CHEMISTRY DAILY PLAN

Class: **Date:**

Subject: ***Isomerism*** **Time:**

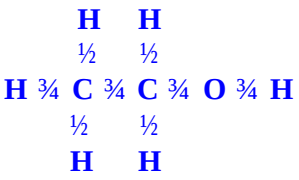
The existence of several different compounds that have the same molecular formula is called **isomerism**.

Molecules that have the same kinds and numbers of atoms but different arrangements are called **isomers**.

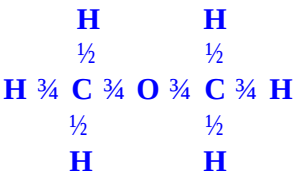
Compounds having the same molecular formula but differing in structural formula are called **structural isomers**.

Isomers have different physical and chemical properties.

Consider the molecular formula C_2H_6O. Two very different substances have been found with the formula C_2H_6O. One is ethyl alcohol, which is a colorless liquid at room temperature. It boils at 78.5°C. The other one is dimethyl ether, a gas at room temperature and boils at - 23.6°C. For the molecular formula C_2H_6O, two and only two structural formulas are possible that satisfy the valence requirements, of 4 for carbon, 2 for oxygen and 1 for hydrogen. They are



Ethyl Alcohol



Dimethyl Ether

Drawing Structural Formulas

Problem: Draw structural formulas for all possible isomers of C_4H_{10}.

Problem: Draw structural formulas for all possible isomers of C_5H_{12}.

($Bp_{n\text{-pentane}}$ (10 °C) > $Bp_{isopentane}$ (28 °C) > $Bp_{neopentane}$ (10 °C))

Homework: Draw structural formulas for all possible isomers of C_6H_{10} and C_7H_{16}. (There are five)