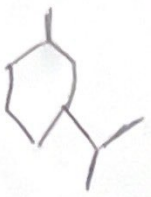
Lecture 8 - CHM2210

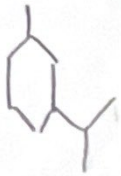


attached to:

$3 \times 3 = 9$ $1^\circ H$'s (CH_3)

$4 \times 2 = 8$ $2^\circ H$'s (CH_2)

$3 \times 1 = 3$ $3^\circ H$'s (CH)



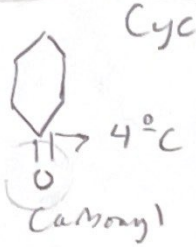
$3 = 3$ $1^\circ C$'s (CH_3)

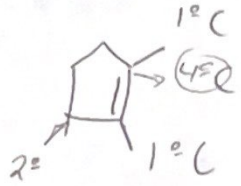
$4 = 4$ $2^\circ C$ (CH_2)

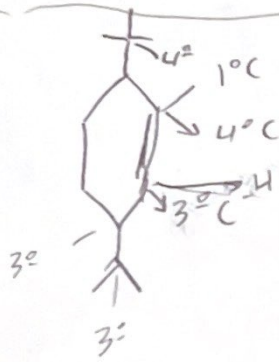
$3 = 3$ $3^\circ C$ (CH)

$4^\circ C = C$ (no H)

Cyclic ketone

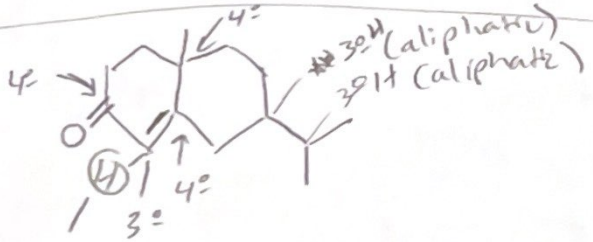






aliphatic - applies to s. b. carbons

vinylic (d. b. ?)



vinylic hydrogen

Aromatic

H's are aromatic not vinylic

~~because~~ resonance

even though double bonds are present on these carbons.

Alkyl Substituents — alpha order

methyl	M
ethyl	E
propyl	P
isopropyl	I
butyl	B
isobutyl	I
sec-butyl	B
tert-butyl	B

Haloalkanes: ~~(access priority)~~
- Br- bromo
- Cl- chloro
- F- Fluoro
- I- Iodo

Conformations of Acyclic Alkanes

Linear: "Stereoisomers" - differ in arrangement of atoms in space (same connectivity)

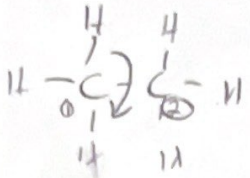
~~Confo~~

- Conformational Isomers: Isomer that can interconvert easily by rotation(s) around single bonds (called conformers)

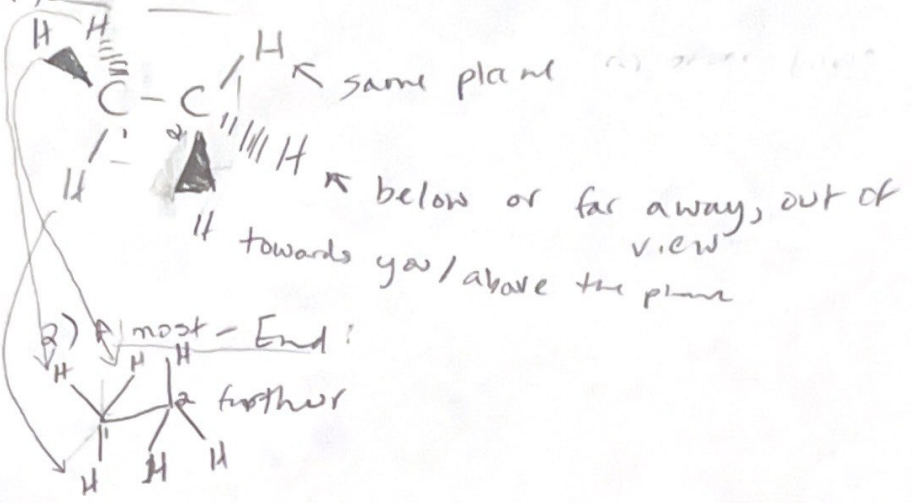
In alkanes: By rotation about C-C σ bonds

- Cannot be isolated
- Some are more stable than the other

Ex: Ethane C_2H_6

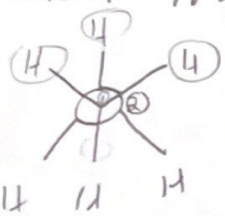


1) Side-view:



2) Almost-End:

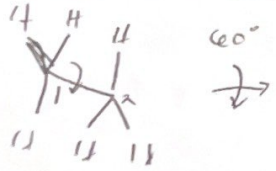
3) Newman Projection



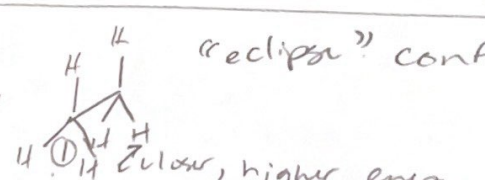
check H conformation & stability.
Inner one is in front.

"staggered" Conformation

≡



60°



"eclipse" conformation

Low, higher energy

60°