

**NAME (Print):** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

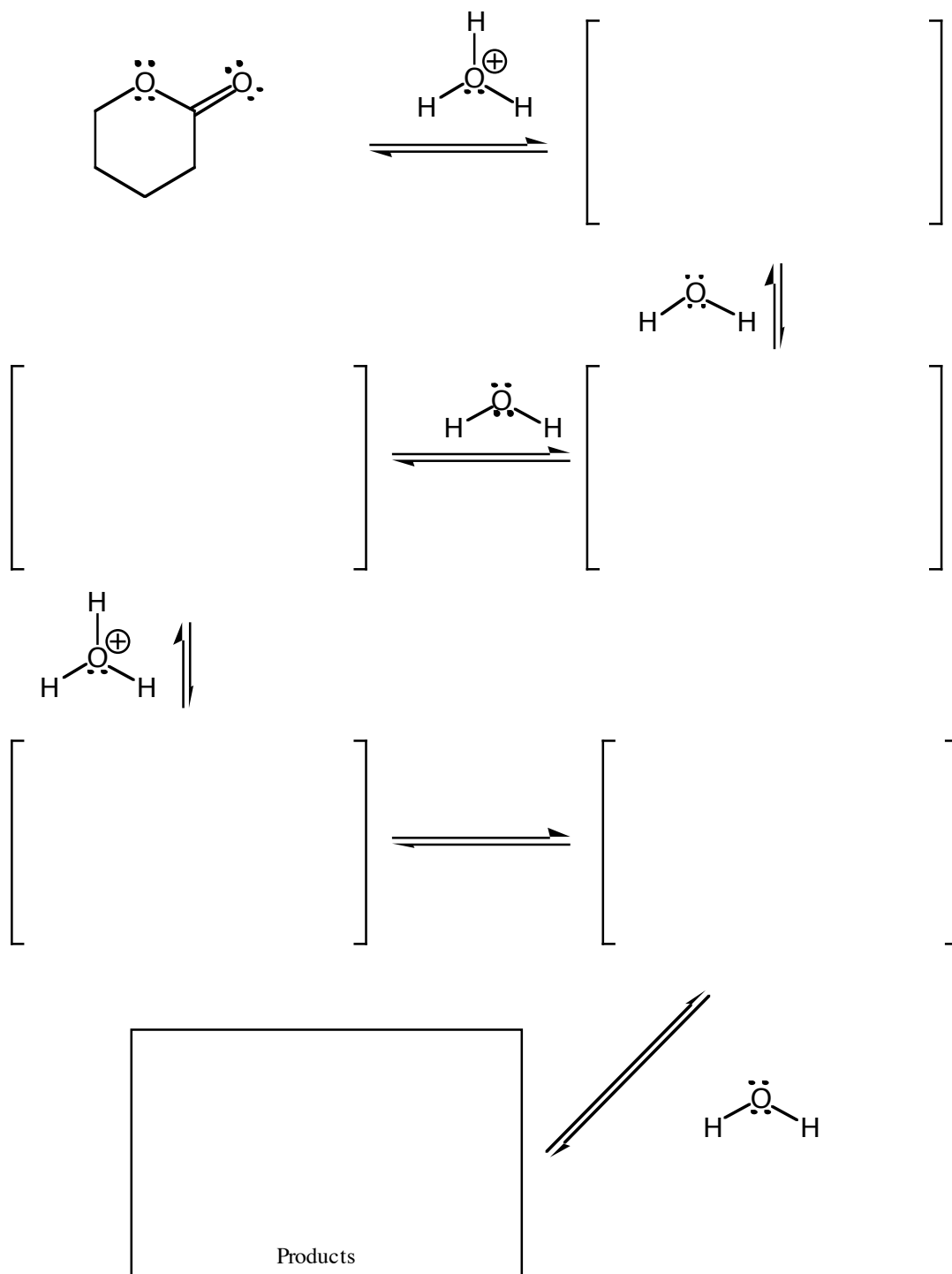
**Chemistry 310N  
Dr. Brent Iverson  
7th Homework  
March 5, 2008**

