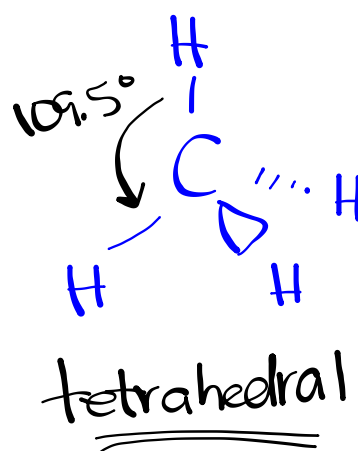
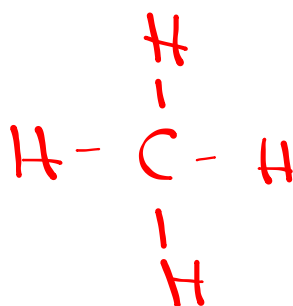
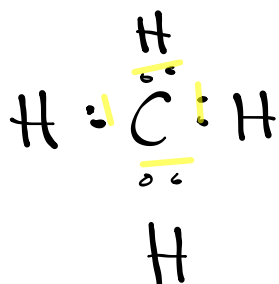


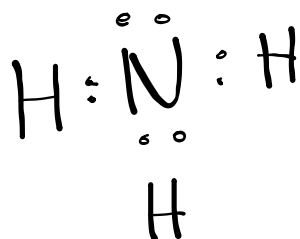
Worksheet 8.2

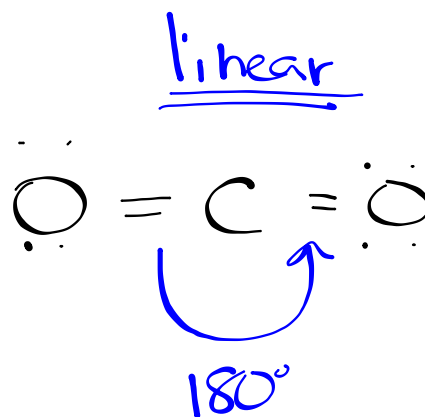
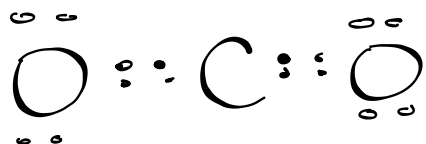
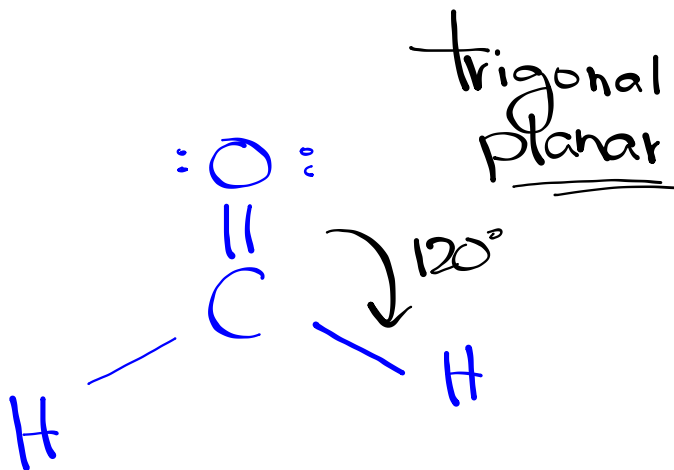
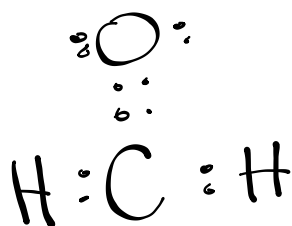
VSEPR

