

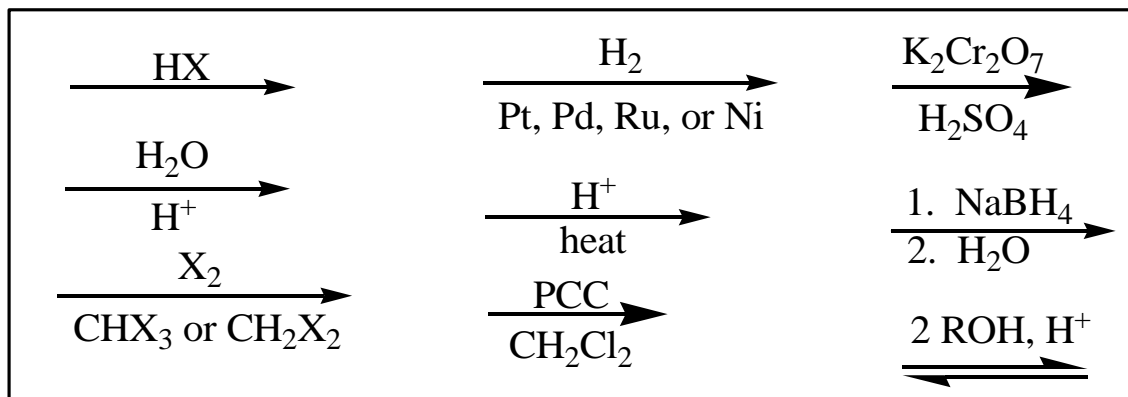
**Moorpark College Chemistry 11**  
**Fall 2007**

Instructor: Professor Torres

Examination #4: Section Four  
November 7, 2007

Name: \_\_\_\_\_ (print)

Name: \_\_\_\_\_ (sign)

