



High School Science Virtual Learning

Chemistry

Mole - Mole Stoichiometry

April 10, 2020



High School Chemistry

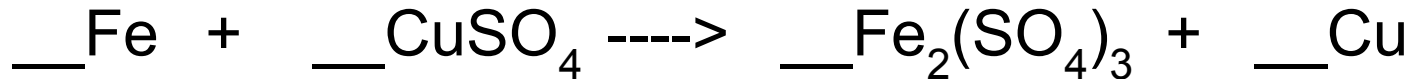
Lesson: 4/10/20

Objective/Learning Target:

Students are able to convert between moles of products and reactants.

Let's Get Started:

1. Balance the following Equation:

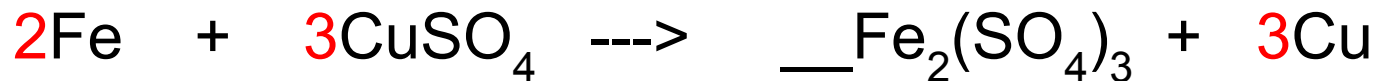


2. Given the following reactants, complete and balance the double replacement reaction.

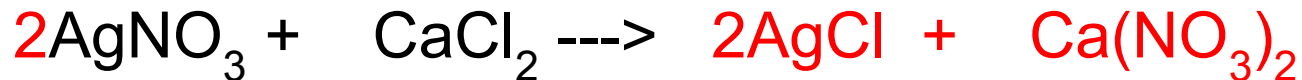


Let's Get Started: Answer Key

1. Question 1- Answer



2. Question 2 - Answer





Lesson Activity:

Directions:

1. Watch the following video, and answer the questions in the handout.

Links:

- [Video](#)
- [Handout](#)

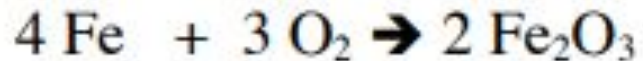


Practice

Complete the following questions using the information you learned during the lesson activity.

Questions: $2 \text{KClO}_3 \rightarrow 2 \text{KCl} + 3 \text{O}_2$

1. How many moles of O_2 will be formed from 1.65 moles of KClO_3 ?
2. How many moles of KClO_3 are needed to make 3.50 moles of KCl ?
3. How many moles of KCl will be formed from 2.73 moles of KClO_3 ?



4. How many moles of Fe_2O_3 are produced when 0.275 moles of Fe is reacted?
5. How many moles of Fe_2O_3 are produced when 31.0 moles of O_2 is reacted?

Once you have completed the practice questions check with the **answer** key.

1. How many moles of O₂ will be formed from 1.65 moles of KClO₃?

$$\frac{1.65 \text{ mol KClO}_3}{\underline{2} \text{ mol KClO}_3} \left| \frac{\underline{3} \text{ mol O}_2}{\underline{2} \text{ mol KClO}_3} \right| = \underline{2.48} \text{ mol O}_2$$

2. How many moles of KClO₃ are needed to make 3.50 moles of KCl?

$$\frac{3.50 \text{ mol KCl}}{\underline{2} \text{ mol KCl}} \left| \frac{\underline{2} \text{ mol KClO}_3}{\underline{2} \text{ mol KCl}} \right| = \underline{3.50} \text{ mol KClO}_3$$

3. How many moles of KCl will be formed from 2.73 moles of KClO₃?

$$\frac{2.73 \text{ moles KClO}_3}{\underline{2} \text{ mol KClO}_3} \left| \frac{\underline{2} \text{ mol KCl}}{\underline{2} \text{ mol KClO}_3} \right| = \underline{2.73} \text{ mol KCl}$$

Once you have completed the practice questions check with the **answer** key.

4. How many moles of Fe_2O_3 are produced when 0.275 moles of Fe are reacted?

$$\frac{0.275 \text{ mol Fe}}{4 \text{ mol Fe}} \left| \frac{2 \text{ mol Fe}_2\text{O}_3}{4 \text{ mol Fe}} \right| = \underline{0.138} \text{ mol Fe}_2\text{O}_3$$

5. How many moles of Fe_2O_3 are produced when 31.0 moles of O_2 are reacted?

$$\frac{31.0 \text{ mol O}_2}{3 \text{ mol O}_2} \left| \frac{2 \text{ mol Fe}_2\text{O}_3}{3 \text{ mol O}_2} \right| = \underline{20.7} \text{ mol Fe}_2\text{O}_3$$

More Practice:

Follow the links below to do more practice.

1. [Mole to Mole Conversion Worksheet](#)
2. [Mole to Mole Stoichiometry](#)



Additional Practice:

Click on the link below for additional practice.

- [Reactions & Stoichiometry](#)