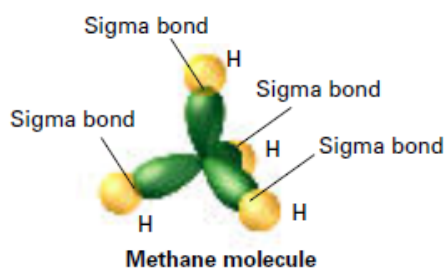
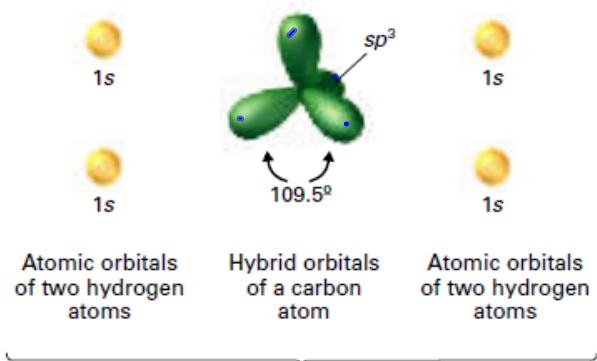
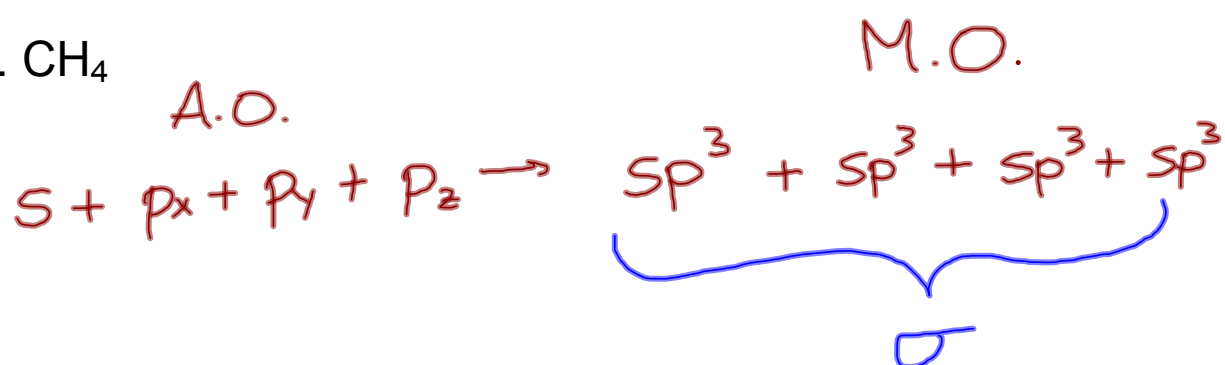
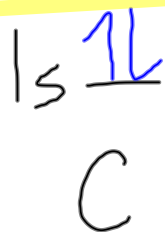
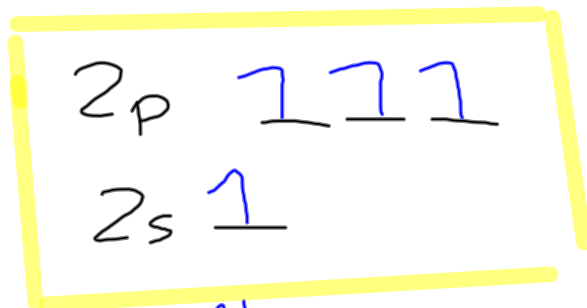
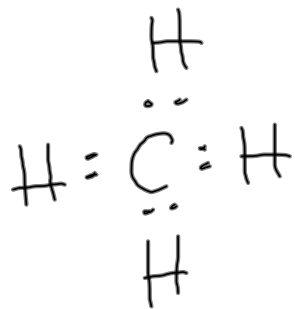


