

(22) Today

Section 4.2 cis-trans isomerism

Sections 4.3 – 4.8 Stability of Cycloalkanes
and Conformations of Cyclohexanes

Sections 4.3 – 4.8 Stability of Cycloalkanes
and Conformations of Cyclohexanes

Next Class

Test 2

Sections 2.4 – 2.12

Sections 3.1 – 3.4, 3.6 – 3.7

Section 4.1

(23) Second Class from Today

Sections 4.3 – 4.8 Stability of Cycloalkanes
and Conformations of Cyclohexanes

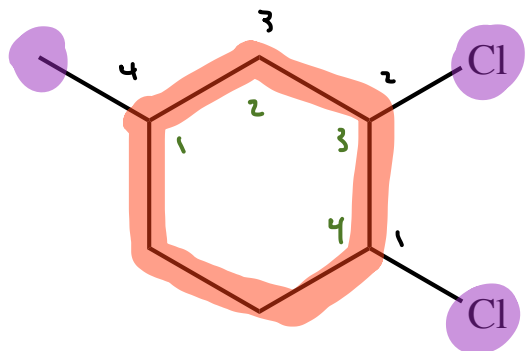
Third Class from Today (24)

Chap 5

Review Session Thursday 7:30 to 9:00 in Wilson 304

Practice Nomenclature

