The mole concept

# Aims

* ***show an understanding of that the Avogadro constant is the number of atoms in 0.012 kg of carbon-12.***
* ***recall the base quantity amount of substance (mol).***
* ***Use molar quantities where one mole of any substance is the amount containing a number of particles equal to the Avogadro constant.***

<http://www.gpb.org/chemistry-physics/chemistry/801>

**Note Taking Guide:** CHEMISTRY: A Study of Matter

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8.1

Stoichiometry

study of the \_\_\_\_\_\_\_\_\_\_\_\_ relationships in a \_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_

based on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ equations

2 Mg + O2 2 MgO

The \_\_\_\_\_\_\_\_\_\_\_ in a \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ give the

\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ for the \_\_\_\_\_\_\_\_\_\_\_ involved in the

\_\_\_\_\_\_\_\_\_\_\_.

Ex. Problem:

When elemental aluminum reacts with elemental iodine, aluminum iodide isproduced.

mole ratios: \_\_\_\_\_ Al: \_\_\_\_\_ I2

\_\_\_\_\_ Al: \_\_\_\_\_ AlI3

\_\_\_\_\_ I2: \_\_\_\_\_ AlI3

If you start with 4 moles of Al, how many moles of AlI3 will be produced?

Problem Set One

How many moles of water will be produced when \_\_\_\_\_\_\_ grams of

hydrogen gas react with the oxygen in the air?

(Hint: To “make the switch” between different substances in a reaction, use

the \_\_\_\_\_\_\_\_ ratio from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ equation.)

Problem Set Two

The Quiz

CR1. CR2. 1. 2.

3. 4. 5