**Please print the  
first three letters  
of your last name  
in the three boxes**

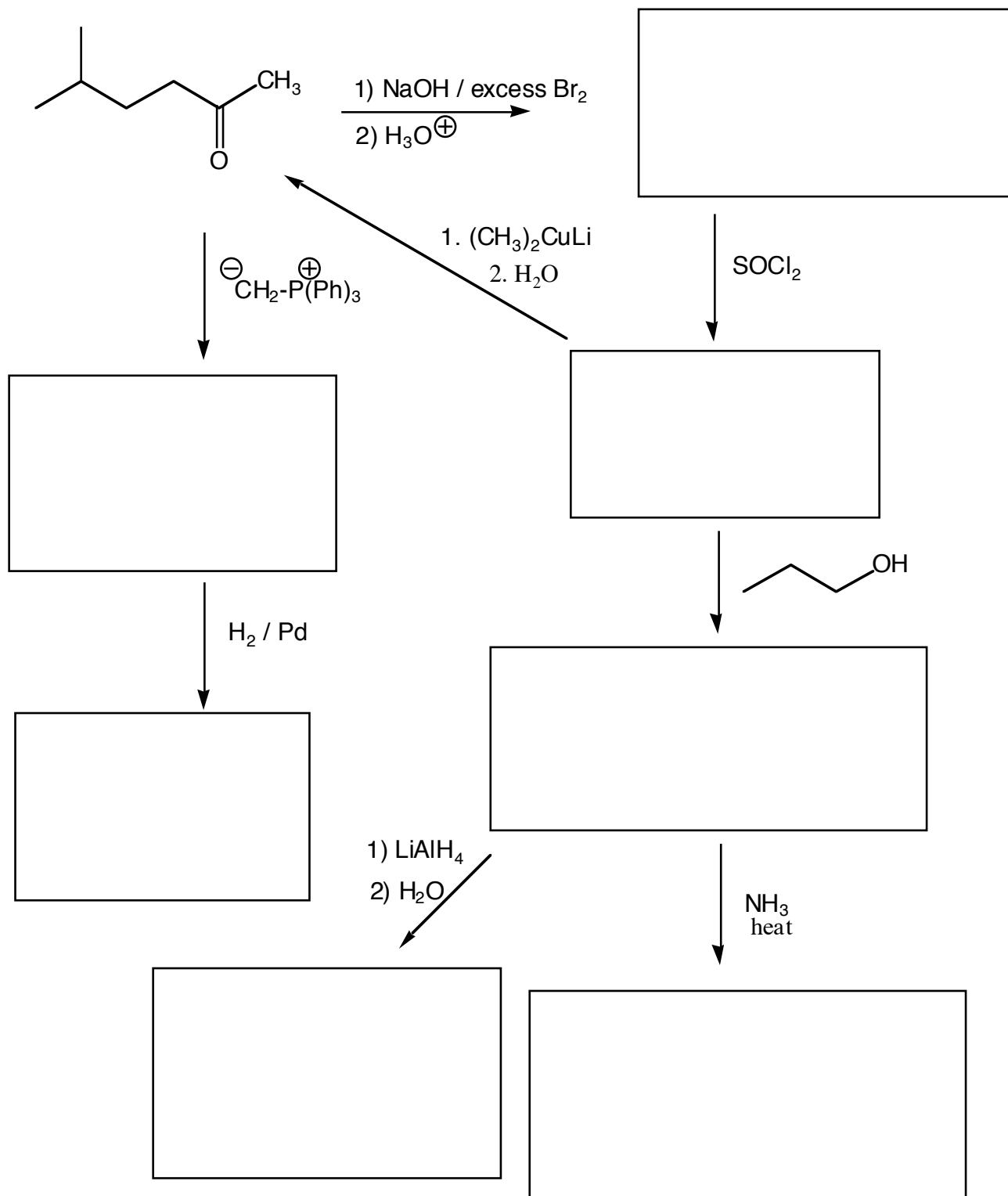
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Score: \_\_\_\_\_

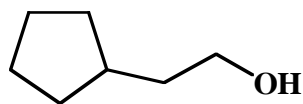
(28 pts.) Complete the mechanism for this lactone hydrolysis in aqueous acid. **Be sure to show arrows to indicate movement of all electrons, write all lone pairs, all formal charges, and all the products for each step.**



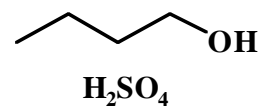
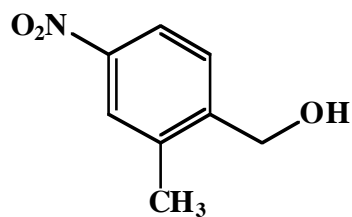
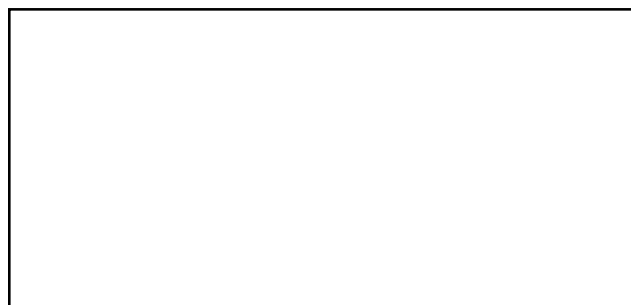
(3 or 5 pts each) Fill in the box with the product or products that are missing from the following chemical reaction equations. When a racemic mixture is formed, **you must write "racemic" under both structures EVEN THOUGH YOU DREW BOTH STRUCTURES.**



