

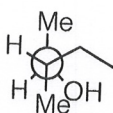
Quiz 2A

Name:

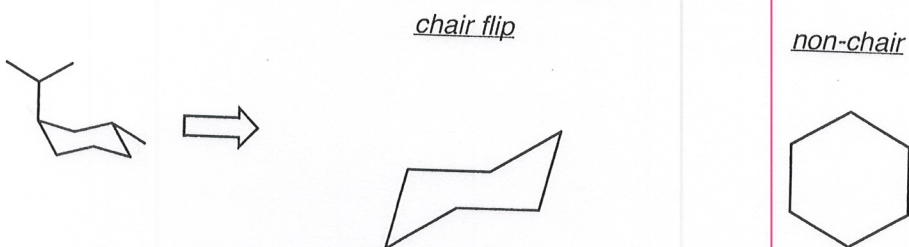
Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

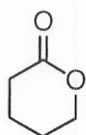
1. Draw the additional 2 staggered Newman projections of the following molecule, as well as all 3 eclipsed conformations (4 points). Which of the 6 Newman projections is lowest in energy (most stable) (2 points).



2. Redraw the following Chair conformation in (a) its alternative chair flip, and (b) in its non-chair form. You may use the templates given (8 points, 4 points each)



3. How many chemically equivalent sets of protons exist on the following molecules? What would be their integration ratio (ie, how many protons exist in each set) (6 points, 3 points each)



sets of chemically equivalent protons (ratio): _____



sets of chemically equivalent protons (ratio): _____

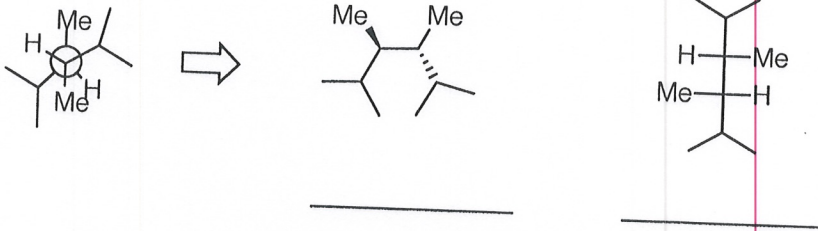
Quiz 2B

Name:

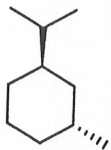
Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

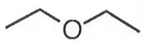
1. What is the relationship between the Newman projection and the structures on the right (6 points).



2. Draw both chair conformations of the following substituted cyclohexane, and circle the one that you believe is lower in energy (8 points)



3. How many chemically equivalent sets of protons exist on the following molecule? Of those, circle the set that you believe would be the most upfield (ie, smallest ppm or most 'shielded') (6 points)



sets of chemically equivalent protons: _____

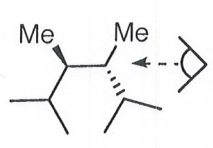
Quiz 2C

Name:

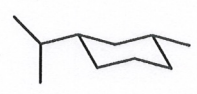
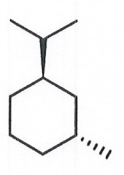
Signature:

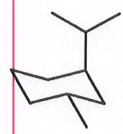
The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

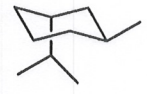
1. Convert the following projection structure into the 3 staggered Newman projections from the projection outlined, and circle the one(s) that is(are) lowest in energy (6 points).



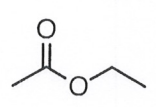
2. What is the relationship between the cyclohexane and the chair structures on the right. Identical, enantiomers, or diastereomers (8 points)







3. How many unique sets of protons exist on the following molecule. What would the splitting pattern be expected for each of these. Specify which protons would have which splitting patterns (6 points)



sets of chemically equivalent protons: _____

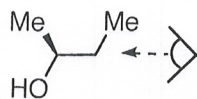
Quiz 2D

Name:

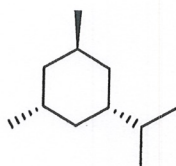
Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

