

**S2018 Organic Chemistry I
Mid-Term Exam 2**

Name (print):

Name (Sign) :

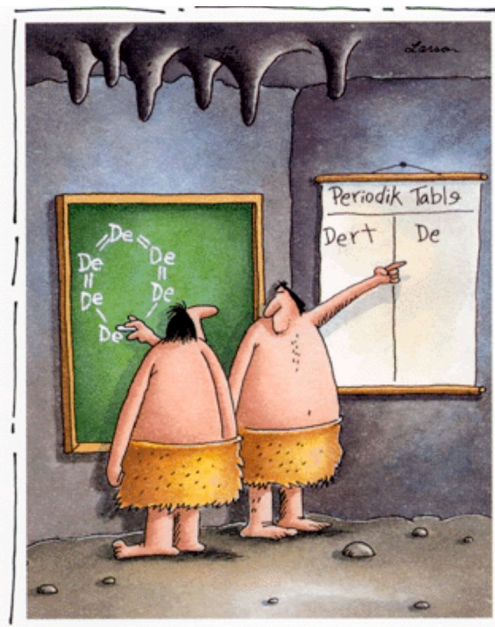
Recitation Instructor Name (so we can get it back to you):

Instructions

1. Keep the exam closed until you are instructed to begin.
2. The exam consists of 5 questions. The first thing you should do is make sure that no pages are missing. If a page is missing, notify a proctor immediately.
3. You will have 1 hr and 15 minutes to complete the exam, at which time pencils must be put down. Budget your time wisely.
4. Make sure to show all of your work, and make it clear what your thought process was. Answers should fit in the space provided. If you need to use the back of the sheet of paper, you must make note of it in the space allotted for credit.