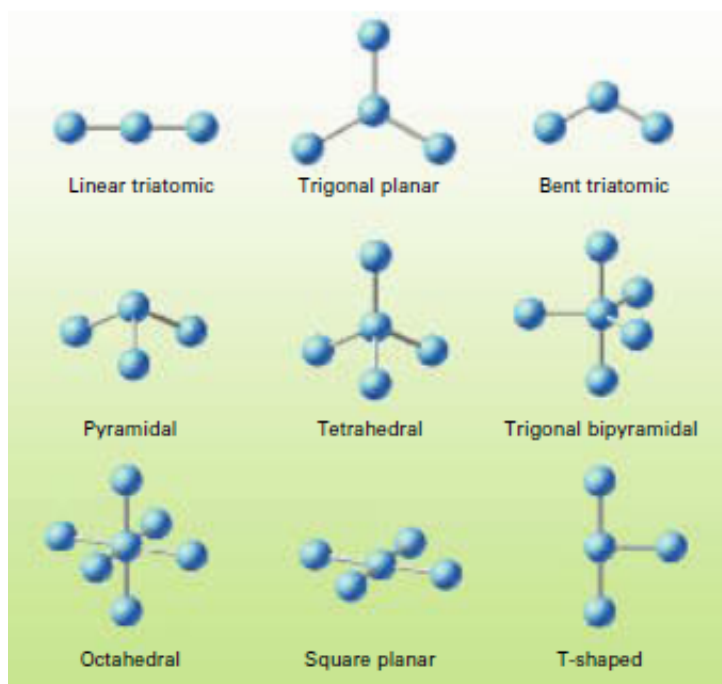
CH₄



NH₃



Ex. CO₂**Ex. CH₂O**

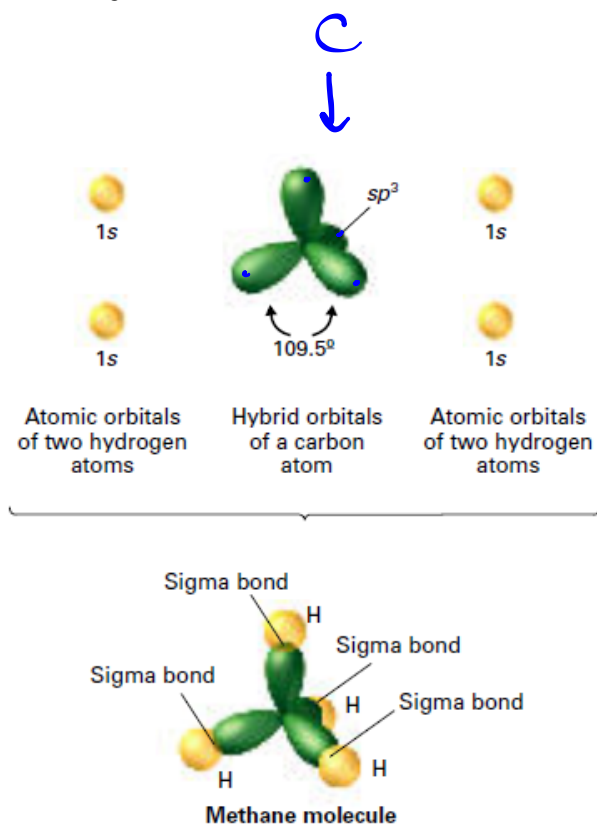


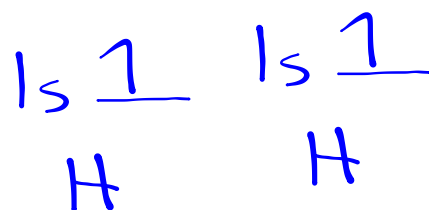
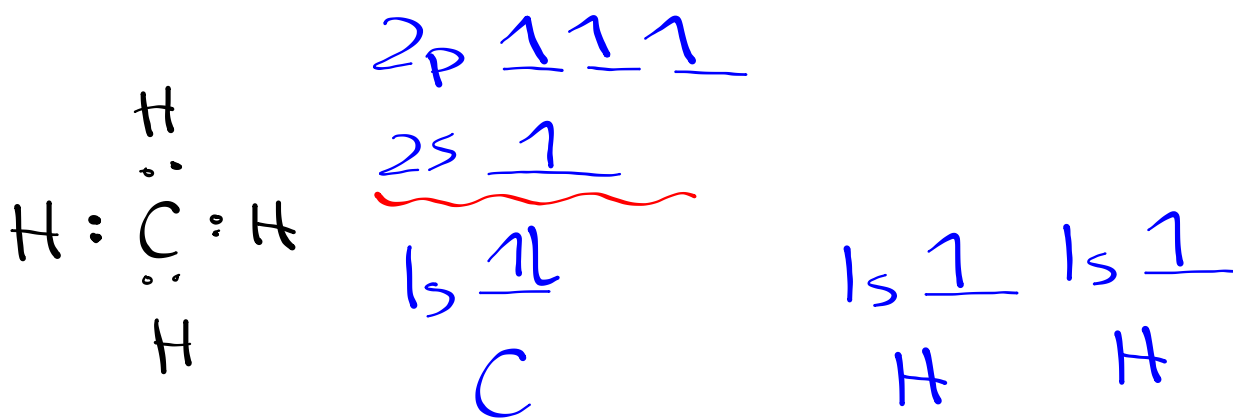
Hybridization Involving Single Bonds

In hybridization atomic orbitals mix to form the same total number of equivalent hybrid orbitals.

