Exam 2
November 14, 2012
Organic Chemistry 334

Please do not open the exam until it begins.

This exam is 65 minutes long (9-10:05). I will post a key on D2L when I have all the exams back. There will be no make-up exams. Please be considerate of your fellow classmates when leaving. Don't stand by the doors and discuss the exam. If you open the exam and/or write on the exam before or after time has been called, you will get a 0/100.

All cell phones and personal audio devices must be turned off and put away. The use of calculators, notes, the text book, or **your neighbor's test** is not permitted during the exam. You may use molecular models but they can not be shared during the exam.

I will not accept answers on scratch paper. All answers must be on the exam.

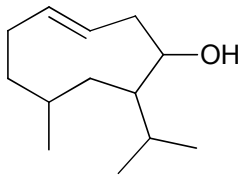
You may tear the cover page off and use it for scratch paper. If your exam becomes unstapled, please let me know.

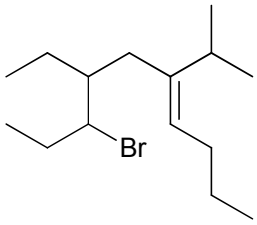
Please put your in-class number and your name on the second page **and** the back of the exam.

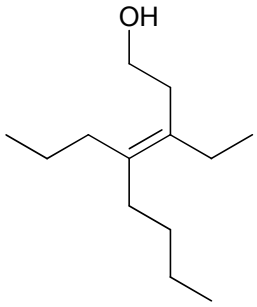
Good Luck!!!!

Exam 2 In-class number _____
Organic Chemistry CH 334
November 14, 2012 Name (last, first) _____

1. Name the following compounds.. (15 pts)

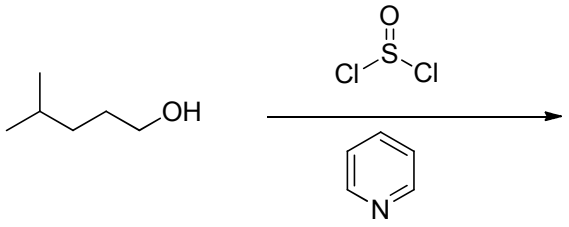


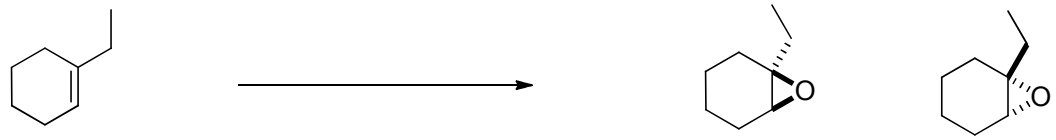


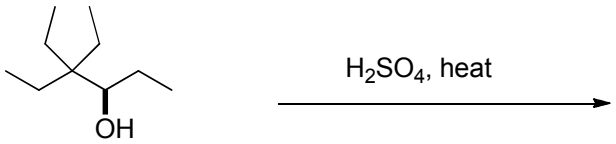


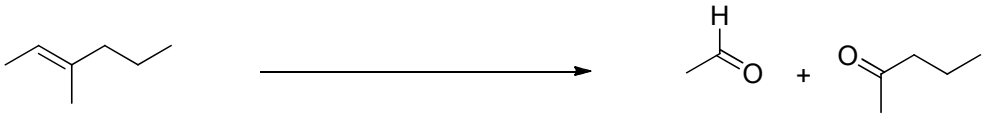
2. Draw 3-allyl-5-fluoro-1,1-divinylcyclohexane in bond line.. (5 pts)

3. What was the starting material, reagents, or product/s for the following chemical transformations? If there is no reaction write "no reaction" (44 points)