Lesus



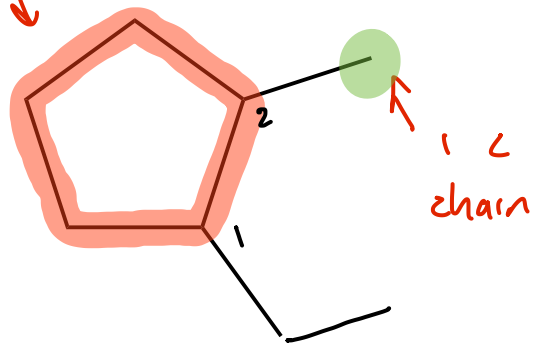
1,2-dichloro-4-methylcyclohexane

3H

A

5 C ring parent

1,2-dimethylcyclopentane



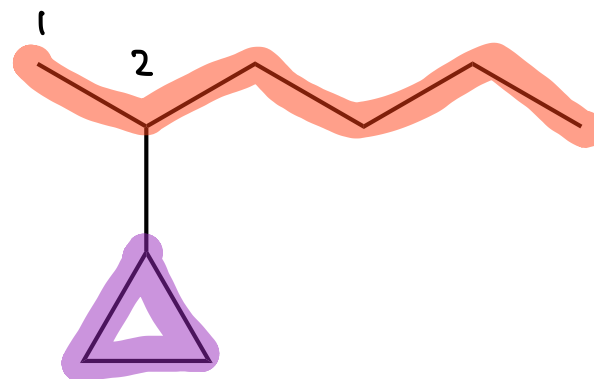
1 C chain

1-ethyl-2-methylcyclopentane

vs 2 1 in a tree go alphabetically

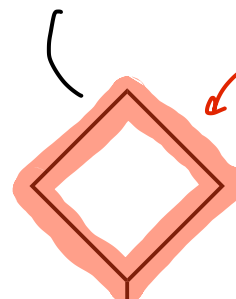
isaac

Section 4.1

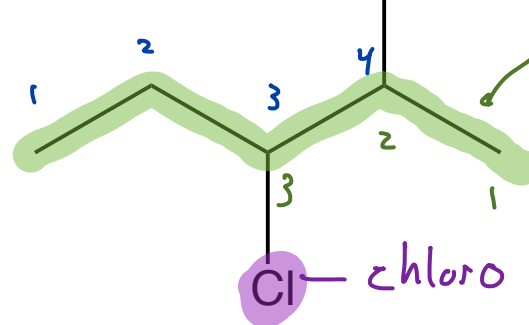


2-cyclopropylhexane

cyclobutanyl



4 carbon ring
this ring is a substituent attached to the 5C long chain

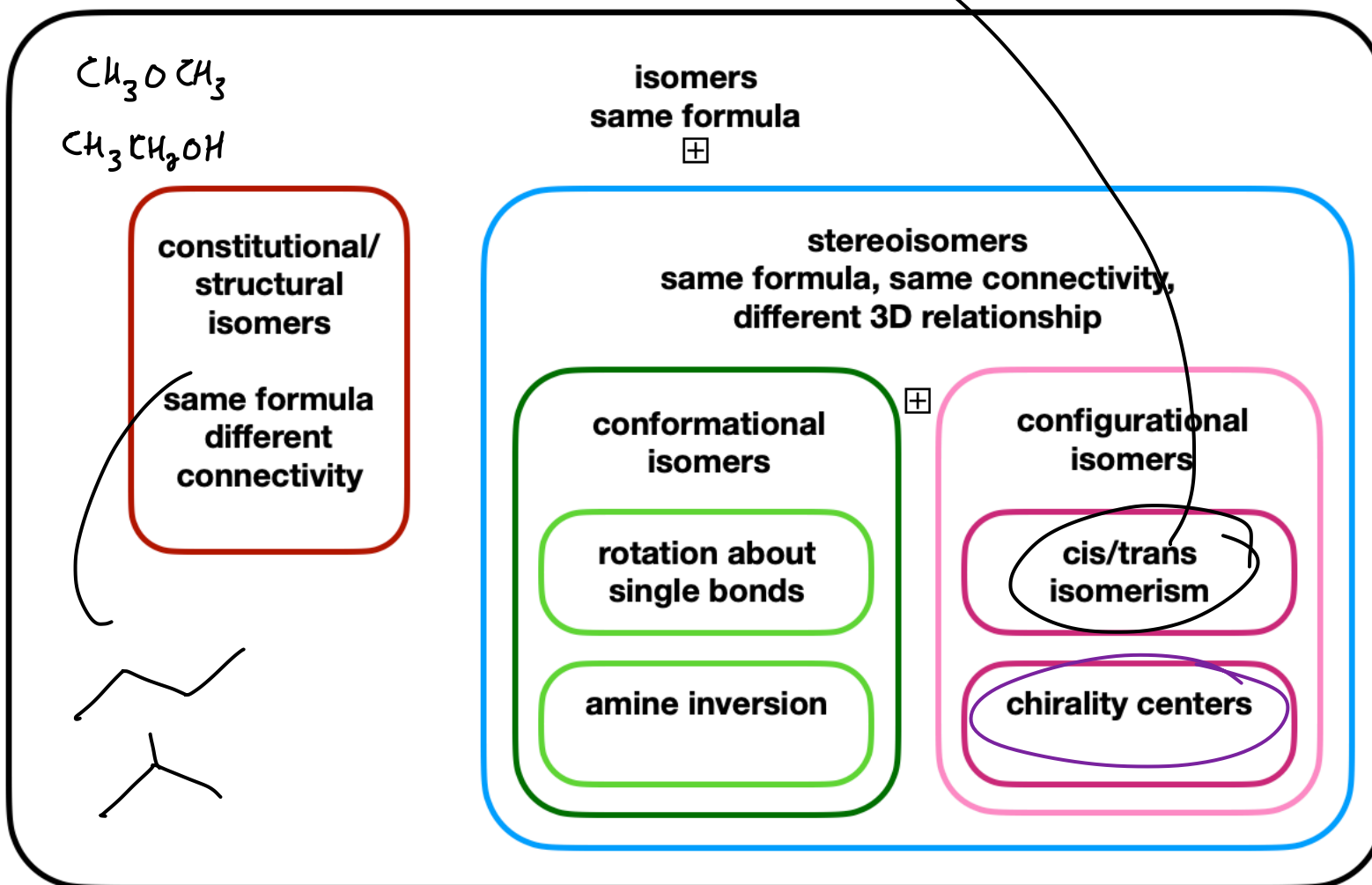
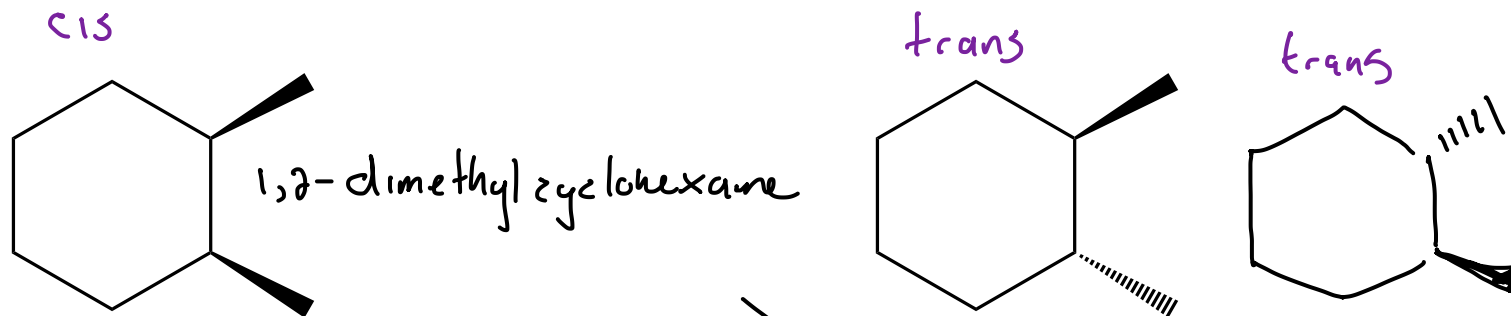


