ Lg = _____ Lg = _____ Lg
5. How many liters of chlorine gas at STP are required to decompose 1.00 g of potassium chlorate?
_____ Lg = _____ Lg
6. How many liters of chlorine gas are produced when 1.00 g of potassium chlorate decomposes?
_____ Lg = _____ Lg
7. How many liters of chlorine gas are produced when 1.00 g of potassium chlorate decomposes?
_____ Lg = _____ Lg

8. Calculate your answer.

STOICHIOMETRY