

PLEASE STAPLE! IF you work with a group of students submit ONE Worksheet with all names for a group grade (print):

CHEM 344 Organic Chemistry II – Spring 2012

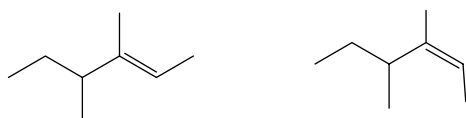
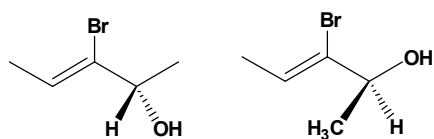
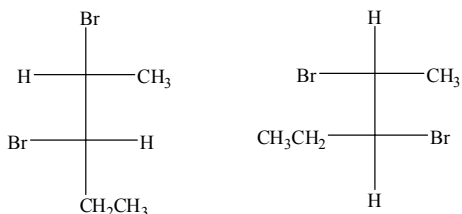
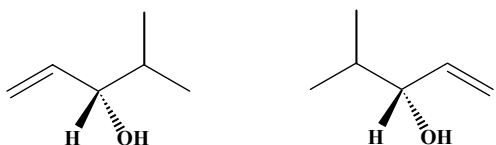
Booster Points _____ (10 max)

Booster #1 CHEM 343 Review: Due Friday, January 27 at 8:00 AM (I will not accept late worksheets).

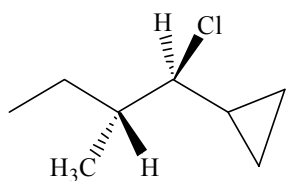
Complete the following worksheet using the course text or any other resources available to you. You may work together, with the names of all students included on ONE sheet and turned in for a group grade.

The purpose of this worksheet is to review some of the key concepts from Organic Chemistry I. The strategies you use to solve these problems will be essential for solving related problems in Organic Chemistry II. If you have trouble answering these questions it is imperative that you see me for help!

1. Are the following pairs of compounds Identical, Constitutional Isomers, Geometric (cis/trans) Isomers, Enantiomers or Diastereomers?

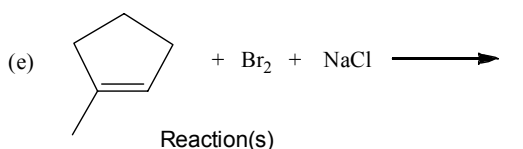
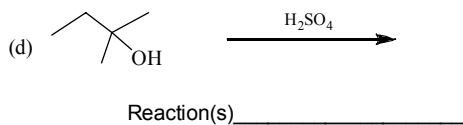
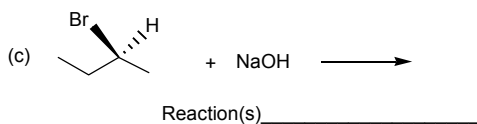
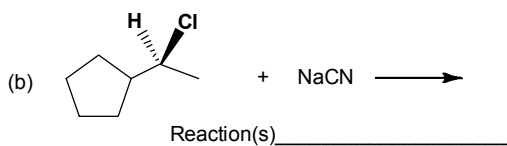
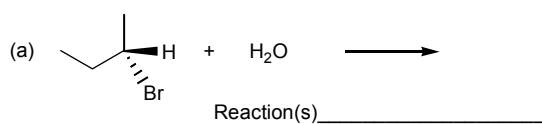


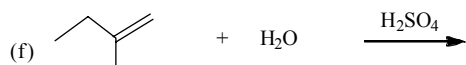
2. Give the IUPAC name for the following structure.



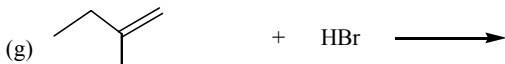
3. Draw the correct chemical structure for the following compound: cis-1-chloro-4-isopropyl-2-heptene

4. Reactions. Complete the reactions shown below by drawing the structure of **the major, neutral organic products**. Watch your stereochemistry! **You do NOT need to balance these reactions.** You must also indicate the type of reaction in the appropriate blank: SN1, SN2, E1, E2, electrophilic addition, dehydration.



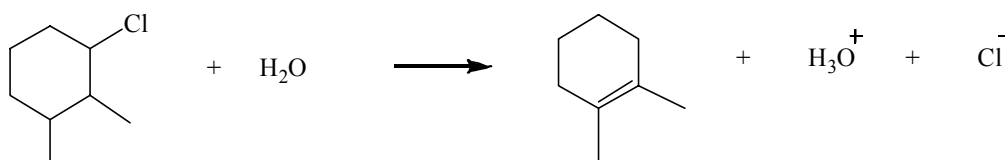


Reaction(s) _____

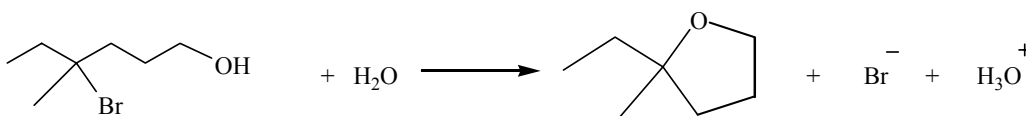


Reaction(s) _____

5. Mechanisms: E1 with Rearrangement. On a separate sheet of paper write a complete mechanism that explains the formation of all products in the balanced net equation below. Your mechanism must consist of: (1) a series of numbered, balanced chemical equations, and (2) curved arrows to show electron pair movement.



6. Mechanisms: Intramolecular S_N1. On a separate sheet of paper write a complete mechanism that explains the formation of all products in the balanced net equation below. Your mechanism must consist of: (1) a series of numbered, balanced chemical equations, and (2) curved arrows to show electron pair movement.



7. Mechanisms: Acid-catalyzed Electrophilic Addition (hydration). On a separate sheet of paper write a complete mechanism that explains the formation of all products in the balanced net equation below. Your mechanism must consist of: (1) a series of numbered, balanced chemical equations, and (2) curved arrows to show electron pair movement.