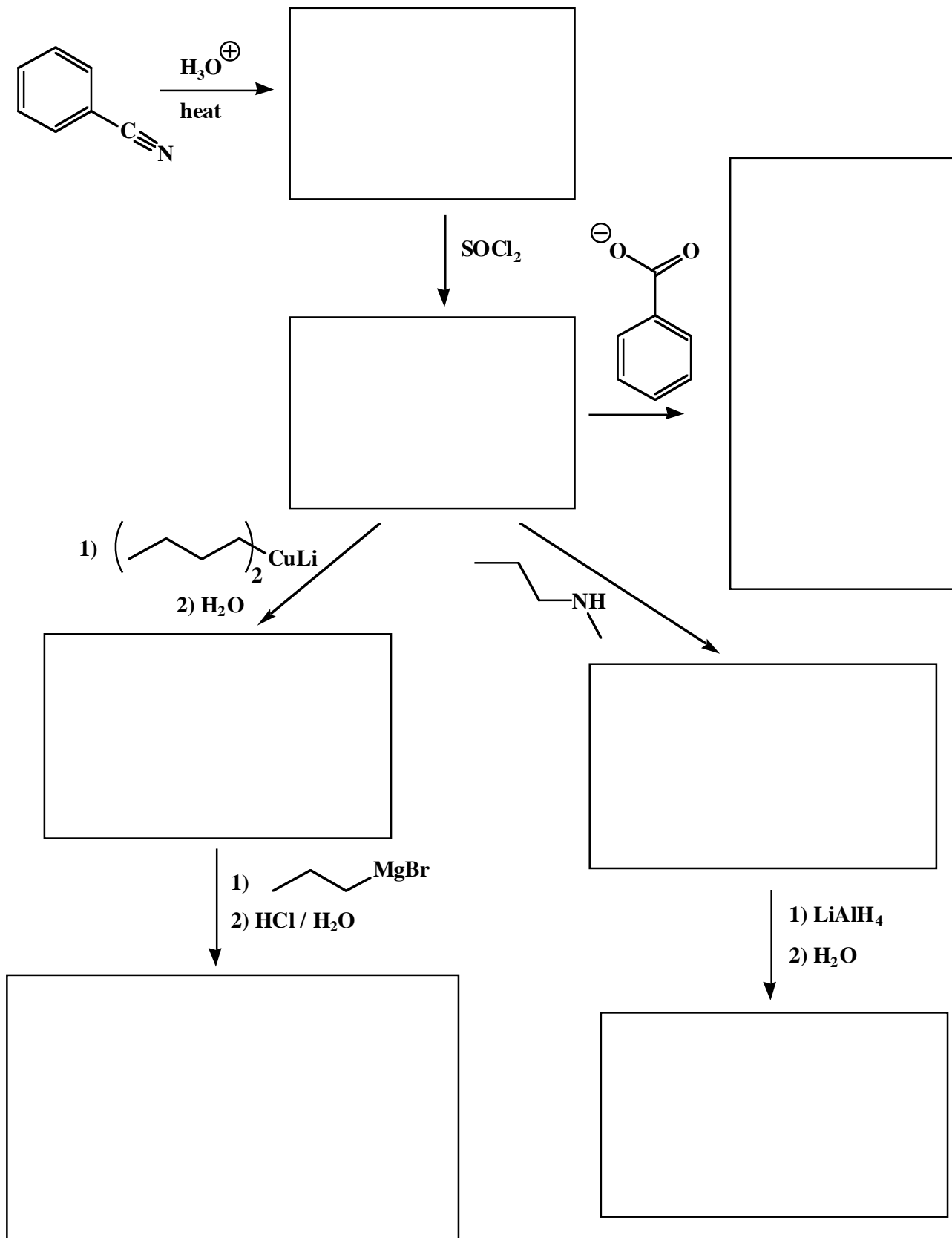
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PCC

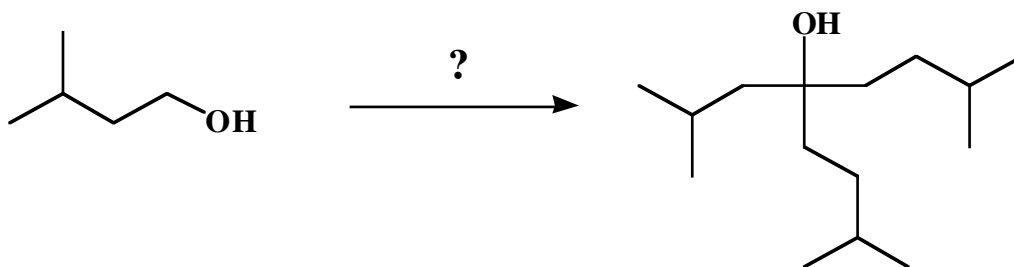
 $\text{H}_2\text{CrO}_4$  $\text{SOCl}_2$  $\text{H}_2\text{SO}_4$ 1)  MgBr2) HCl / H<sub>2</sub>O

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(13 pts) Using any reagents turn the starting material into the indicated product. All carbon atoms must come from the starting material. Draw all molecules synthesized along the way. When in doubt, draw the molecule! Hint: this should look familiar as a homework problem.

All the carbon atoms of the product must come from the starting material



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