5 carbon chain parent

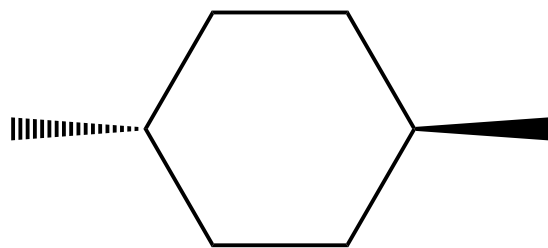
3-chloro-2-cyclobutylpentane

3
3

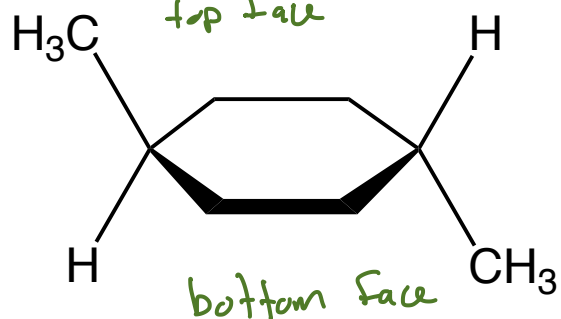
4
2



1,4-dimethylcyclohexane

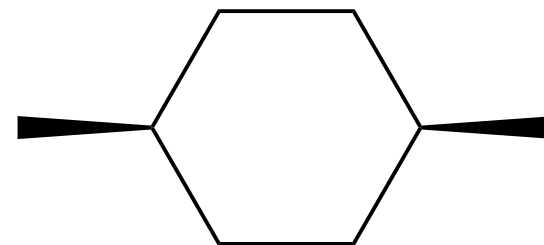


rotate \Downarrow 90°

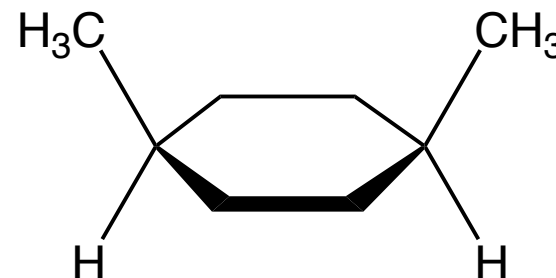


opposite faces = trans

trans-1,4-dimethylcyclohexane



rotate \Downarrow 90°

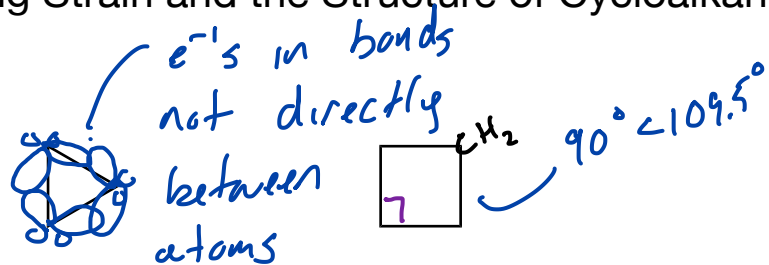


same face = cis

cis-1,4-dimethylcyclohexane

Ring Strain and the Structure of Cycloalkanes

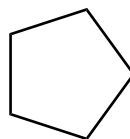
Section 4.3 – 4.8



60

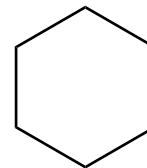
very reactive

~~90~~



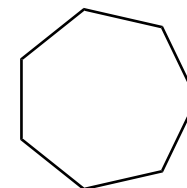
~~108~~

108

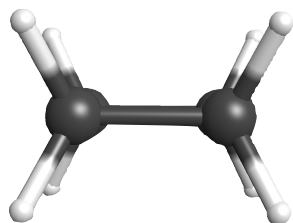


~~120~~

120



~~128~~



*eclipsing interactions
bond angles*

all of these C's are sp³ hybridized ... so rings with angles closest to 109.5 should be most stable