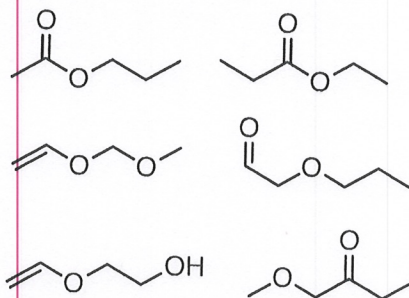
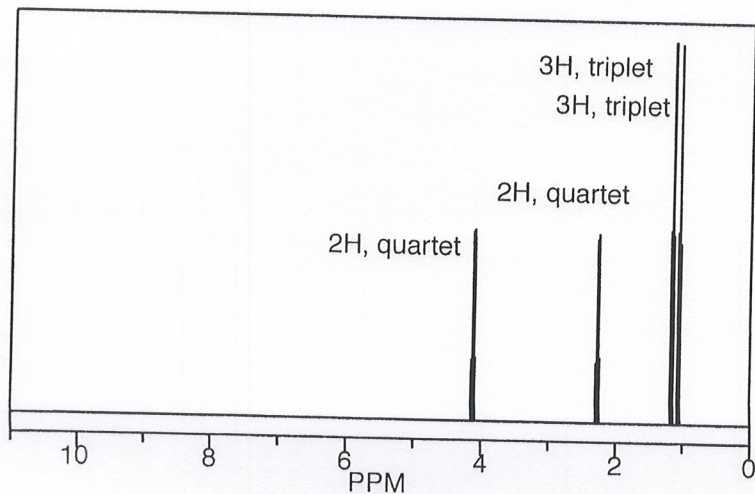
1. Convert the following projection structure into the 3 staggered Newman projections from the projection outlined, and circle the one(s) that is(are) lowest in energy (6 points).



2. Draw both chair conformations of the following substituted cyclohexane, and circle the one that you believe is lower in energy (8 points)



3. Below are 6 structures and an NMR spectra. Which of the molecules would be most consistent with the spectra (6 points)



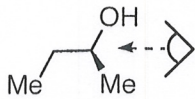
Quiz 2E

Name:

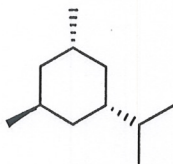
Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

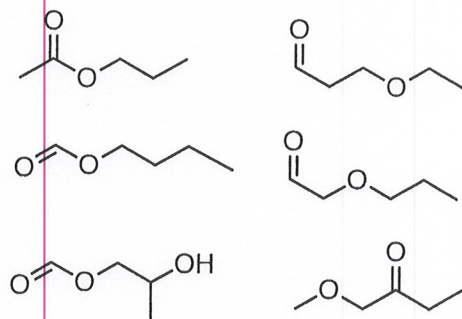
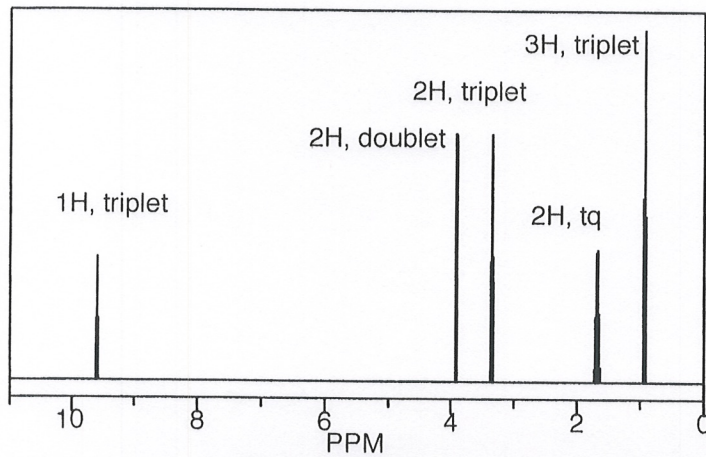
1. Convert the following projection structure into the 3 staggered Newman projections from the projection outlined, and circle the one(s) that is(are) lowest in energy (6 points).