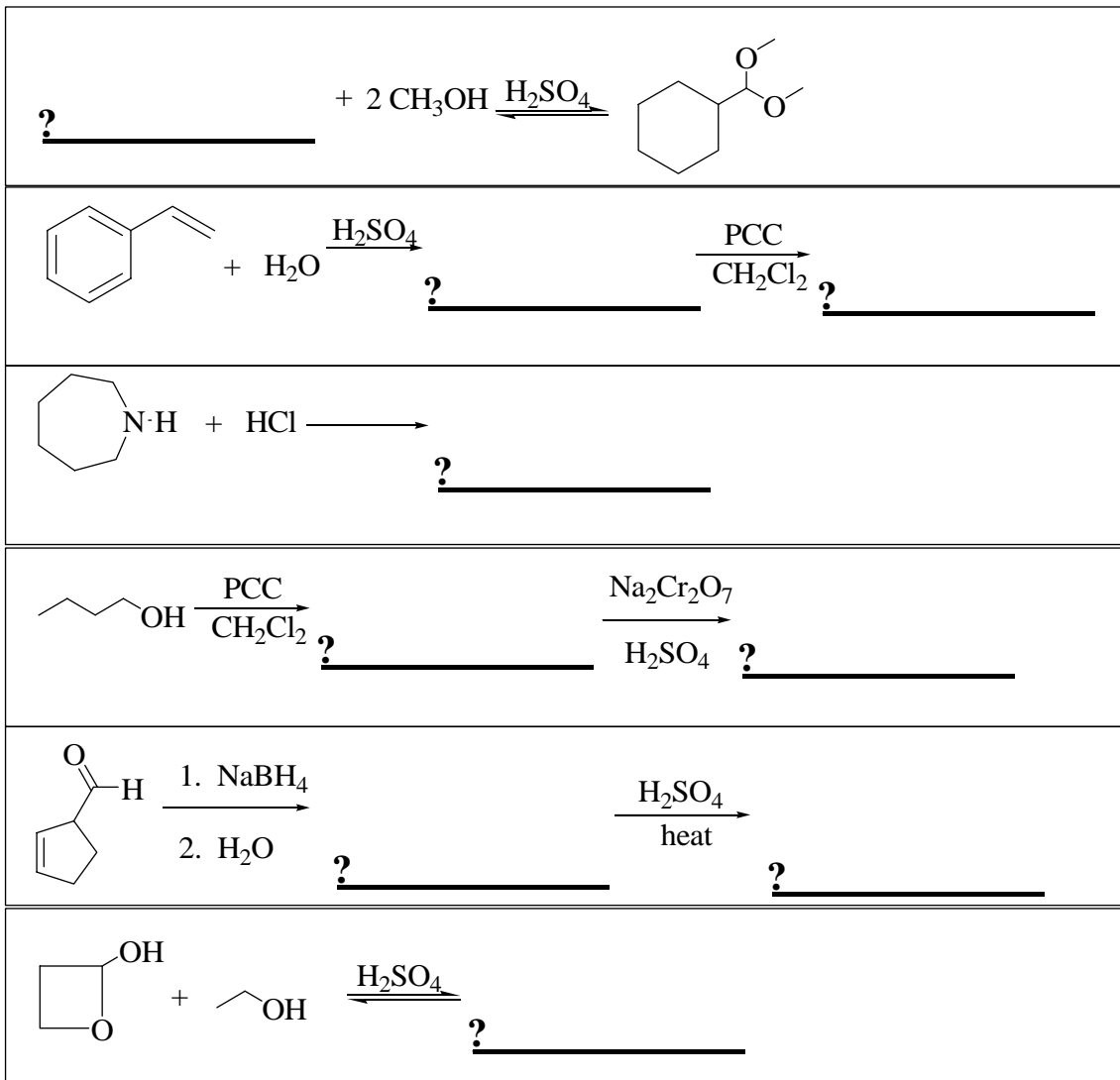


**Directions:** Make sure your examination contains EIGHT total pages (including this cover sheet) when instructed to do so. Answer all the questions in the spaces provided.

Question	Points
1. (27 pts.)	
2. (9 pts.)	
3. (9 pts.)	
4. (10 pts.)	
5. (10 pts.)	
6. (18 pts.)	
7. (17 pts.)	
<b>TOTAL (100 points)</b>	

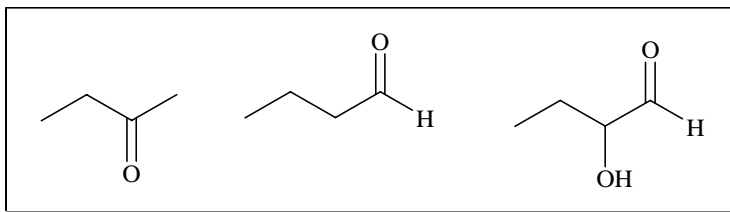
Chemistry 11 Fall 2007  
Examination #4

1. (27 pts. total; 3 pts. each) **SEQUENCES!** Complete each sequence below by providing the reagents or structures as indicated by the “?”. *ONLY ANSWERS BY THE “?” WILL BE GRADED.*



2. (9 pts.) Draw **THREE** possible structures for compounds with a molecular formula  $\text{C}_3\text{H}_6\text{O}$  using bond-line notation.

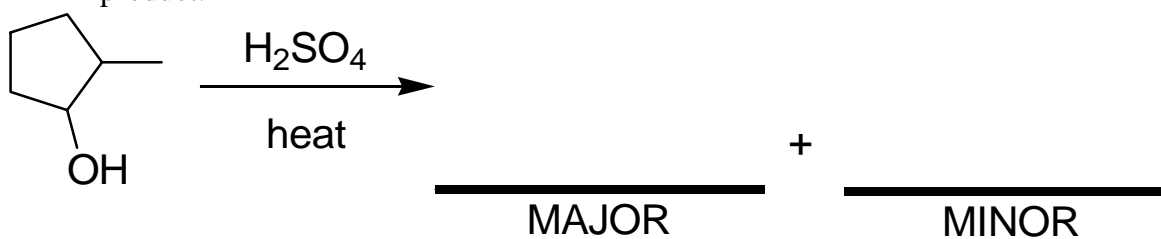
3. (9 pts.) A stockroom assistant prepares three bottles, each containing one of the following compounds:



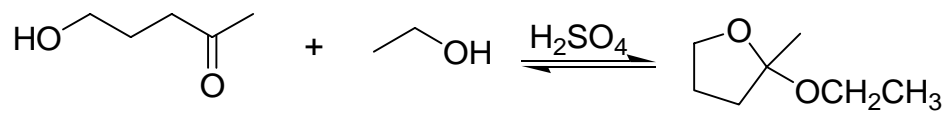
However, the bottles are left unlabeled. Instead of discarding the samples, another assistant runs tests on the contents using Tollens' and Benedict's reagents. Match the compound to the bottle based on the results shown, and briefly explain your identifications.

	<u>Tollens' Reagent</u>	<u>Benedict's Reagent</u>
Bottle A	A dark precipitate forms	A red-orange precipitate forms
Bottle B	No reaction	No reaction
Bottle C	A dark precipitate and silver mirror form	No reaction

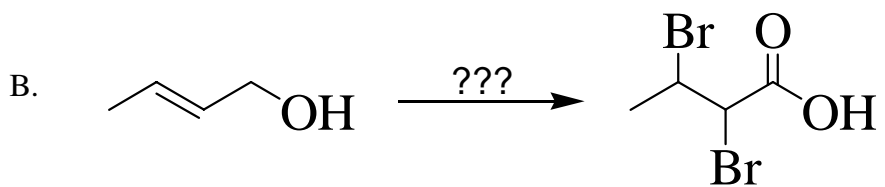
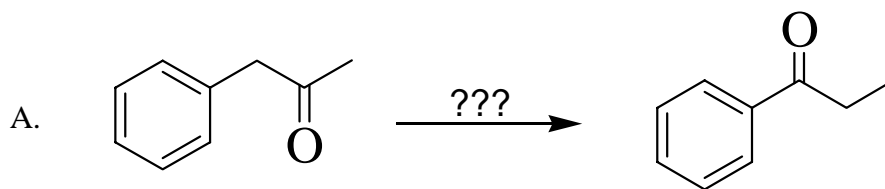
4. (10 pts.) Predict the MAJOR and MINOR products for the reaction listed below AND give the appropriate curved arrow notation for formation of each final product.



5. (10 pts.) Provide the appropriate curved arrow notation for formation of the final product.

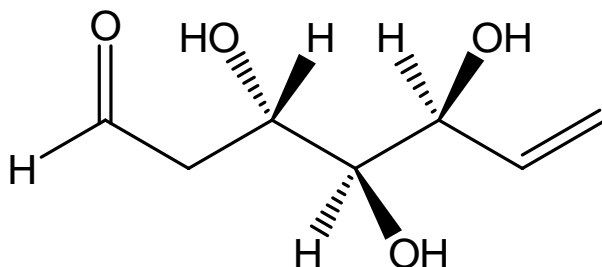


6. (18 pts. total; 9 pts. each) **SYNTHESIS!** Design a synthetic sequence using the appropriate reagents on the cover page of this examination to account for the following chemical transformations.

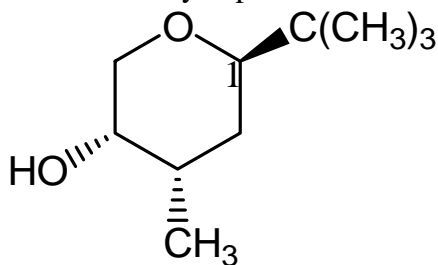


7. (17 pts. total) **STRUCTURAL EXPLORATION!**

- A. (4 pts.) Draw a Fischer projection on the right to correspond to the given structure.



- B. (4 pts.) Draw BOTH chair conformations of the molecule shown, beginning with carbon 1 assigned below. Which conformation is the most stable? Briefly explain.



- C. The remaining questions test your basic understanding of fatty acids.
1. (2 pts.) Draw one example of a *saturated* fatty acid using bond-line notation which contains **NO MORE THAN 16** carbons.

