

## Tutorial N°1

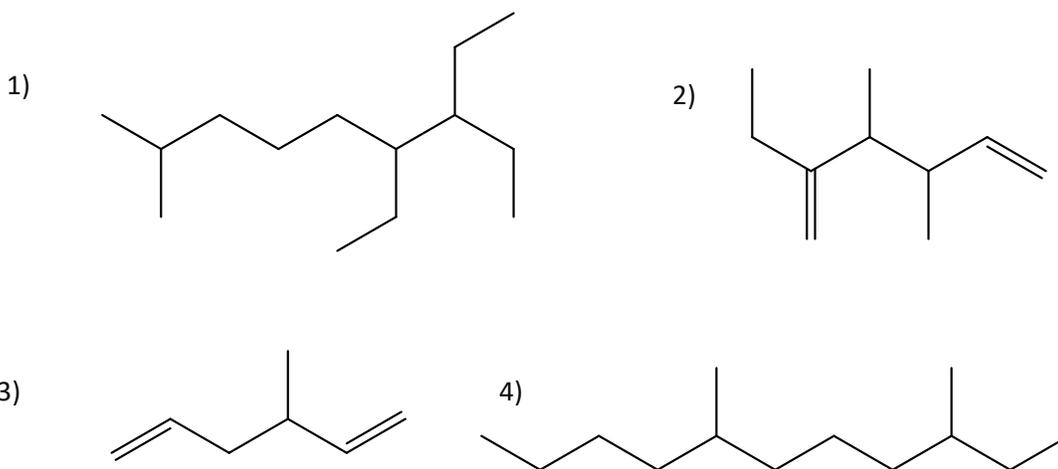
### Exercise 1 :

Explain and illustrate the formation of the sigma bond and the pi bond in the following organic compounds : CH<sub>4</sub> ; C<sub>2</sub>H<sub>4</sub> ; C<sub>2</sub>H<sub>2</sub> ; C<sub>3</sub>H<sub>4</sub> .

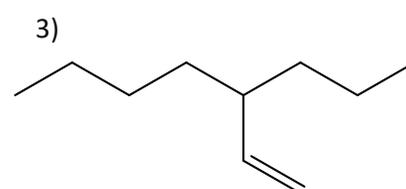
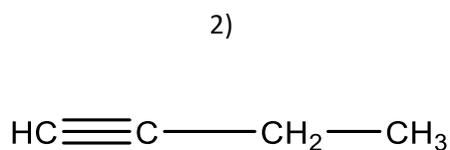
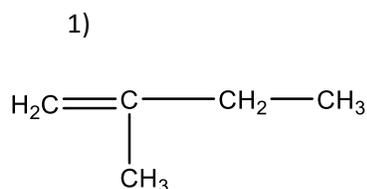
- Indicate the type of hybridization of the carbon atoms in these molecules.
- How many sigma bonds and pi bonds are there in each molecule ?

### Exercise 2 :

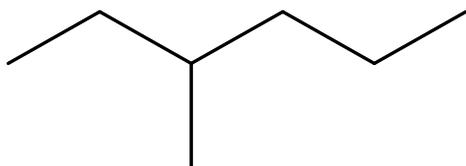
Give the structural and the displayed formulas of the following structures :



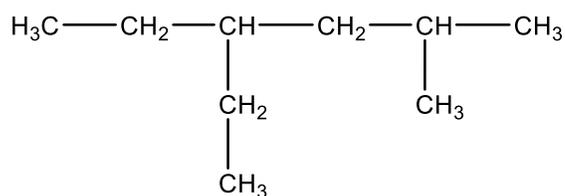
**Exercise 3 :** Give the I.U.P.A.C name for the following compounds :



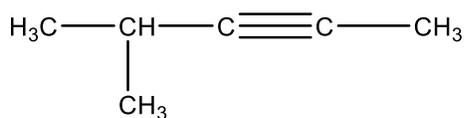
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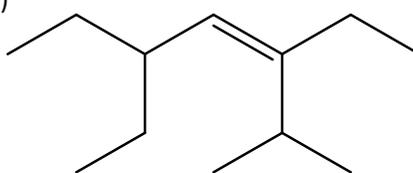
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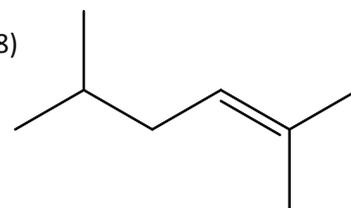
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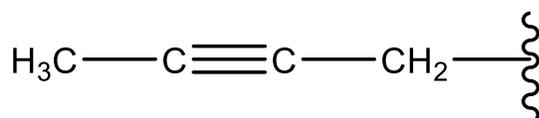
7)



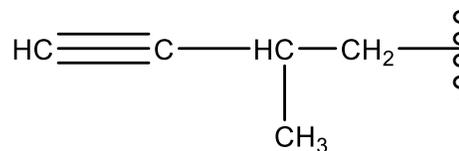
8)



9)



10)



**Exercise 4 :** Draw the following molecules :

- 1) 2-methylhexane
- 2) 4,5- dimethylhept-1-ene
- 3) 3-propylhexa-1,4-diene
- 4) 5,7-diethylnon-2-ene
- 5) 7-isopropenylundec-2,4,9-triene
- 6) 7-ethyl-4,5,6-trimethylnon-2-yne
- 7) 4-methylhept-3-ene-1-yne
- 8) Pent-1-ene-4-yne
- 9) 5-secbutyl-3-isopropyldodecane