

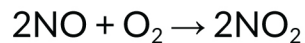
MOLE TO MOLE CALCULATIONS WORKSHEET

Name : _____

Date : _____

Answer the following questions.

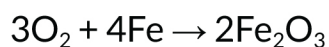
1) Here is a balanced equation.



a. How many moles of NO_2 will be produced if 3.6 moles of NO react?

b. How many moles of NO must react to form 4.67 moles of NO_2 ?

2) Here is a balanced equation.



a. How many moles of O_2 must react in order to produce 3 moles of Fe_2O_3 ?

b. How many moles of Fe are needed to produce 6.9 moles of Fe_2O_3 ?

c. How many moles of O_2 are required to react with 8.6 moles of Fe ?

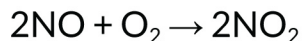
MOLE TO MOLE CALCULATIONS WORKSHEET

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Answers

1) Here is a balanced equation.



a. How many moles of NO_2 will be produced if 3.6 moles of NO react?

In this reaction, 2 moles of NO produce 2 moles of NO_2

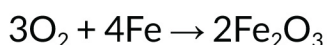
So, 3.6 moles of NO produce 3.6 moles of NO_2

b. How many moles of NO must react to form 4.67 moles of NO_2 ?

In this reaction, 2 moles of NO react to produce 2 moles of NO_2

So, 4.67 moles of NO_2 are produced by 4.67 moles of NO

2) Here is a balanced equation.



a. How many moles of O_2 must react in order to produce 3 moles of Fe_2O_3 ?

In this reaction, 3 moles of O_2 produce 2 moles of Fe_2O_3

So, the number of moles of O_2 needed to produce 3 moles of $\text{Fe}_2\text{O}_3 = (3/2) \times 3 = 4.5$ moles

b. How many moles of Fe are needed to produce 6.9 moles of Fe_2O_3 ?

In this reaction, 4 moles of Fe produce 2 moles of Fe_2O_3

So, the number of moles of Fe needed to produce 6.9 moles of $\text{Fe}_2\text{O}_3 = (4/2) \times 6.9 = 13.8$ moles

c. How many moles of O_2 are required to react with 8.6 moles of Fe ?

In this reaction, 4 moles of Fe react with 3 moles of O_2

So, the number of moles of O_2 that need to react with 8.6 moles of $\text{Fe} = (3/4) \times 8.6 = 6.45$ moles