## Hybridization Involving Single Bonds

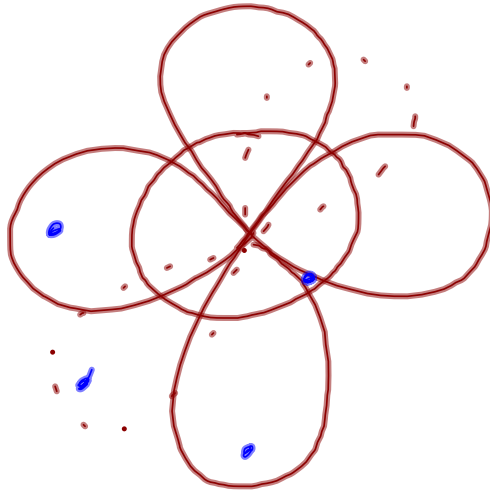
In hybridization, atomic orbitals mix to form the same total number of equivalent hybrid orbitals.

Ex. CH<sub>4</sub>



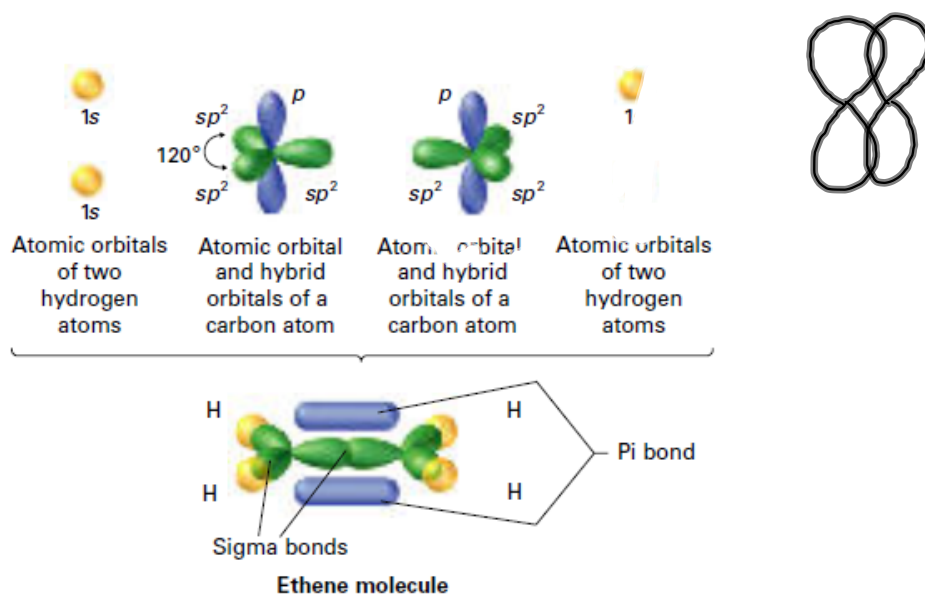
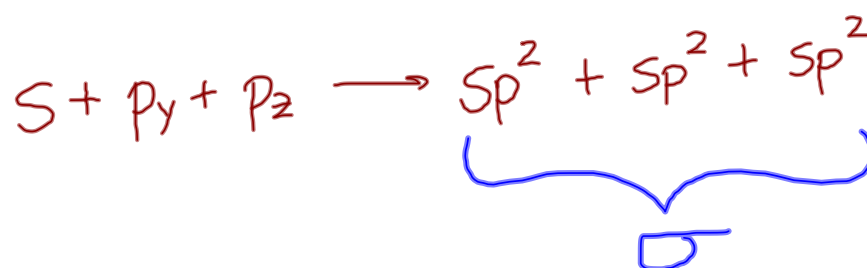
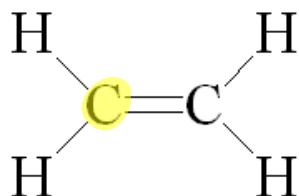


