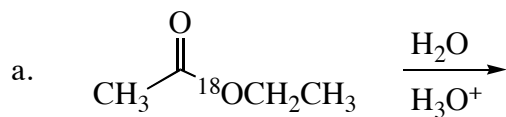
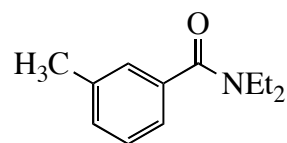
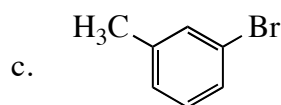
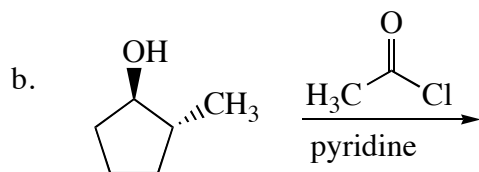


51C Practice Problems 6
Spring 2019

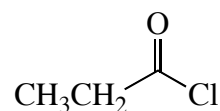
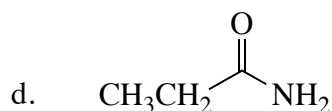
1. Predict the products or provide reagents in the following reactions. For reactions that require reagents, if more than one step is required, number individual steps.



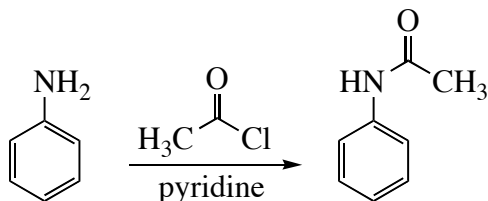
2 products (*show where label is!*)



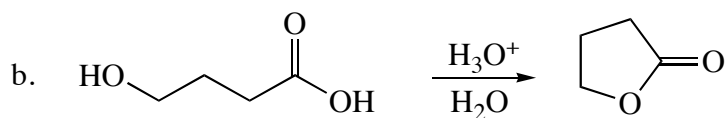
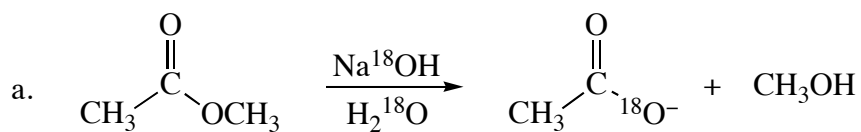
DEET (the active ingredient
in **Off** insect repellent)



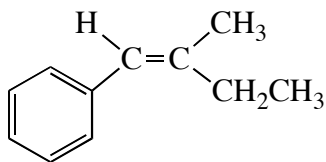
2. Provide a mechanism for the following reaction, which we used back in chapter 18 to convert aniline (a highly activated aromatic ring) into acetanilide (a moderately activated aromatic ring.)



3. Provide mechanisms for the following two reactions:



4. Provide a synthesis of the following alkene using a Wittig reaction. Choose the pathway that would give the best yield.



5. Sulfonate esters react with thionyl chloride to form sulfonyl chlorides. This is analogous to the reaction of carboxylic acids with thionyl chloride. With this reaction in mind, show how to synthesize tosyl chloride starting from benzene:

