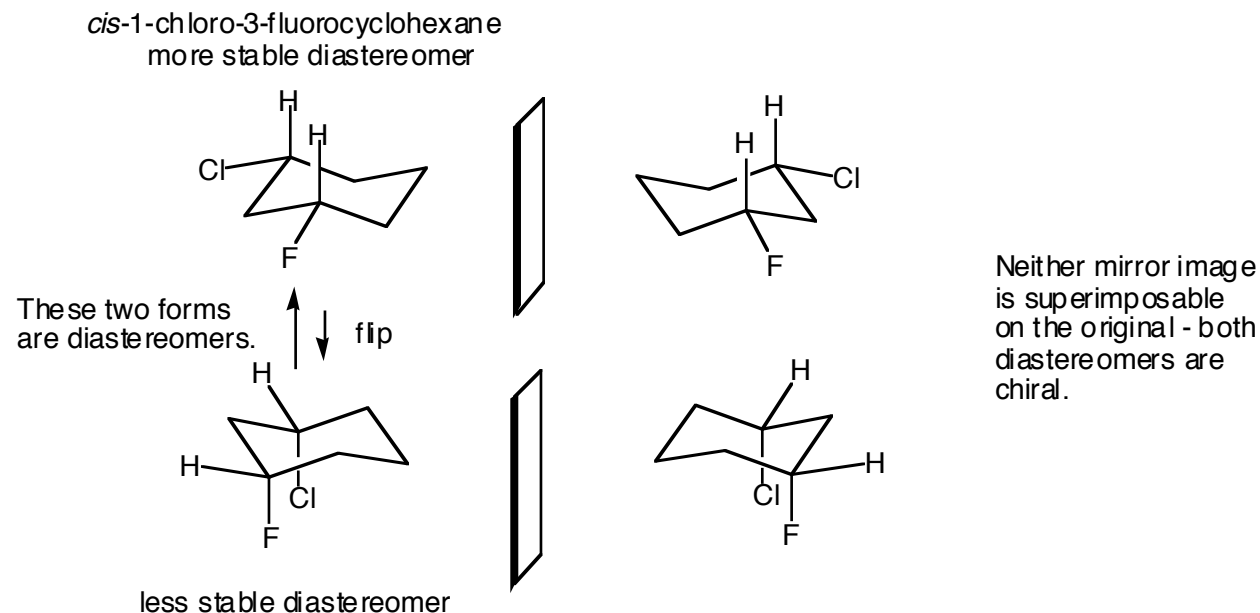


Answers to Problem 38, Chemistry 301X - 2006

The more stable conformation of *cis*-1-chloro-3-fluorocyclohexane is the one with the two groups equatorial. Ring "flip" generates the less stable conformation with the two alkyl groups axial. Each of these two diastereomers is chiral.



The situation is the same in the *trans* molecule. The more stable conformation has the large chloro group equatorial. Ring "flip" generates the less stable conformation with the large chloro group axial. Each of these two diastereomers is chiral.

