Empirical Formulas

Atoms combine to form compounds in whole number ratios (John Dalton)

Molecular Formula: shows the number of atoms that make up each molecule or formula unit. Ex. $C_6H_{12}O_6$ or MgF_2

Empirical Formula: shows the lowest whole number ratio (simplest formula). Ex. CH_2O or MgF_2

* It is possible for compounds with different molecular formulas to have the same empirical.

Benzene	C_6H_6	CH
Acetylene	C_2H_2	CH

<u>Finding Empirical Formulas</u>
Ex 1. Find the empirical formula for a compound that is 81.9% C, 6.12% H and 12.1% O.

Ex 2. An unknown compound has a percent composition of 81.7% C and 18.3% H. What is the compound's empirical formula?