



High School Science Virtual Learning

Chemistry

April 9th, 2020



Chemistry

Lesson: April 9th 2020

Objective/Learning Target:

The learner will be able to perform conversion using the Mole concept.



Bell Ringer

Question 1

How do we convert grams to moles?

Resources:

[Mole Map](#)

[Periodic Table](#)

Question 2

Find the molar mass of Nitric Acid (HNO_3)?



Bell Ringer Answers:

1. Divide by the molar mass.
2. Molar Mass of $\text{HNO}_3 = 63.012 \text{ g/mol}$

$$\text{H- } 1.008 \times 1 = 1.008$$

$$\text{N- } 14.007 \times 1 = + 14.007$$

$$\text{O- } 15.999 \times 3 = + \underline{47.997}$$

$$63.012 \text{ g/mol}$$



Lesson:

Refresh yourself about molar conversions with the following videos before trying the practice.

[Video 1](#)

[Video 2](#)

Practice Problems:

Resources:

[Mole Map](#)

[Periodic Table](#)

1. A certain reaction produces 86.5 L of hydrogen gas at STP.
How many moles of hydrogen were produced?
2. What volume does 4.96 moles of O_2 occupy at STP?
3. Calculate how many grams are in 0.700 moles of H_2O_2 .
4. Convert 25.0 grams of $KMnO_4$ to moles.
5. 0.450 mole of Fe contains how many atoms?
6. How many moles of carbon atoms is 4.72×10^{24} atoms of carbon?



Answers:

1. 3.86 mol H_2
2. 111 liters O_2
3. 23.8 g H_2O_2
4. 0.158 mol KMnO_4
5. 2.71×10^{23} atoms Fe
6. 7.84 mol C



More Practice:

[Moles Worksheet](#)

Resources:

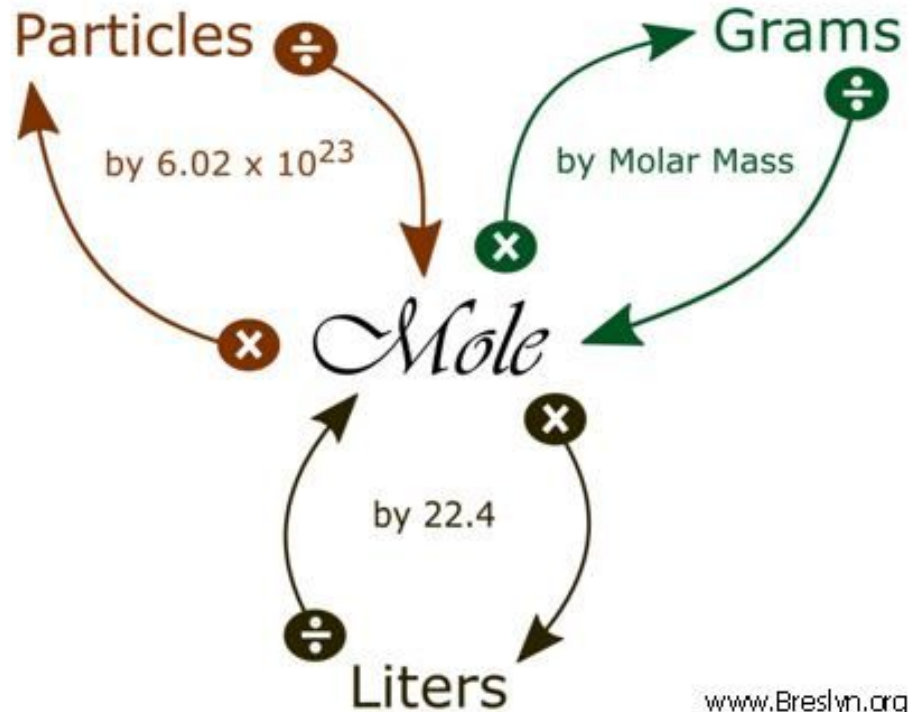
[Mole Map](#)

[Periodic Table](#)

When you finish the worksheet, check your answers [here](#).

Try this [Quizizz](#)

Mole Map:





Additional Material:

[Black and White Periodic Table PDF](#)

More Videos if you need extra help:

[Bozeman Science Basic Molar Conversion](#)

[Tyler DeWitt Grams and Moles](#)

[Tyler DeWitt Liters and Moles](#)