

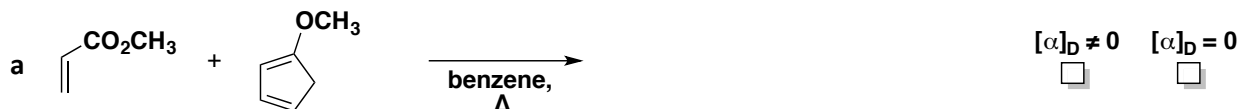
CHE 310 – 002 & 003
Lecture Homework #35

(Note: there is no homework #34. I am just keeping the number to correlate with the date and number of the quizzes)

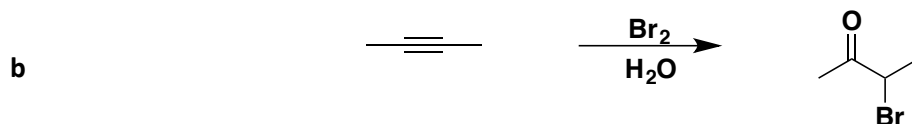
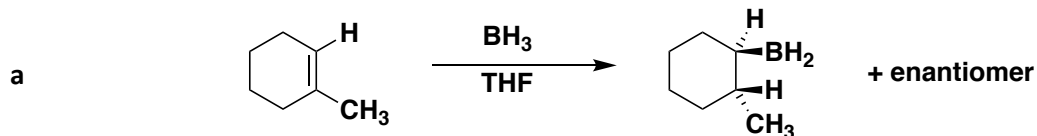
Due: Monday, April 22, 2019, 10:00 am.

1. Provide the major product(s). Clearly indicate the stereochemistry in your structures where appropriate. Where more than one stereoisomer is formed you only need to draw one of the stereoisomeric products. Other stereoisomers should be indicated by writing, “+ *enantiomer*” or “+ *diastereomer*”, as appropriate. Check the boxes on the right to indicate whether the reaction product solution would be optically active ($[\alpha]_D \neq 0$) or not optically active ($[\alpha]_D = 0$). Under the check boxes indicate why that box was chosen (possible answers are single enantiomer, diastereomers, racemic, meso and achiral)

Hint: carefully follow the model reaction that I gave you in class if you orient the diene and dienophile as I gave them you will get the correct answers.



2. Provide the complete mechanism for each reaction below to give the product(s) shown. Each mechanism must include the following:
- Proper arrows to show all electron motion.
 - The structure of all reactive intermediates including stereochemistry where appropriate.



Due Friday, April 26, 2019, 10:00 am

1. ***Correct your exam critically.*** Carefully go over the solutions and add correct answers. ***Include explanations for all corrected answers.*** Even chemical reactions require explanations in words.

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. If you are unsure if you have analyzed critically enough, please contact me.