

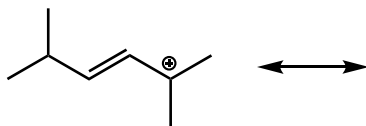
Problem Set Chapter 17

Organic Chemistry for
Life Sciences: CHM 224

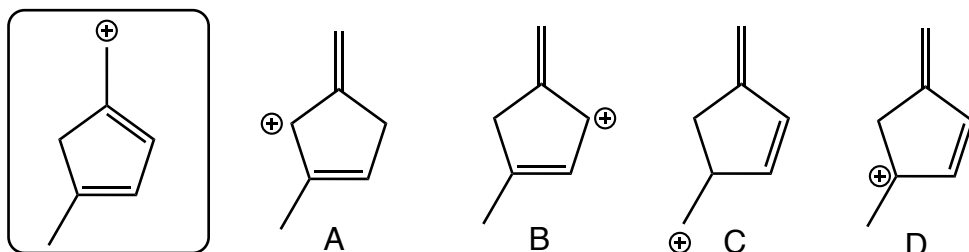
Name _____

DUE: Friday, January 19 in class

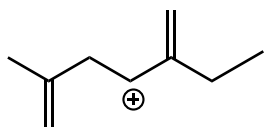
1. Draw ONE additional important resonance form for the following carbocation (include proper curved arrows AND resonance arrows):



2. Which of the following is NOT a resonance form for the structure provided in the box (may be more than one answer)?

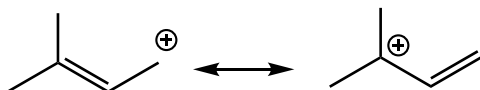


3. How many additional good resonance forms may be drawn for the following carbocation?

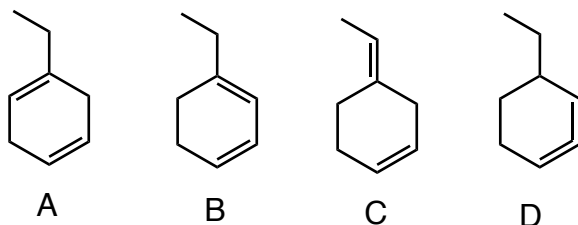


- A. 1
B. 2
C. 3
D. 4
E. 5

4. Draw the hybrid form for the carbocation below. Indicate which carbon atom has the largest partial positive charge.



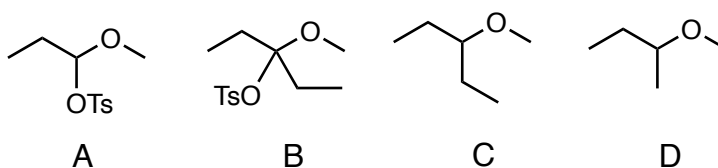
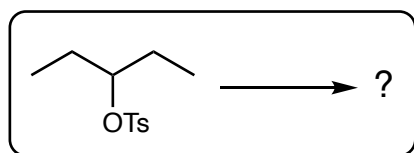
5. Which one of the dienes below would be the most stable and which least stable?



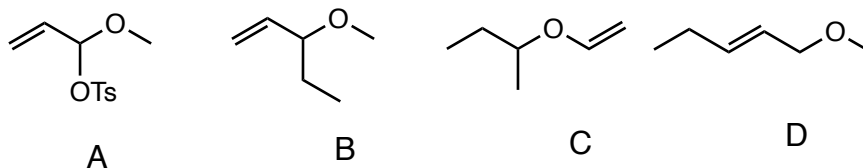
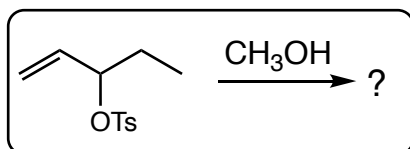
most:

least:

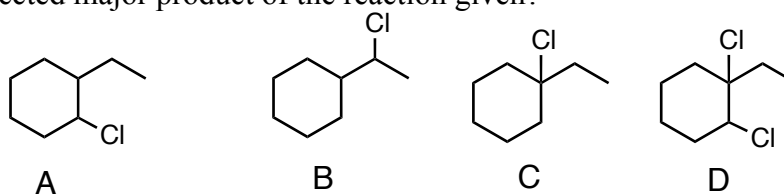
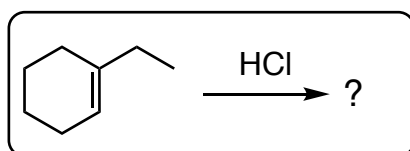
6. Which of the following would be products from the S_N1 reaction given (may be more than one answer)?



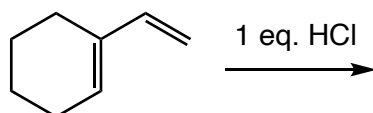
7. Which of the following would be products from the S_N1 reaction given (may be more than one answer)?



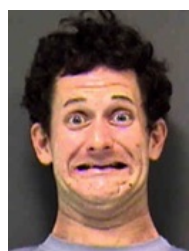
8. Which one of the following is the expected major product of the reaction given?



9. Draw the products formed from the following reaction and predict the major product. Show your work.



10. Using the C=C bonds in the benzene ring, Jimmy, after drawing all reasonable resonance forms, predicts the hybrid form shown as a good representation of the benzylic carbocation. Do you agree with Jimmy? If not, what is the correct hybrid form (do not be concerned with the size of the δ^+ symbol)?



Jimmy!