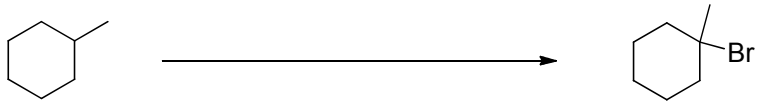


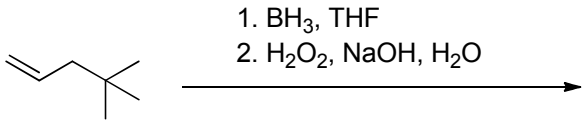


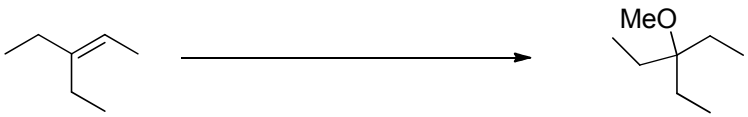


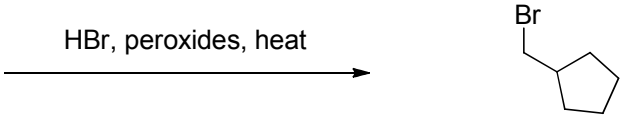


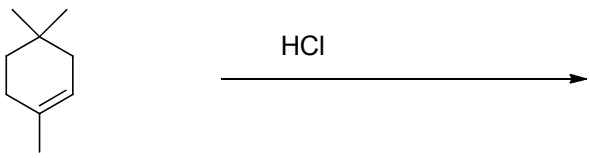
Problem 3.. Continued



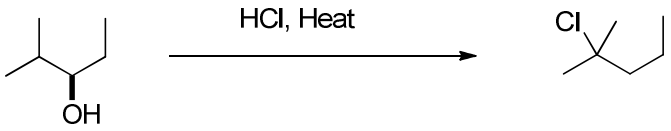






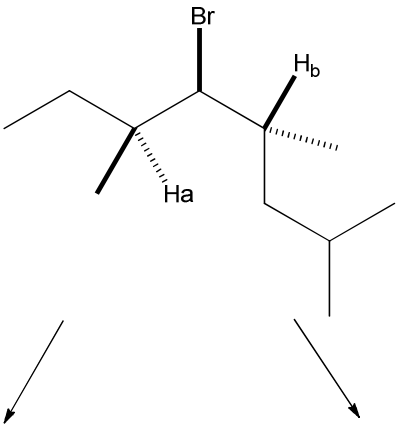


4. Draw the mechanism for the following reaction.. (9 pts)



5. Draw (in bond line) three *E*-trisubstituted alkenes with the molecular formula C_7H_{14}.. (6 pts)

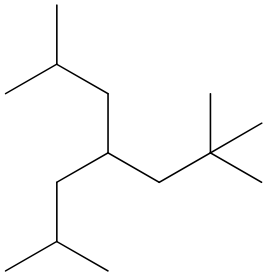
6. What is the product if we do an E2 elimination of H_a or $H_{b...}$ (8 pts)



E2 of H_a

E2 of H_b

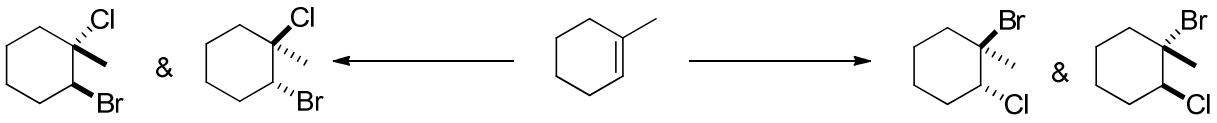
7. How many different monochlorinated products are possible from the following reaction? (4 pts) **You do not need to draw the different products..**



Cl_2, heat

# of different products

8. Fill in the necessary reagents for the following chemical transformations. (4 pts)



9. Please answer the following questions about an S_N1 reaction with 2-methylpropan-2-ol and hydrogen chloride. (5 pts)

a. The S_N1 reaction has _____ (number) transition states..

b. The S_N1 reaction has _____ (number) intermediates.

c. The slow step of the reaction is

**********Insurance Question (5 pts)**********

Draw the mechanism for the following reaction.