

CHEMISTRY

Chemistry Section Slideshow



Malleable
Lustrous



conductor
of heat



conductor
of
Electricity



Ductile

Common Physical Characteristics of Metals

Malleable - can be pressed into thin sheets

Ductile - can be drawn into wire

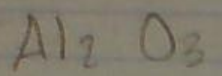
Luster - shiny (when polished)

Good conductivity - allows heat & electricity
to flow through

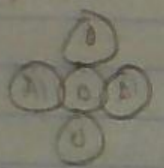
Solid at room temperature
(with the exception of mercury)

Nonmetals are usually brittle and dull
(when solid) and poor conductors

e.g.



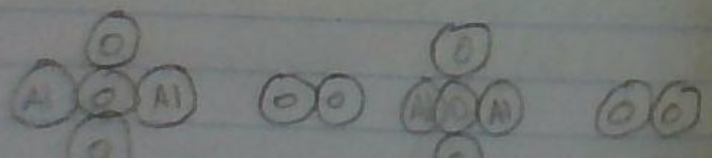
2 atoms of Aluminum + 3 atoms of Oxygen



I.E. 2 or more different elements bonded together

Mixture

Combination of compounds and/or elements that are Not chemically bonded to each other

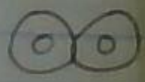


Elemental Molecule

(Not a compound)

e.g. O_2

2 atoms of Oxygen



Aka

"Diatomic"

I.E.

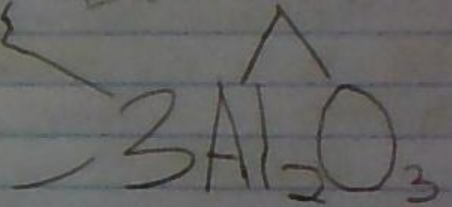
2 atoms

2 or more elements combined chemically represents by a chemical formula

Such as

Coefficients

Element Symbols



tells how many molecules

I.E.

3 Molecules

6 Total Aluminum Atoms

9 Total Oxygen Atoms

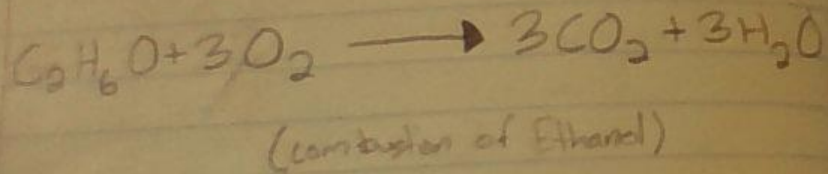
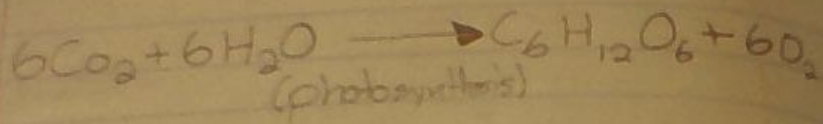
Subscript

tell # of atoms of element each under

Examples of Chemical Equations

Reactants

Products



Chemical Reactions

Processes that lead to the transformation of one set of chemical substances to another

Chemical Reactions are represented symbolically by chemical equations

In chemical equations

Reactants are on the left


they produce the products


which are on the right

The arrow that connects reactants and products is read as "Produces"




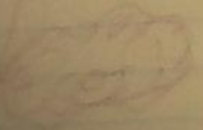
Evidence of Chemical Reaction

 Effervescence
(a gas is formed)

 Temperature Change
(endothermic or exothermic)

 Odor Change

 Precipitation
(a solid is formed)

 Color Change

A substance
disappears

Law of Conservation of Mass

(Atoms can't be created or
destroyed in a chemical reaction)

SO

The mass of the ~~product~~
in a chemical reaction
must be equal to the
Mass of the ~~reactants~~

The atoms of the ~~product~~
are the same as the
atoms of the ~~reactants~~

- same #
- same kind
- same atom

Because:

(Chemical reaction)

Balancing Chemical Equations
Chemical Equations must follow
the Law of Conservation of Mass
Steps

The atoms on the reactants side
must equal
the atoms on the products side
in both # & type.

The formulas for the molecules must
not be changed; they are the
same reactants (on the reactants side)
or the products of the reaction (on the
products side)

Coefficients must be adjusted so that
the number is representative of each
reactant

I.E.
follows

The Law of Conservation of Mass