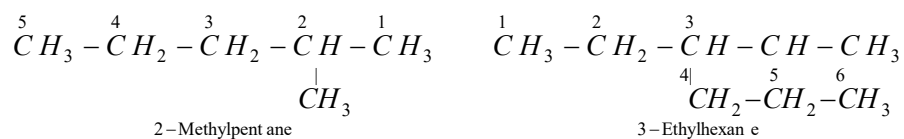


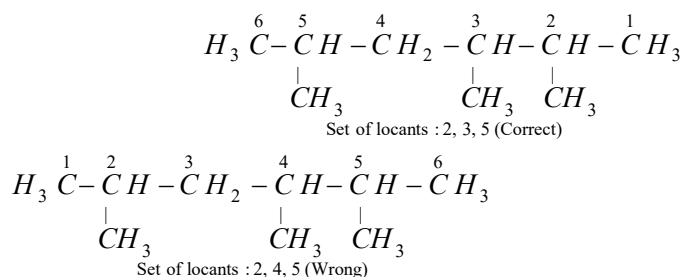


The number that indicates the position of the substituent or side chain is called locant.

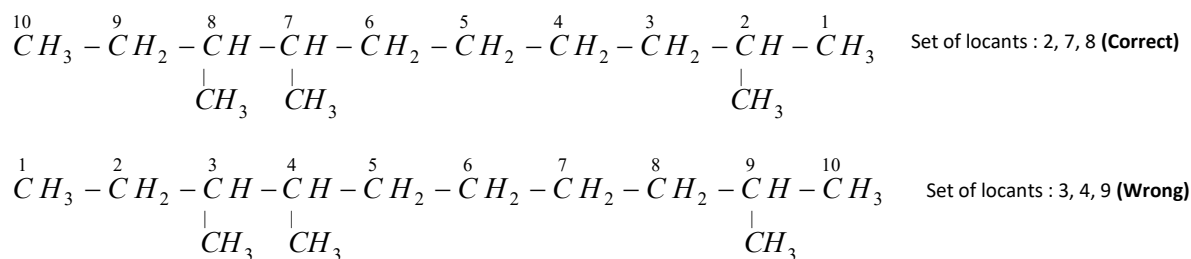


(iii) Lowest set of locants: When two or more substituents are present, then end of the parent chain which gives the lowest set of the locants is preferred for numbering.

This rule is called lowest set of locants. This means that when two or more different sets of locants are possible, that set of locants which when compared term by term with other sets, each in order of increasing magnitude, has the lowest term at the first point of difference. This rule is used irrespective of the nature of the substituent. For example,



The correct set of locants is 2, 3, 5 and not 2, 4, 5. The first set is lower than the second set because at the first difference 3 is less than 4. (Note that first locant is same in both sets 2; 2 and the first difference is with the second locant 3, 4. We can compare term by term as 2-2, 3-4 (first difference), 5-5. Only first point of difference is considered for preference. Similarly for the compounds,

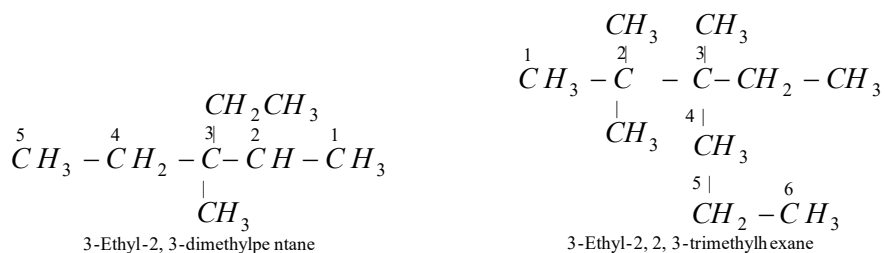


First set of locants 2, 7, 8 is lower than second set 3, 4, 9 because at the first point of difference 2 is lower than 3.

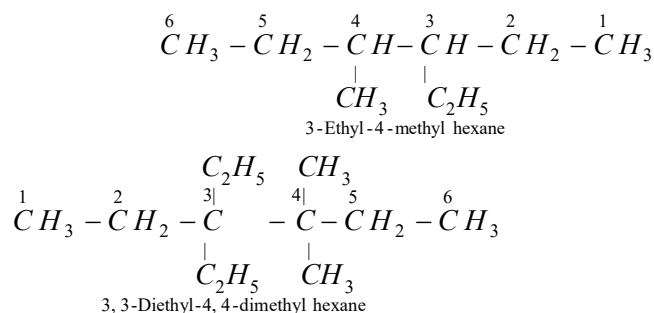
Lowest sum rule: It may be noted that earlier, the numbering of the parent chain containing two or more substituents was done in such a way that sum of the locants is the lowest. This rule is called lowest sum rule. For example, the carbon chain of alkanes given below should be numbered as indicated in structures A and not according to structure B.



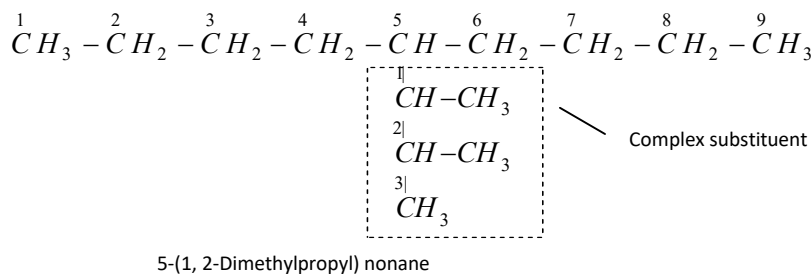
(v) Naming different substituents: If two or more different substituents or side chains are present in the molecule, they are named in the alphabetical order along with their appropriate positions.



(vi) Naming different substituents at equivalent position: In case, there are different alkyl substituents at equivalent positions, then numbering of the parent chain is done in such a way that the alkyl group which comes first in the alphabetical order gets the lower number.



(vii) Naming the complex substituents (or substituted substituents): If the substituent on the parent chain is complex (i.e. it is branched) it is named as substituted alkyl group by numbering the carbon atom of this group attached to the parent chain as 1. The name of such substituent is given in brackets in order to avoid confusion with the numbering of the parent chain. For example,



The name of the complex substituent is always written in brackets.

While deciding the alphabetical order of the various substituents, the name of the complex substituent is considered to begin with the first letter of the complete name. It may be remembered that in case of simple substituents, however, the multiplying prefixes are not