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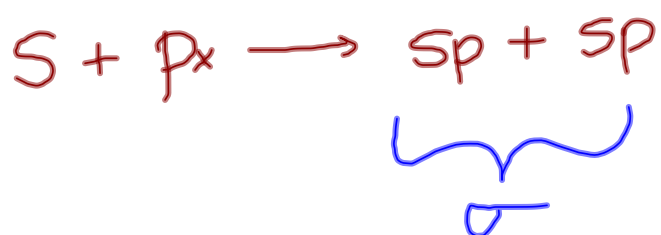
## Hybridization Involving Double Bonds

Ex.  $C_2H_4$

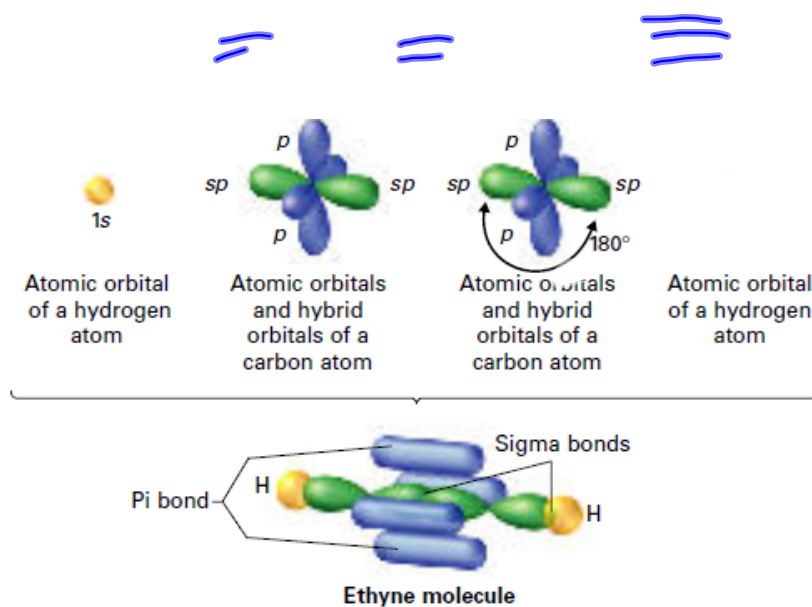


## Hybridization Involving Triple Bonds

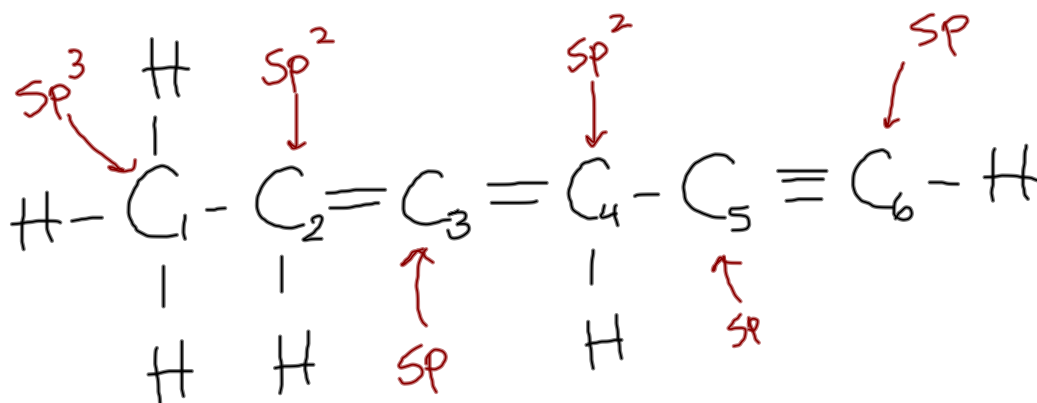
Ex.  $C_2H_2$



$p_y, p_z$   
 $\hookrightarrow \pi$  bonds



Determine the type of hybrid orbitals used by each carbon atom in the molecule.



Determine the number of sigma and pi bonds in the molecule.



# **Homework**

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**Worksheet 8.3**