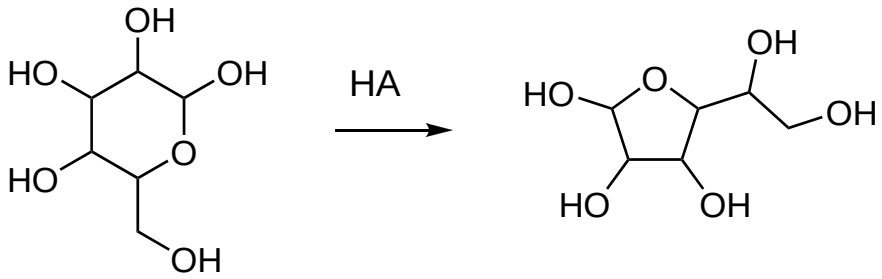
Library of Organic Chemistry Active Learning (LOCAL) Resources

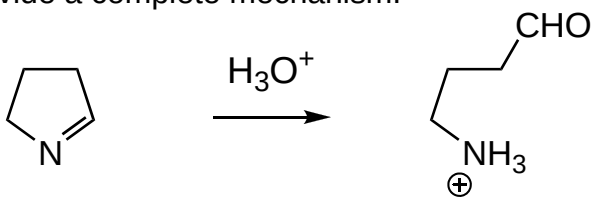
Acetal Mechanisms & Ketone Synthesis Problems

Name:_____ Section: _____ (day/time)

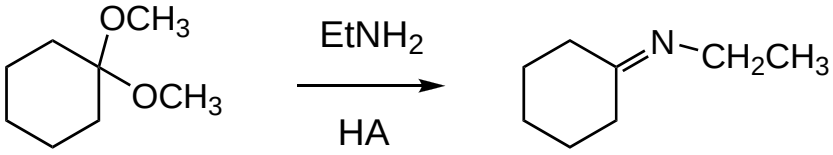
1. Provide a complete mechanism.



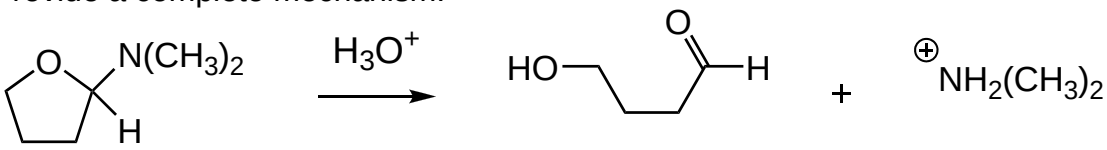
2. Provide a complete mechanism.



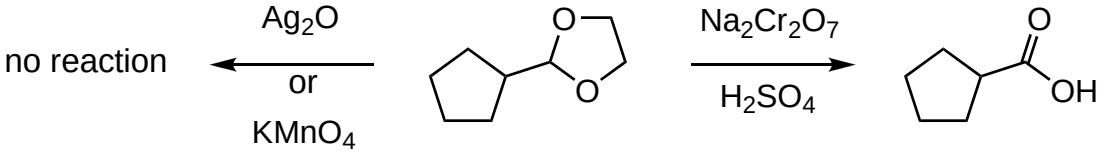
3. Provide a complete mechanism.



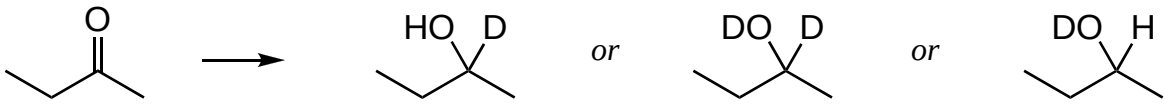
4. Provide a complete mechanism.



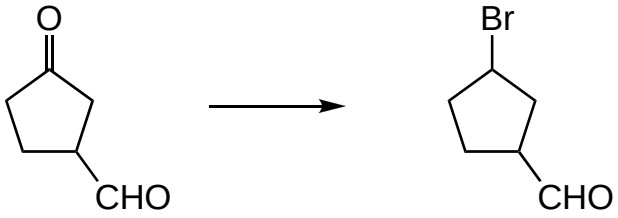
5. Explain why Jones oxidation works but silver oxide (Tollens) or permanganate oxidations fail.



6. Synthesize the following compounds from 2-butanone, using $NaBH_4$, $NaBD_4$, H_2O, and D_2O as needed. Recall that deuterium (D) is an isotope of hydrogen (D = ^2H).



7. Provide the reagents needed to transform the given starting material into the desired product. More than one step may be required, and it may help to start with a retrosynthesis of the TM.



8. Provide the reagents needed to transform the given starting material into the desired product. More than one step may be required, and it may help to start with a retrosynthesis of the TM.