

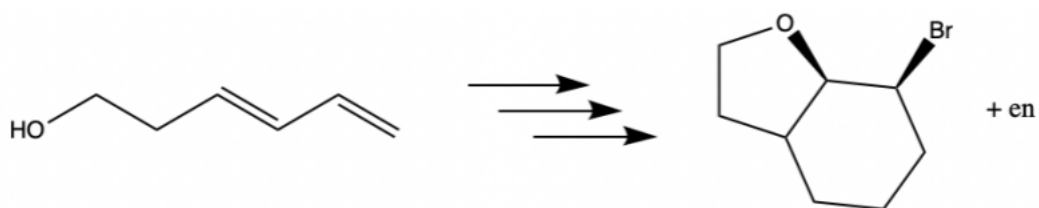
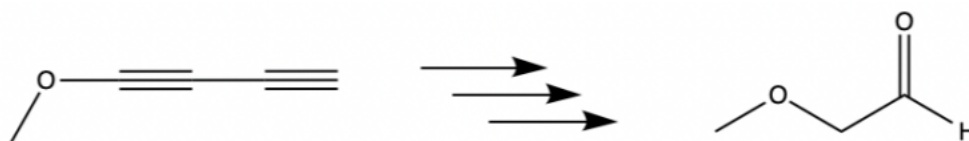


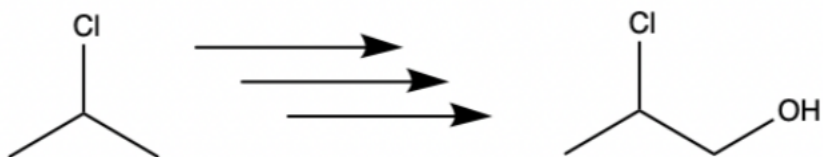
Problem Set 11 (Exam 2 Review)

Organic Chemistry 1 (Greenberg)

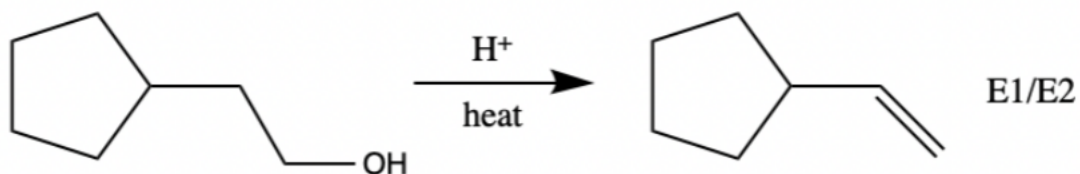
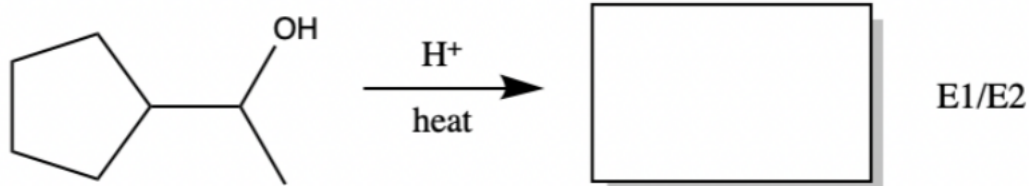
Fall 2025

1. Provide the synthetic routes for the following problems:

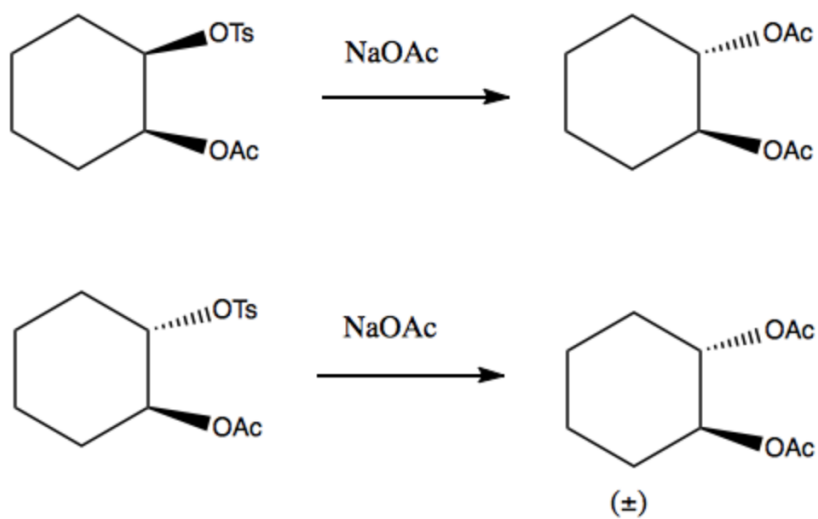




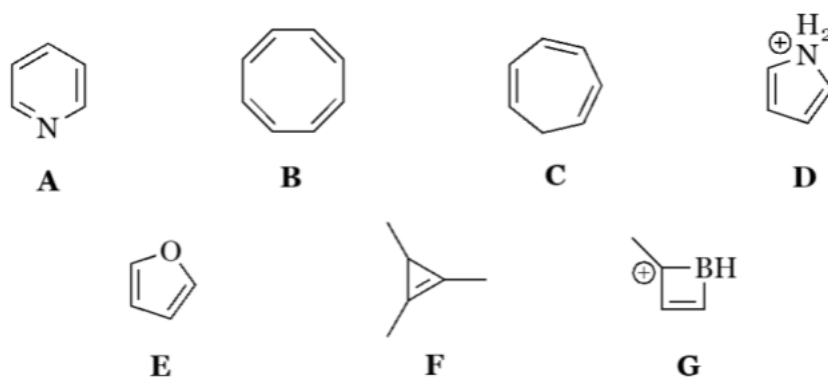
2. Indicate the type of reaction and draw both the mechanism and product:



3. Using principles of anchimeric assistance (neighboring group participation), explain which reactant (cis or trans) will undergo a faster $\text{S}_{\text{N}}2$ reaction:



4. Consider the following seven compounds; assume all are planar.



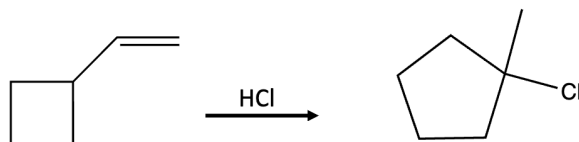
a. Which compound(s) is/are aromatic?

b. Which compound(s) is/are antiaromatic?

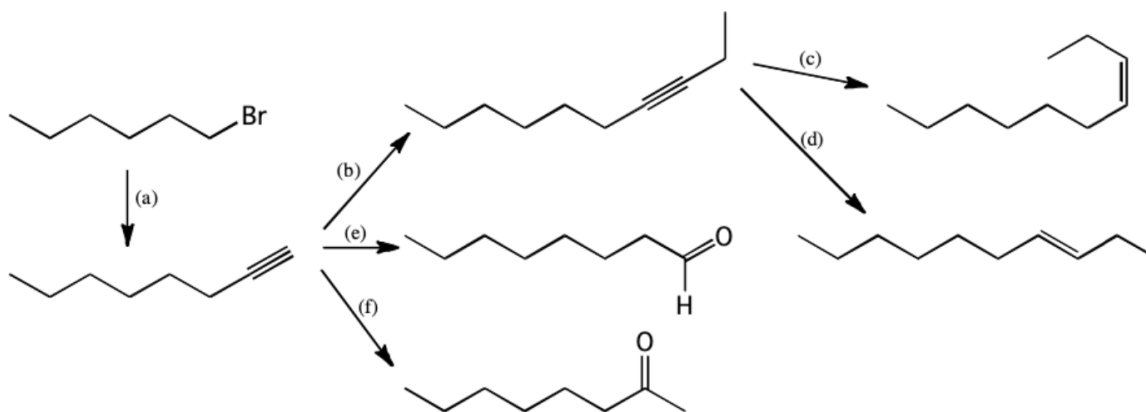
c. Of the nonaromatic compounds, which compound(s) can become aromatic after the removal of a proton?

d. Of the nonaromatic compounds, which compound(s) become aromatic after the removal of a hydride?

5. Provide the mechanism for the following transformation:



6. We have learned many ways to transform between functional groups. Provide the reagents for the reactions (a) through (e).



Clubs and Orgs Bulletin:

Promote your club! <https://forms.gle/V19BipzLyuAaWMyz8>

Motorsports Society

Motorsport Society: Are you interested in motorsport, whether you're an F1 fan, becoming a mechanical engineer, or pursuing a career in sports journalism? Join Motorsoc! We foster a fun, inclusive environment for all kinds of motorsport fans. Follow our Instagram @motor_socjhu for more updates!

Maryland Science Olympiad

Did you do Science Olympiad or similar competitions in high school? Are you interested in helping organize, volunteer, and write for Maryland Science Olympiad's regional and state tournaments? Join the Maryland Science Olympiad @ JHU chapter! Sign up: https://jhu.campusgroups.com/MSO/club_signup

Tip of the Week:



A green poster for 'CSS SATURDAYS' at Johns Hopkins University. The poster features the university's shield logo, a pizza icon, and a lightbulb icon. It lists dates (NOV. 15, DEC. 6, DEC. 13) and times (12-4PM). It also lists supported courses: Introductory Chemistry I, Organic Chemistry I, Physics I & II, Pre-Calculus, Calculus I, II, III, Gateway Computing: Java, and Gateway Computing: Python. The poster includes the text 'Study with the help of a Learning Den Tutor' and 'Build a finals study schedule with a study consultant'. The bottom of the poster has the Johns Hopkins University logo and address: 3003 N Charles Street, Suite 103.

Study with the help of a **Learning Den Tutor**

Build a finals study schedule with a **study consultant**

Pizza & Snacks Provided

CSS SATURDAYS

Study with a tutor

NOV. 15 | DEC. 6 | DEC. 13
12-4PM

Courses Supported:

- Introductory Chemistry I • Organic Chemistry I
- Physics I & II • Pre-Calculus
- Calculus I, II, III • Gateway Computing: Java
- Gateway Computing: Python

JOHNS HOPKINS UNIVERSITY Student Affairs Center for Student Success 3003 N Charles Street, Suite 103