

How to name complex alkanes

Recall:

Rule #1: Find and name the longest chain.

Rule #2: Find any "branches". Locate with a number where they are on the "chain". Use the lowest number possible to indicate location.

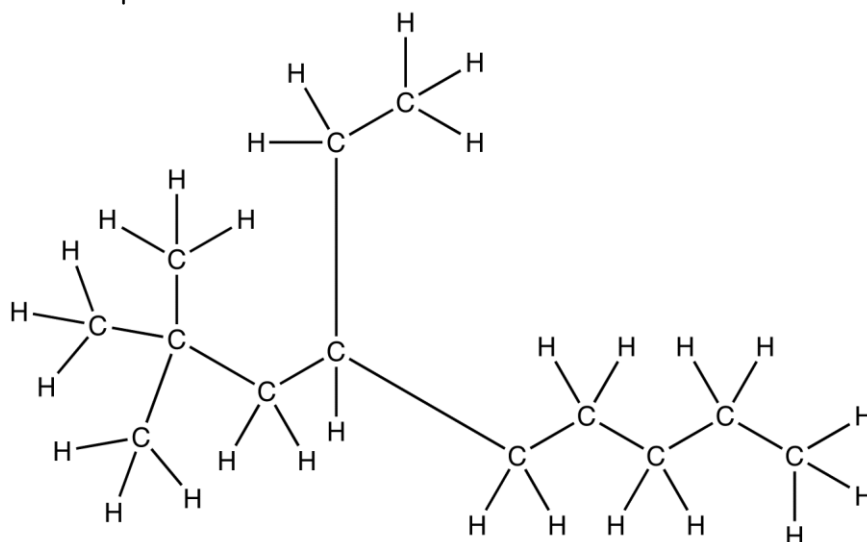
Rule #3: Count the carbons in the branch and name using the prefixes given. Add "yl" to the end of the name.

Rule #4: If there are multiple (for example) "methyl" you need to indicate location AND that there are multiples with di~ for 2, tri~ for 3, tetra~ for 4.

Rule #5: If there are different length branches, list them alphabetically (eth~ before meth~ (di, tri etc have no impact on this).

FINALLY if a "ring" of carbons you count the carbons, and add cyclo~ (ie cyclohexane is a ring of 6 carbons).

For example:



1: Count longest chain (9 carbons \therefore nonane)

2: Meth branch (1 carbon) @ 2, meth (1 carbon) branch @ 2, eth (2 carbons) @ 4

3: \therefore 2,2 - methyl 4-ethyl

4: \therefore 2,2 - dimethyl 4 - ethyl

5: 4 - ethyl 2,2 - dimethyl

Final name: 4 - ethyl 2,2 - dimethylnonane