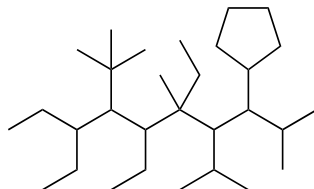


Lecture 4 & 5 In-Class Problems

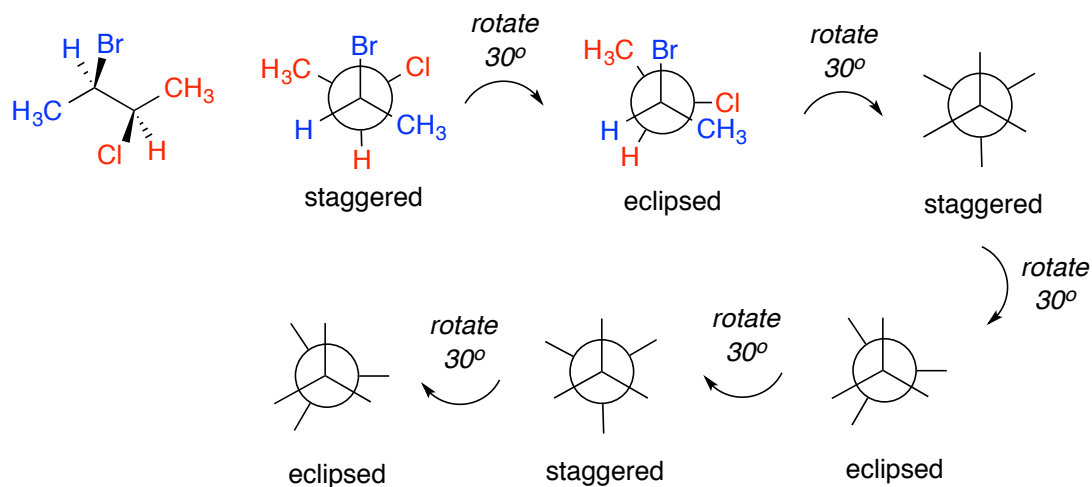
Draw the structure of **4-Ethyl-2,2-dimethylhexane**

Name the following compound (How many degrees of unsaturation does this compound have?)

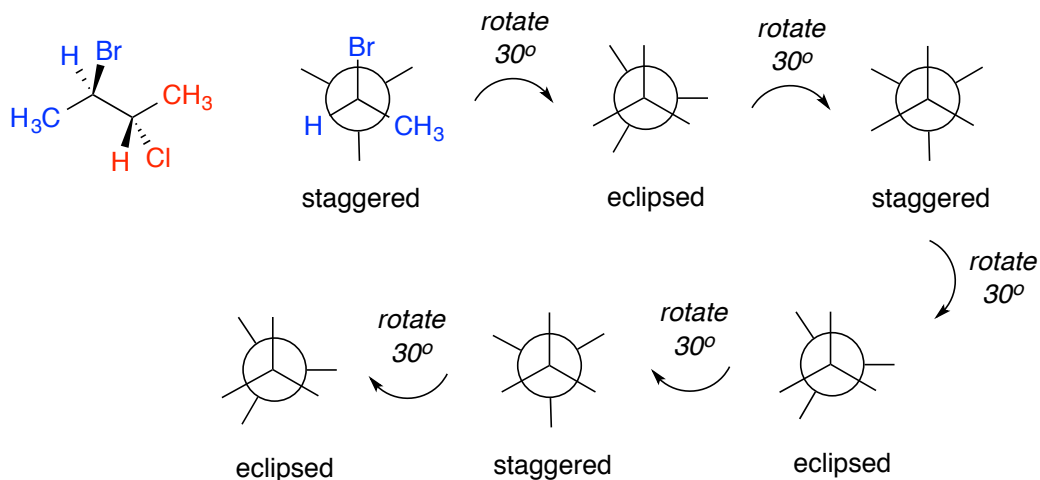


NEWMAN PROJECTIONS explore rotation around C-C single bonds.

Draw each conformation of **(2R, 3R)-2-bromo-3-chlorobutane**. Label the most and least stable.

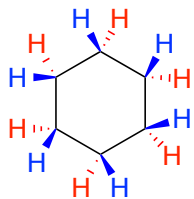


Draw each conformation of **(2R, 3S)-2-bromo-3-chlorobutane**. Label the most and least stable.



CHAIR CONFORMATIONS explore restricted rotation in six-membered rings.

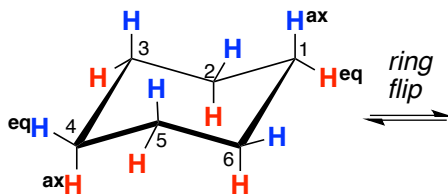
Cyclohexane



Blue H's are above the plane

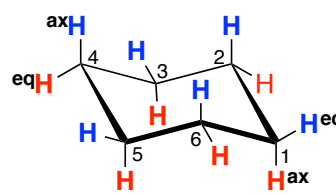
Red H's are below the plane

Chair Conformation 1



ring flip

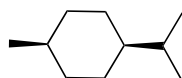
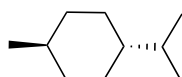
Chair Conformation 2



ax = axial

eq = equatorial

Draw both chair conformations of *cis*- and *trans*-1-isopropyl-4-methylcyclohexane. Indicate the least and most stable conformation for each. Explain how to account for the stability.

*cis**trans*