

IV.1.3.1. Saturated and unsaturated monocyclic hydrocarbons :

- Substituted hydroalkanes(enes) are named in manner similar to the open chain hydrocarbons.
- The cyclic structure or ring is considered as P.C.C. till the number of carbon in the ring is same or greater than number of carbon in chain.

Prefix1 prefix2 PCC suffixe

Prefix1 : substituents



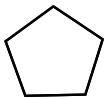
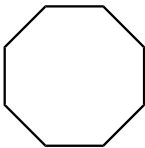
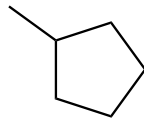
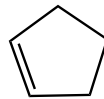
prefix2 : cyclo

PCC : tells number of carbon atoms

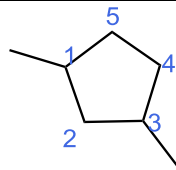
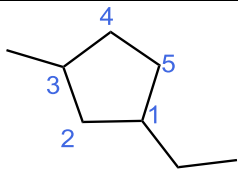
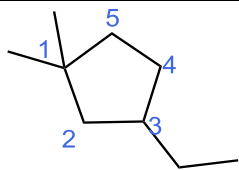
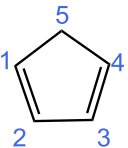
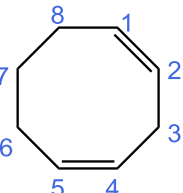
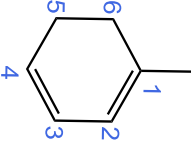
Suffixe : ane (cyclic alkane) ; ene (cyclic alkene)

Examples :

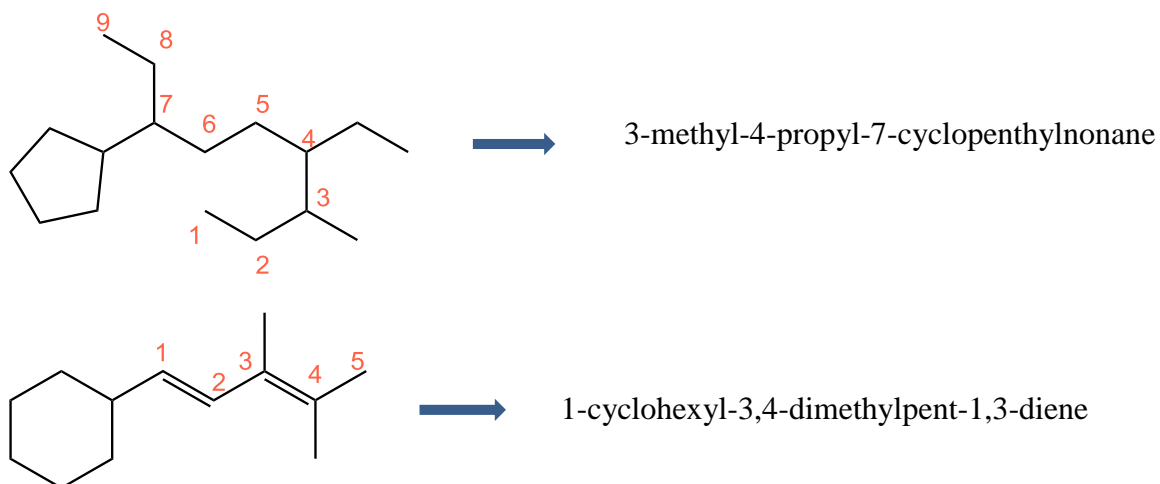
Monosubstituent cyclo alkanes and monounsaturated cycloalkenes

| cyclopropane | cyclobutane | cyclopentane | cyclooctane | methylcyclopentane | cyclopentene |
|--|--|--|--|---|--|
| C_3H_6 | C_4H_8 | C_5H_{10} | C_8H_{16} | C_6H_{12} | C_5H_8 |
|  |  |  |  |  |  |

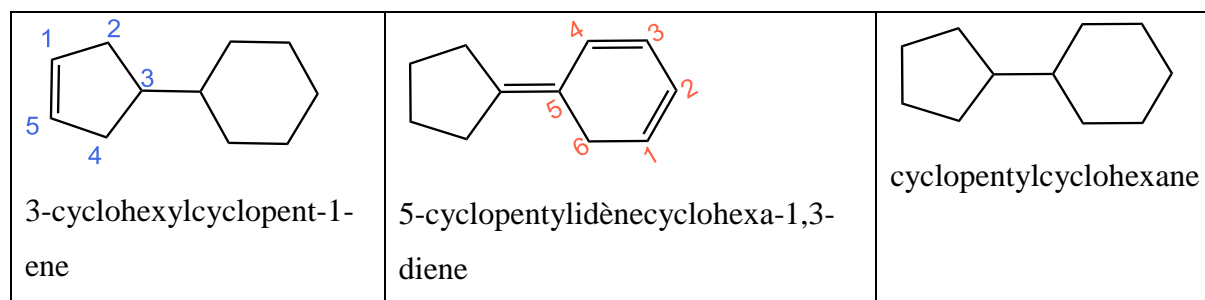
polysubstituent cyclo alkanes and polyunsaturated cycloalkenes

| | | |
|---|---|--|
|  <p>1,2-dimethylcyclopentane</p> |  <p>1-ethyl-3-methylcyclopentane</p> |  <p>3-ethyl-1,1-dimethylcyclopentane</p> |
|  <p>Cyclopenta-1,3-diene</p> |  <p>cycloocta-1,4-diene</p> |  <p>1-methylcyclohexa-1,3-diene</p> |

Nomenclature of organic compounds



- Even if the compound contains two rings, the priority ring is the most complex (has more unsaturations, larger, more substituted), the second ring named as a substituent.



- Especially if the compound contains an unsaturated ring and a saturated linear or branched chain, the ring takes precedence. The carbon chain named as a substituent.

