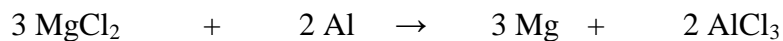


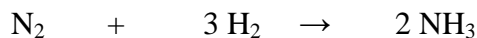
Mole Ratio Worksheet

1. Consider the chemical reaction represented by the equation below:



- If 8 moles of magnesium chloride react with enough aluminum, how many moles of aluminum chloride are produced?
- How many moles of magnesium chloride are needed to with 10 moles of aluminum?

2. Consider the following chemical reaction:



- How many moles of nitrogen gas are needed to react with to react with 7.5 moles of hydrogen?
- How many moles of ammonia would you get if 4.5 moles of hydrogen gas reacted?
- How many moles of nitrogen gas are needed in order to produce 5 moles of NH_3 ?

3. Consider the combustion of methane (CH_4).

- How many moles of carbon dioxide are obtained when 20 moles of methane are burned?
- If only 15 moles of oxygen are available, how many moles of methane will burn?
- During combustion, 12 moles of carbon dioxide were obtained. How many moles of water were also obtained?

More practice : mole to mole, mole to gram, gram to mole

1) Give the reaction : $4 \text{ Fe} + 3 \text{ O}_2 \rightarrow 2 \text{ Fe}_2\text{O}_3$

- How many moles of O_2 are needed if we wish to make 6 moles of Fe react?
- In the lab, a reaction involving 624 g of O_2 occurred. How many moles of Fe_2O_3 were produced?
- How many grams of Fe do you need if you wish to produce 7 moles of Fe_2O_3 ?

2) Given the reaction: $6 \text{ Mg} + \text{ P}_4 \rightarrow 2 \text{ Mg}_3\text{P}_2$

- How many moles of Mg are needed in order to produce 1213.83 g of Mg_3P_2 ?
- 495.52 g of P_4 react with some magnesium. How many moles of Mg_3P_2 are produced?
- How many moles of P_4 are needed to react with 9 moles of Mg?

3) Given the reaction: $\text{H}_2 + \text{ Cl}_2 \rightarrow 2 \text{ HCl}$

- If 40.4 g of H_2 were used-up in a reaction, how many moles of HCl were produced?
- How many grams of Cl_2 are needed if we wish to produce 6 moles of HCl?
- How many moles of Cl_2 are needed in order to produce 291.68 g of HCl?