

In these compounds, which are formed between (metals, nonmetals, metals and nonmetals), the atoms bond together to form (molecules, ions). In molecular compounds, _____ are used to show the number of atoms of each element per molecule. Finish the chart below, listing the prefixes and the number of atoms each represents:

Prefix	mono-							octa-		
# of atoms			3			6				

Write the formula of these molecular compounds:

carbon tetrachloride _____ sulfur trioxide _____

dinitrogen monoxide _____ dinitrogen trioxide _____

dinitrogen pentoxide _____ silicon dioxide _____

phosphorus trichloride _____ carbon disulfide _____

tetraphosphorus decoxide _____ carbon monoxide _____

Organic Compounds—A Special Case of Molecular Compounds

Organic compounds are now defined as compounds that contain the element _____. The nature of the _____ between each pair of carbon atoms in an organic compound will determine whether the compound is saturated or unsaturated. The bonds between the carbon atoms in a(n) _____ compound are single bonds, but in a(n) _____ compound, the bonds between neighboring carbon atoms are _____ or _____ bonds. The organic compounds containing only hydrogen and

carbon are called _____. C_nH_{2n+2} is the general form for the _____ series of hydrocarbons. The names of this series are composed of a _____, which denotes the number of carbon atoms present, and the suffix _____. This series of hydrocarbons has only single bonds, and so, is said to be _____. C_nH_{2n} is the general form for the class of hydrocarbons referred to as the _____. Each member of this series has a pair of carbon atoms connected by a _____ bond, and so, is said to be _____. Again, _____ are used to denote the number of carbon atoms present in the molecule, and all members of this series end in the suffix _____.

Finish the chart below, filling in the missing prefixes and the number of carbon atoms each represents:

Prefix		eth-								dec-
# of Carbon Atoms	1				5					

What is the formula for the following hydrocarbons?

butene _____

propane _____

methane _____

hexane _____

nonene _____

ethene _____