

"Branched alkanes"

① locate the longest continuous chain

→ number the C's so side chains are given the lowest possible number

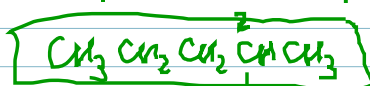
② name side chains

"-ane" "yl"

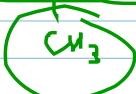
* every side chain gets its own #

* alphabetically

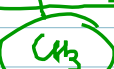
* use prefixes if duplicate side chains



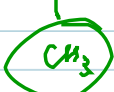
2-methylpentane



2,2-dimethylpentane



2,3-dimethylpentane



4-ethyl-2,2-dimethylnonane

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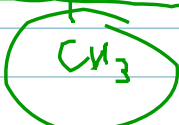
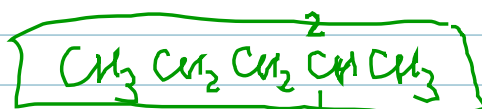
② name side chains

"-ane", "-yl"

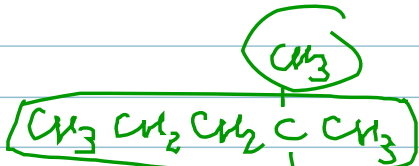
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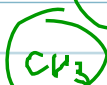
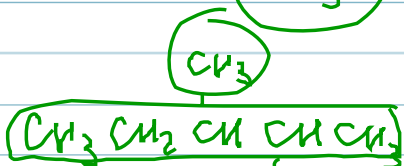
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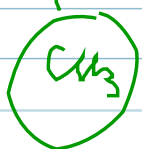
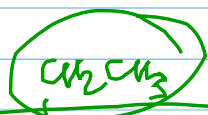
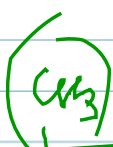
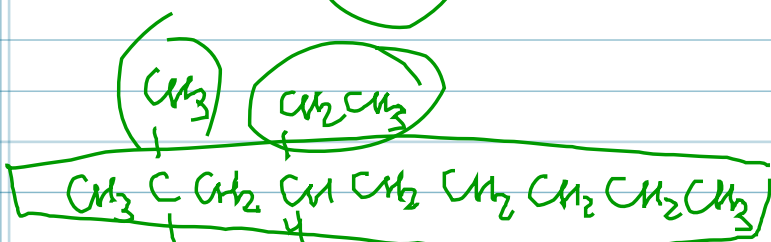
2-methylpentane



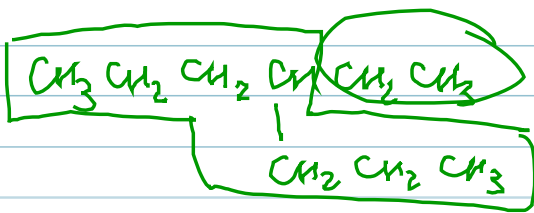
2,2-dimethylpentane



2,3-dimethylpentane



4-ethyl-2,2-dimethylnonane



4-ethylheptane

Common side chains

"alkyl groups"

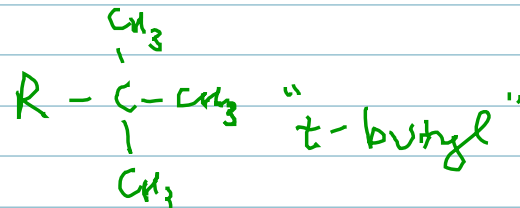
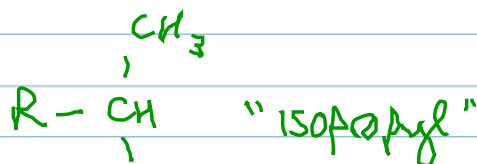
R-CH₃ methyl

R-CH₂CH₃ ethyl

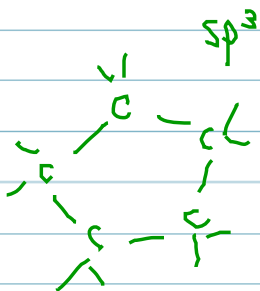
R-CH₂CH₂CH₃ propyl

R-CH₂CH₂CH₂CH₃ butyl

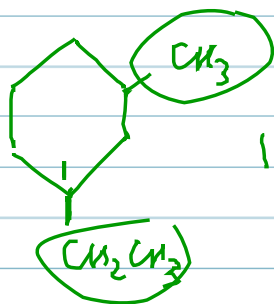
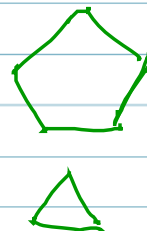
R- "phenyl"



CYCLOALKANES C_nH_{2n}

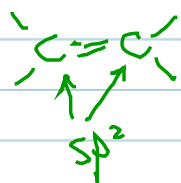


C₅H₁₀
cyclopentane



1-ethyl-3-methylcyclohexane

ALKENES



1 σ

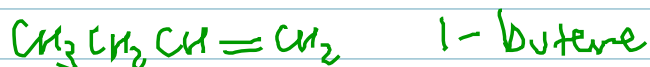
1 π

no rotation

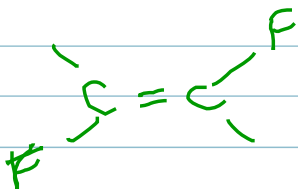
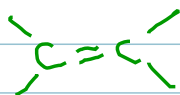
relatively
reactive

Nomenclature

→ "ene" ; always give the C=C
the lowest #s

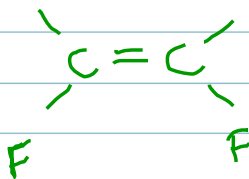


Geometric Isomers



"trans"

nonpolar



"cis"

polar