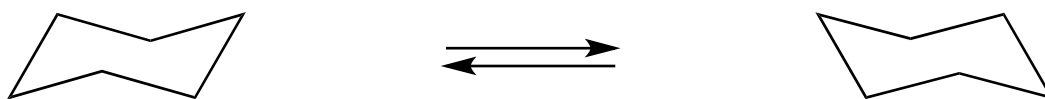


CHE 310 – 002 & 003
Lecture Homework #13

Section 002 Due: Wednesday, Feb 13, 2019, 9:00 am.

Section 003 Due: Wednesday, Feb 13, 2019, 10:00 am.

1. Correct your exam critically. Carefully go over the solutions and add correct answers. Include explanations for all corrected answers. This is due Friday, Feb 20 at 10:00 am. You can write directly on the exam, in pen, as long as it is in a different color than what was used originally. Feel free work problems on additional pages, but the exam must be turned in. The key is posted outside my office and **may only be hand-copied**. The solutions must also stay in the faculty office suite.
2. Use the templates below and explicitly draw all of the all of the axial (label as H_a) and equatorial (label as H_{eq}) hydrogens. On the left template, color code the axial hydrogens with one color and the equatorial hydrogens with another. Use the same color code to indicate where the hydrogens appear on the structure on the right after a “ring flip.” Refer to Figure 4.11 in the text and <https://www.nku.edu/~russellk/tutorial/cycloalk/cyclohexane-js2.htm> for guidance.



3. If two cyclohexane chair conformations differ in energy by 17 kJ/mol, approximately how many molecules would be found in the more stable conformation for every molecule in the less stable conformation at 20 °C? Show your work.