2. Draw both chair conformations of the following substituted cyclohexane, and circle the one that you believe is lower in energy (8 points)



3. Below is a predicted NMR spectra of one of the compounds on the right. Which molecule would be most consistent with the spectra (6 points)



Quiz 2A

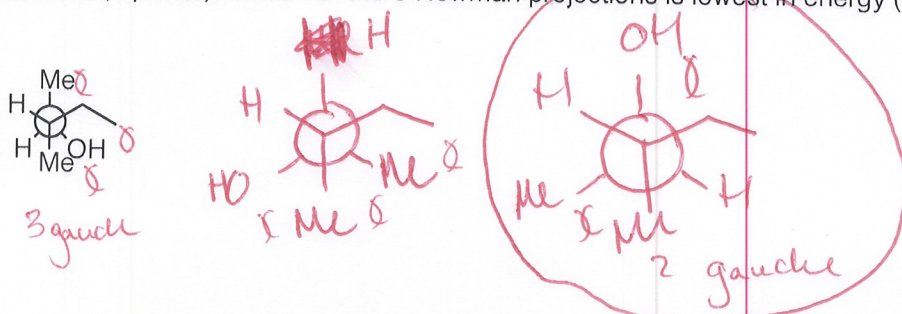
Name:

Key

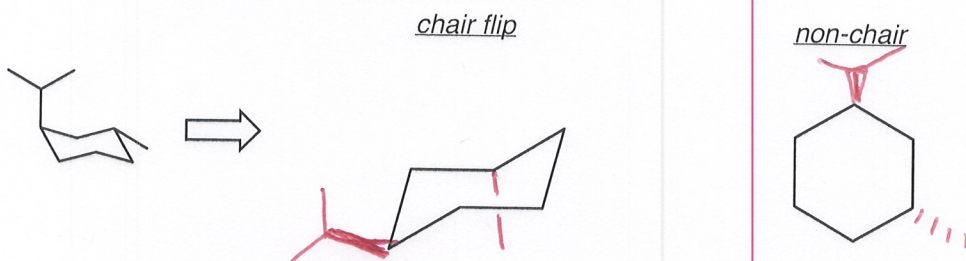
Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

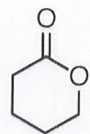
1. Draw the additional 2 staggered Newman projections of the following molecule, as well as all 3 eclipsed conformations (4 points). Which of the 6 Newman projections is lowest in energy (most stable) (2 points).



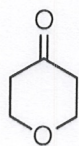
2. Redraw the following Chair conformation in (a) its alternative chair flip, and (b) in its non-chair form. You may use the templates given (8 points, 4 points each)



3. How many chemically equivalent sets of protons exist on the following molecules? What would be their integration ratio (ie, how many protons exist in each set) (6 points, 3 points each)



sets of chemically equivalent protons (ratio): 4 (2:2:2:2) or (1:1:1:1)



sets of chemically equivalent protons (ratio): 2 (4:4) or (1:1)

Quiz 2B

Key

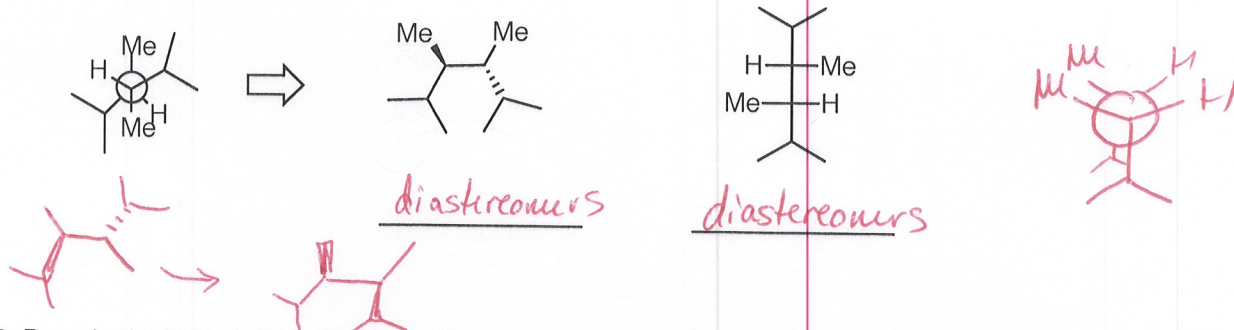
D

Name:

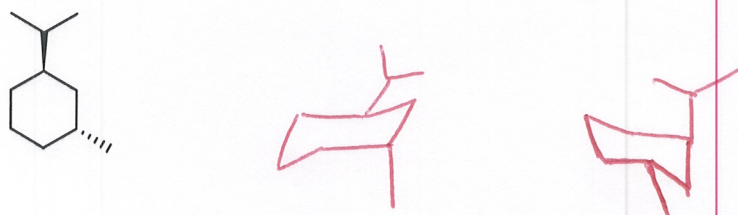
Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

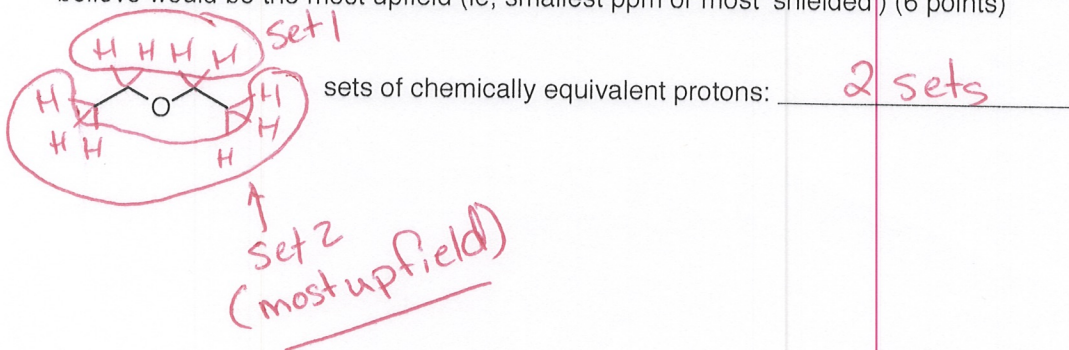
1. What is the relationship between the Newman projection and the structures on the right (6 points).



2. Draw both chair conformations of the following substituted cyclohexane, and circle the one that you believe is lower in energy (8 points)



3. How many chemically equivalent sets of protons exist on the following molecule? Of those, circle the set that you believe would be the most upfield (ie, smallest ppm or most 'shielded') (6 points)



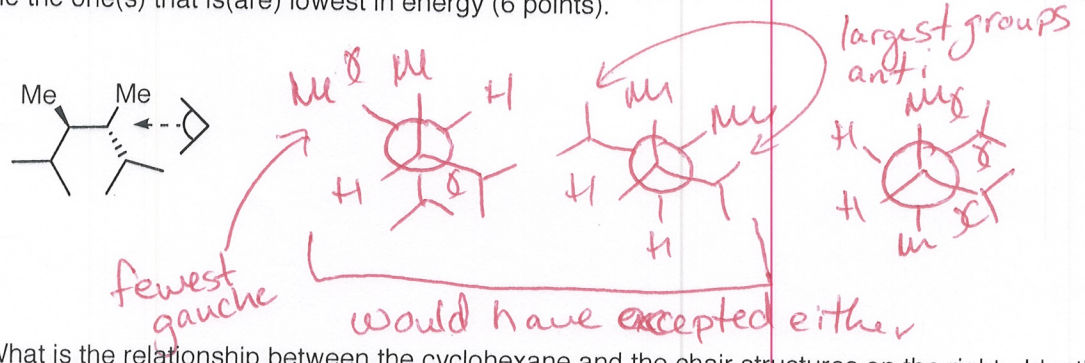
Quiz 2C *Key*

Name:

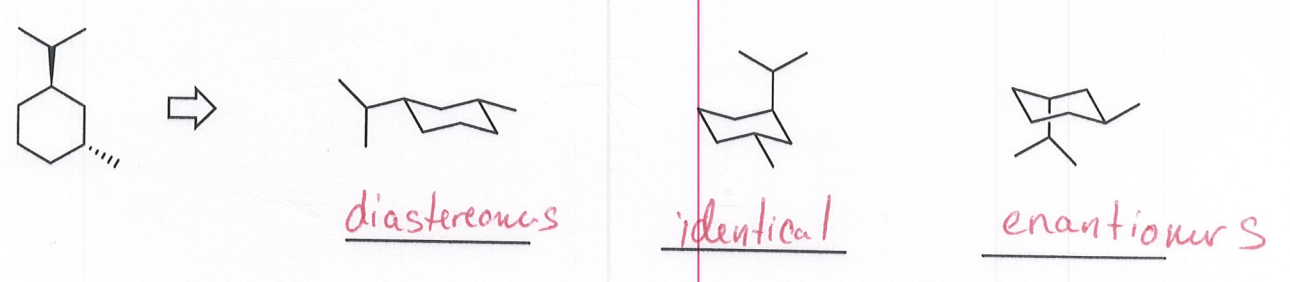
Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

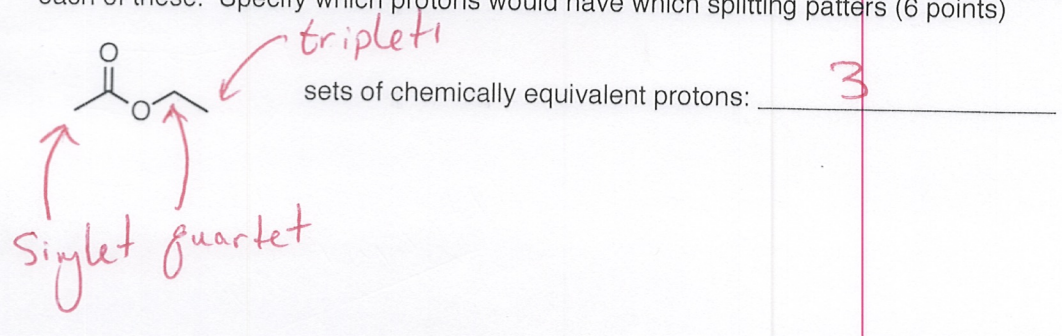
1. Convert the following projection structure into the 3 staggered Newman projections from the projection outlined, and circle the one(s) that is(are) lowest in energy (6 points).



2. What is the relationship between the cyclohexane and the chair structures on the right. Identical, enantiomers, or diastereomers (8 points)



3. How many unique sets of protons exist on the following molecule. What would the splitting pattern be expected for each of these. Specify which protons would have which splitting patterns (6 points)



Quiz 2D

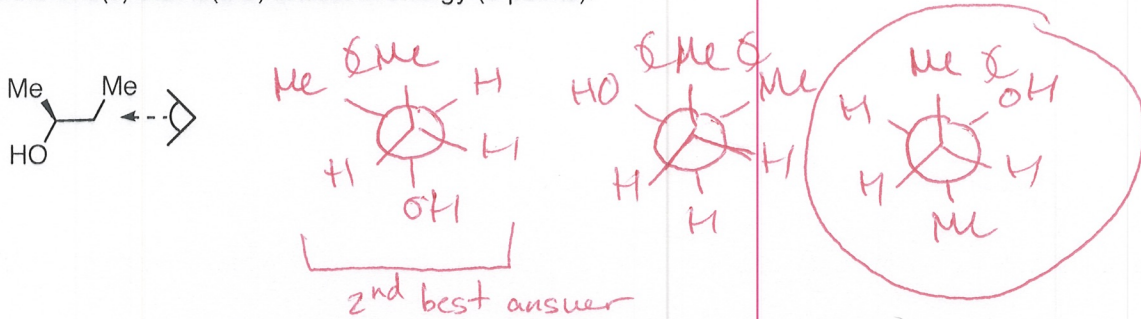
Name:

Key

Signature:

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

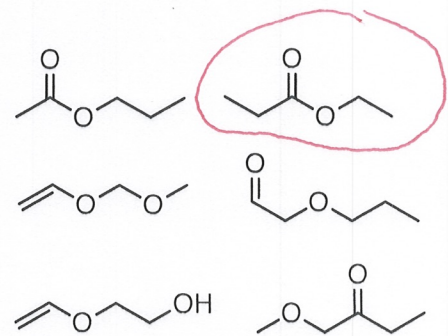
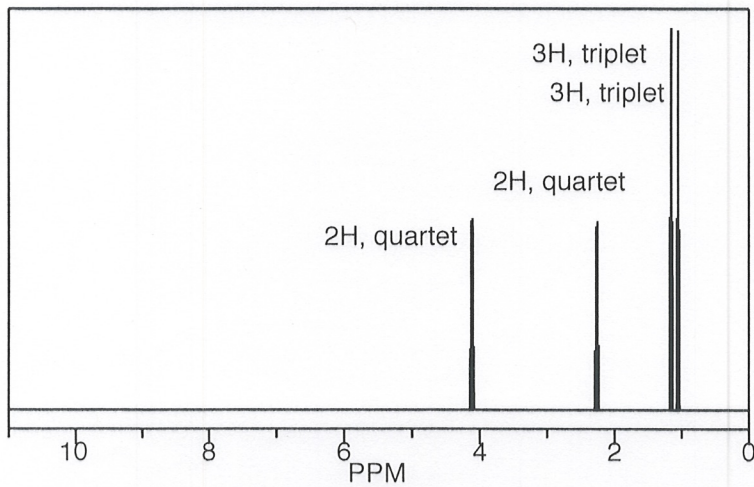
1. Convert the following projection structure into the 3 staggered Newman projections from the projection outlined, and circle the one(s) that is(are) lowest in energy (6 points).



2. Draw both chair conformations of the following substituted cyclohexane, and circle the one that you believe is lower in energy (8 points)



3. Below are ~~6~~ structures and an NMR spectra. Which of the molecules would be most consistent with the spectra (6 points)

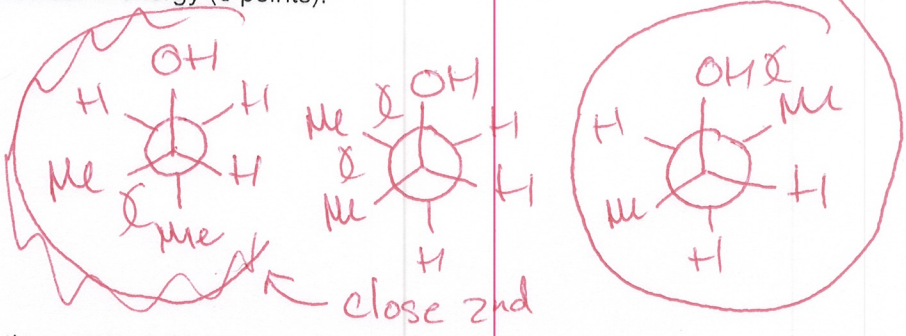
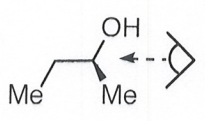


Quiz 2E

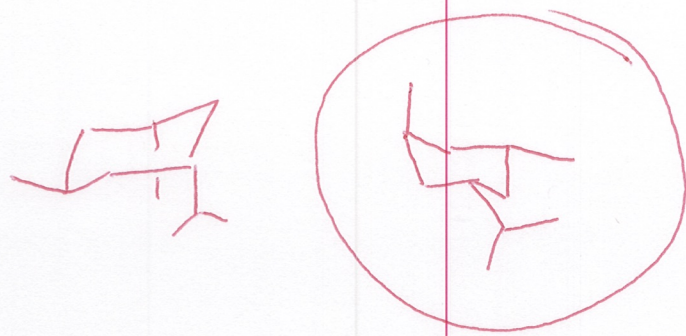
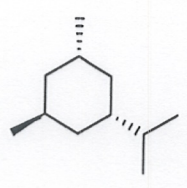
Name: Ky
Signature: [Handwritten Signature]

The following quiz will start 5 minutes into your recitation section and go for 30 minutes. Please stay seated throughout the entire quiz. Good luck.

1. Convert the following projection structure into the 3 staggered Newman projections from the projection outlined, and circle the one(s) that is(are) lowest in energy (6 points).



2. Draw both chair conformations of the following substituted cyclohexane, and circle the one that you believe is lower in energy (8 points)



3. Below is a predicted NMR spectra of one of the compounds on the right. Which molecule would be most consistent with the spectra (6 points)

