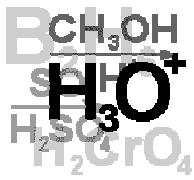
**Name:** _____ **Date:** _____ **Class Notes**
**IPC**

# Chemical Symbols and Formulas




One of the greatest developments in science was the creation of the periodic table. The periodic table is an organized arrangement of the element's names, chemical symbols and other important information. The more you know about the periodic table the easier it will be to understand the symbols and formulas of the pure substances.

**Chemical symbol**s are used to represent the elements and various combinations of these symbols are used to create chemical formulas.

**Examples:** _____ hydrogen _____ oxygen _____ nitrogen

The **chemical formulas** are symbolic representations of compounds and make it easier to work with compounds in chemical equations and experimental descriptions. A chemical formula tells you the elements involved, the number of atoms or ions of each element (subscript) and the number of molecules or formula units (coefficient).


**Examples:** _____ ammonia _____ silver nitrate

_____ propanol _____ sodium chloride

## Diatomic Elements

There a few elements which in the pure form are diatomic; meaning that they are two atoms bonded together creating a molecule.

_____ _____

_____ _____

_____ _____

_____

## Chemical Formulas

**Example:** carbon dioxide **$CO_2$**

carbon monoxide **CO**

Carbon monoxide is a poisonous gas while carbon dioxide is a harmless gas – they are not the same!

**Count the Atoms for the Following:**

**$NH_3$** _____ nitrogen atoms

_____ hydrogen atoms

**$AgNO_3$** _____ silver atoms

_____ nitrogen atoms

_____ oxygen atoms

**$C_3H_7OH$** _____ carbon atoms

_____ hydrogen atoms

_____ oxygen atoms

**$H_2O$** _____ hydrogen atoms

_____ oxygen atoms

**$NaHCO_3$** _____ sodium atoms

_____ hydrogen atoms

_____ oxygen atoms

_____ carbon atoms

**$C_2H_4O_2$** _____ hydrogen atoms

_____ oxygen atoms

_____ carbon atoms

**$Mg(OH)_3$** _____ magnesium atoms

_____ hydrogen atoms

_____ oxygen atoms

**$H_3PO_4$** _____ hydrogen atoms

_____ oxygen atoms

_____ phosphorus

***"The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather a lack of determination."***
***- Vince Lombardi***