NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Block\_\_\_\_\_\_\_\_\_\_

Alkanes

Models lab #2 (staple to the back of the Isomers Lab)

1. Build Cyclopropane. Can it be constructed with the wooden pegs or springs? (circle answer) Draw a representation :
2. Calculate bond angles and record.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Build Cyclobutane. Pegs or springs? Draw:
4. Calculate Bond angles\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Build Cyclopentane. Pegs or springs? Draw:
6. Calculate Bond angles\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Build Cyclohexane. Pegs or springs? Draw:
8. What is the nonplanar shape of #7 commonly called (see p. 345)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Calculate Bond angles of #7\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. Which of the above structures have bond angles with the normal tetrahedral values? (See p. 114 for help)\_\_\_\_\_\_\_\_\_\_\_\_
11. Which of the above structures are the most unstable and why?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. Build the following: “Aminochlorohydroxylmethylmethane”. \*\*Technically, this is named either aminochlorohydroxylethane or aminochloroethanol, but I am trying to make sure you can construct it correctly since we just started nomenclature. Draw the structure below left
13. Build its enantiomer, draw above right and get initialed. Label the chiral carbon in each.
14. What is a chiral carbon?