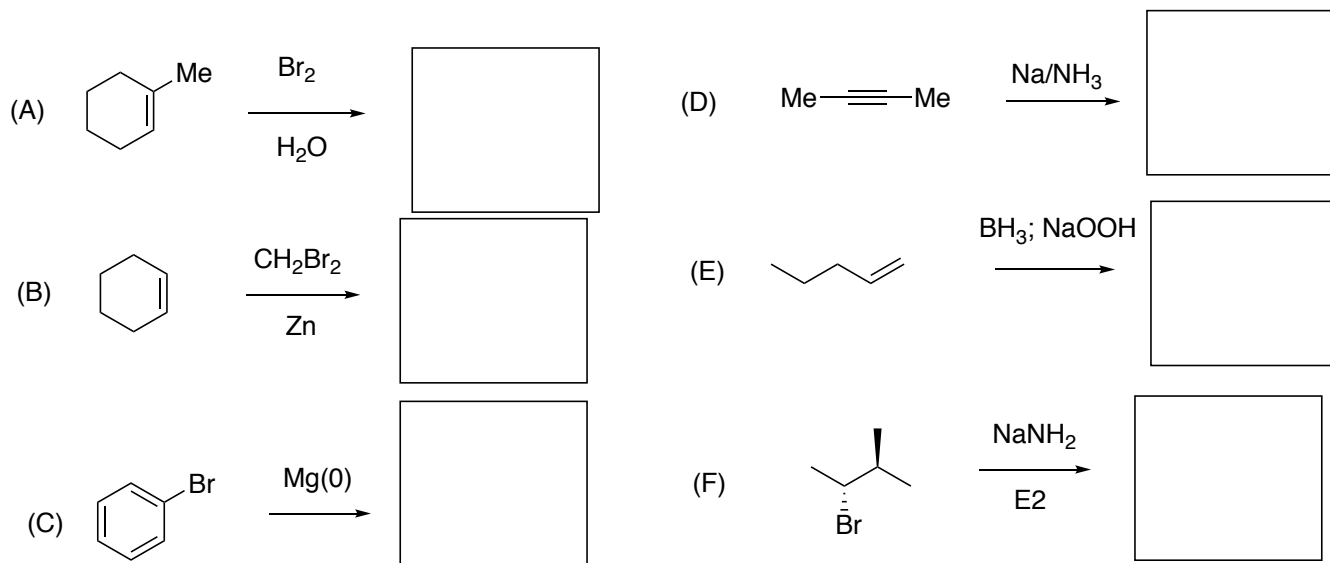
Breakdown

1. ___ / 20
2. ___ / 20
3. ___ / 10
4. ___ / 30
5. ___ / 20
total ___ / 100

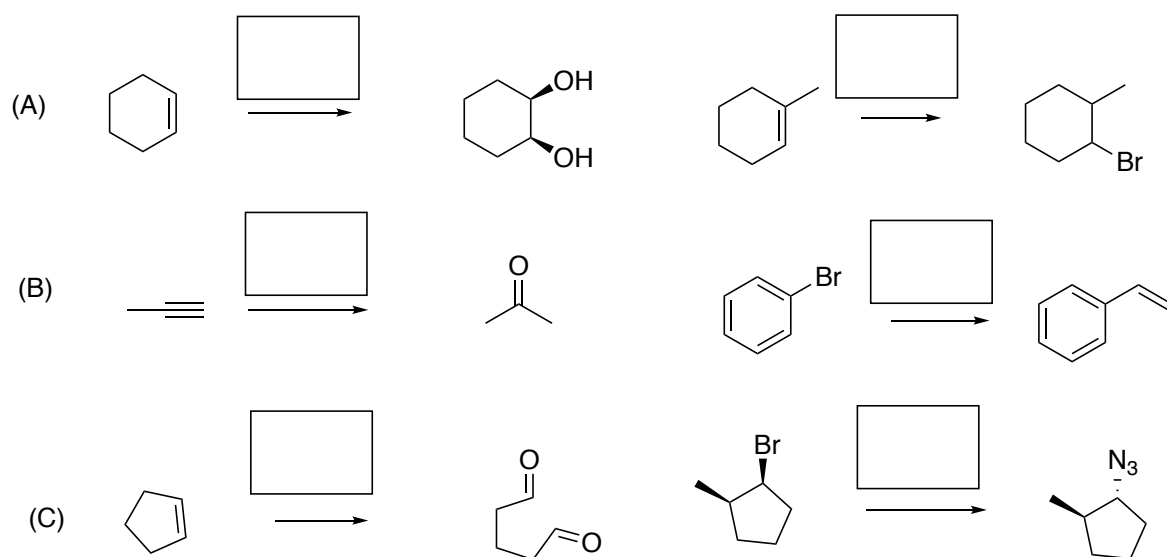


*Early chemists describe
the first dirt molecule.*

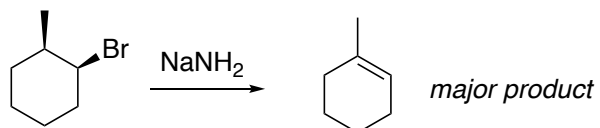
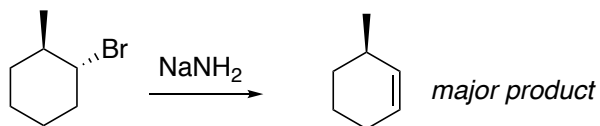
1) **Reactions Part A.** Show the products of the following reactions. Chose 5 of the 6, and make sure to circle those you want graded. If you do not circle, we will grade the first 5. (20 points, 4 each)



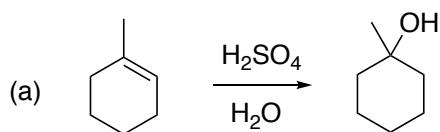
2). **Reactions Part B.** Show the reagents for the following reactions. Chose 5 of the 6, and make sure to circle those you want graded. If you do not circle, we will grade the first 5. (20 points, 4 each)



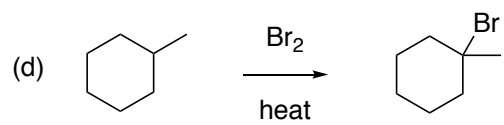
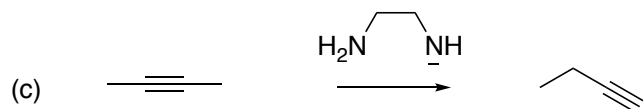
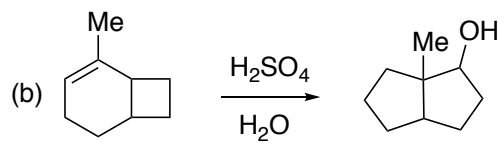
3) **Concept Question.** The following reactions illustrate two different elimination products that arise from E2 elimination from two different diastereomers. Explain this difference, using structures and mechanisms to help support your answers (10 points)



4) **Mechanisms.** Show the mechanism of 3 of the following 4 reactions. Make sure to circle the 3 you would like graded. Otherwise, we will grade the first 3. (30 points, 10 points each.)



4) Mechanisms (Continued)



5) **Synthesis.** Propose a series of reactions that would help carry out the following synthesis. (20 points, 10 points each)