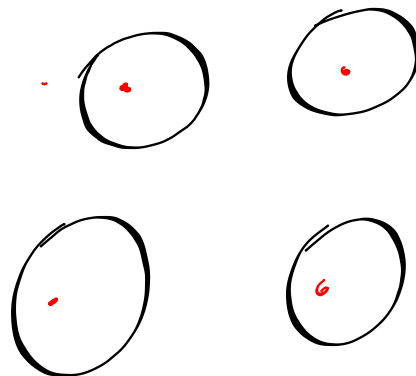
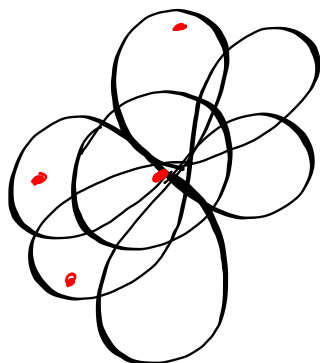
Ex. CH_4

The one $2s$ orbital and three $2p$ orbitals of a carbon atom mix to form four sp^3 hybrid orbitals.

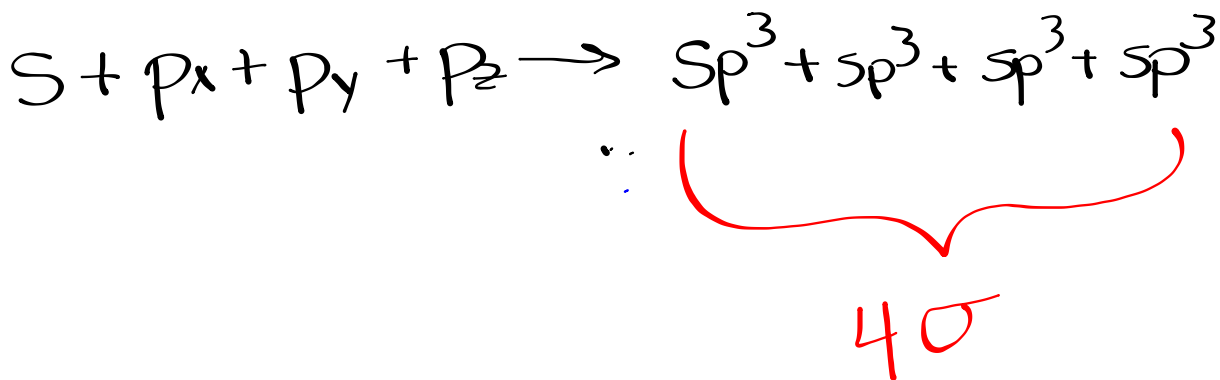




||

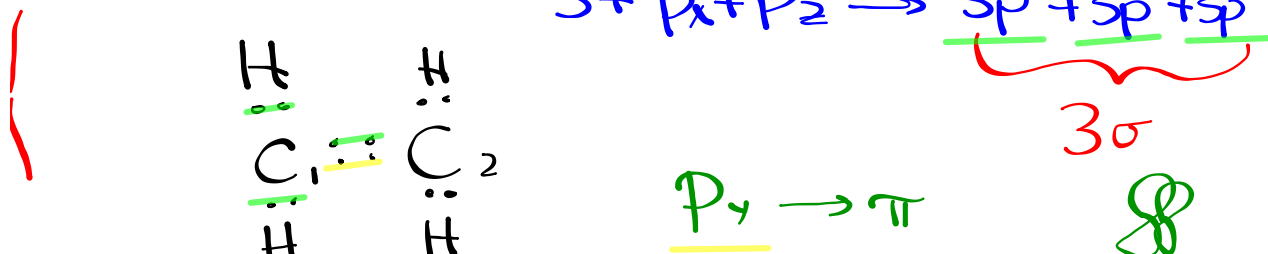


C



Hybridization Involving Double Bonds

Ex. C_2H_4



The one $2s$ orbital and two $2p$ orbitals of each carbon atom mix to form three sp^2 hybrid orbitals.

Two of the sp^2 orbitals overlap with the $1s$ hydrogen orbital to form carbon-hydrogen sigma bonds.

The third sp^2 orbital overlaps with an sp^2 orbital from the other carbon to form a carbon-carbon sigma bond.

The non-bonding $2p$ orbitals overlap side-by-side to form a carbon-carbon pi bond.

