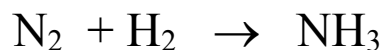


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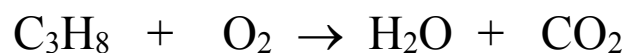
Worksheet on Limiting Reactants

Use the following equation to answer questions 1-4.



1. How many moles of NH_3 can be produced from the reaction of 28 g of N_2 ?
2. How many moles of NH_3 can be produced from the reaction of 25 g of H_2 ?
3. If 28 g of N_2 and 25 g of H_2 are reacted together, which one would be the limiting reactant?

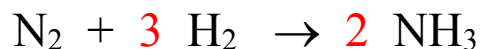
Use the following to answer questions 5-8.



5. How many moles of water can be produced from the reaction of 28 g of C_3H_8 ?
6. How many moles of water can be produced from the reaction of 45 g of O_2 ?
7. If 28 g of C_3H_8 and 45 g of O_2 are reacted together, which one would be the limiting reactant?

Worksheet on Limiting Reactants

Use the following equation to answer questions 1-4.



1. How many moles of NH_3 can be produced from the reaction of 28 g of N_2 ?

$$28 \text{ g N}_2 \times \frac{1 \text{ mole N}_2}{28 \text{ g N}_2} \times \frac{2 \text{ moles NH}_3}{1 \text{ mole N}_2} = 2 \text{ moles NH}_3$$

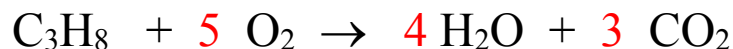
2. How many moles of NH_3 can be produced from the reaction of 25 g of H_2 ?

$$25 \text{ g H}_2 \times \frac{1 \text{ mole H}_2}{2 \text{ g H}_2} \times \frac{2 \text{ moles NH}_3}{3 \text{ moles H}_2} = 8.3 \text{ moles NH}_3$$

3. If 28 g of N_2 and 25 g of H_2 are reacted together, which one would be the limiting reactant?

N_2 would be the limiting reactant because it only makes 2 moles of NH_3 before it is used up.

Use the following to answer questions 5-8.



5. How many moles of water can be produced from the reaction of 28 g of C_3H_8 ?

$$28 \text{ g C}_3\text{H}_8 \times \frac{1 \text{ mole C}_3\text{H}_8}{44 \text{ g C}_3\text{H}_8} \times \frac{4 \text{ moles H}_2\text{O}}{1 \text{ moles C}_3\text{H}_8} = 2.55 \text{ moles H}_2\text{O}$$

6. How many moles of water can be produced from the reaction of 45 g of O_2 ?

$$45 \text{ g O}_2 \times \frac{1 \text{ mole O}_2}{32 \text{ g O}_2} \times \frac{4 \text{ moles H}_2\text{O}}{5 \text{ moles O}_2} = 1.125 \text{ moles H}_2\text{O}$$

8. If 28 g of C_3H_8 and 45 g of O_2 are reacted together, which one would be the limiting reactant?

O_2 would be the limiting reactant because it only makes 1.125 moles of H_2O before it is used up.