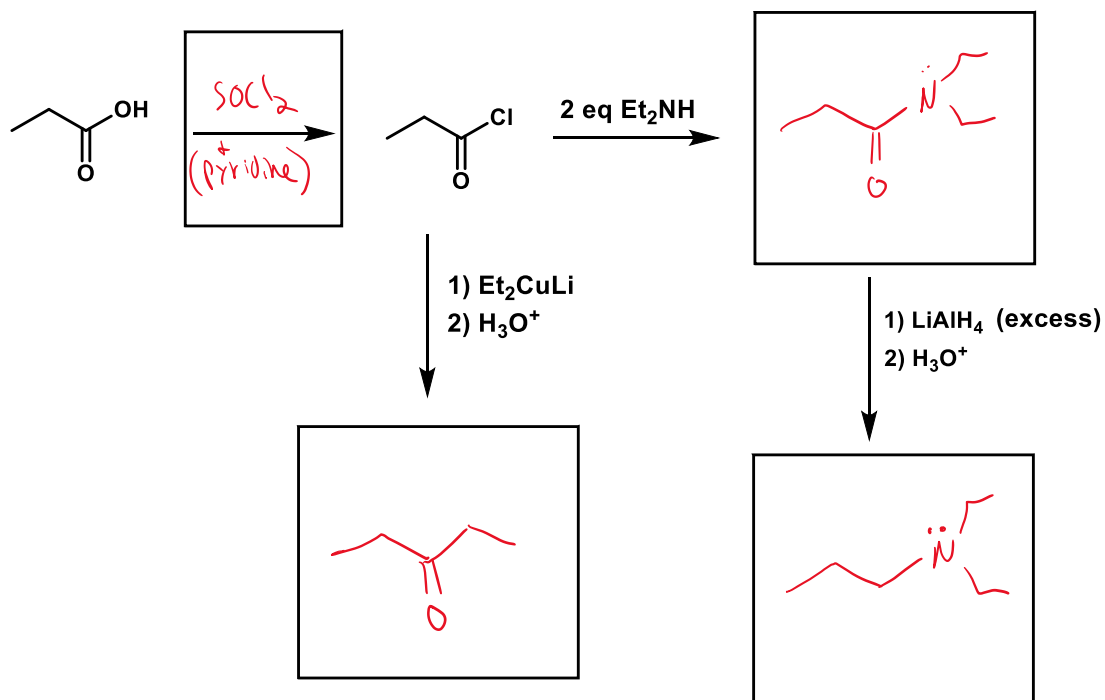
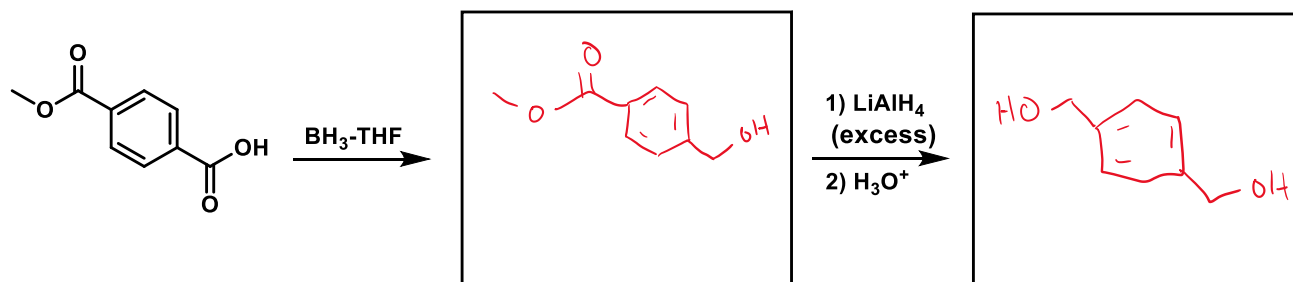


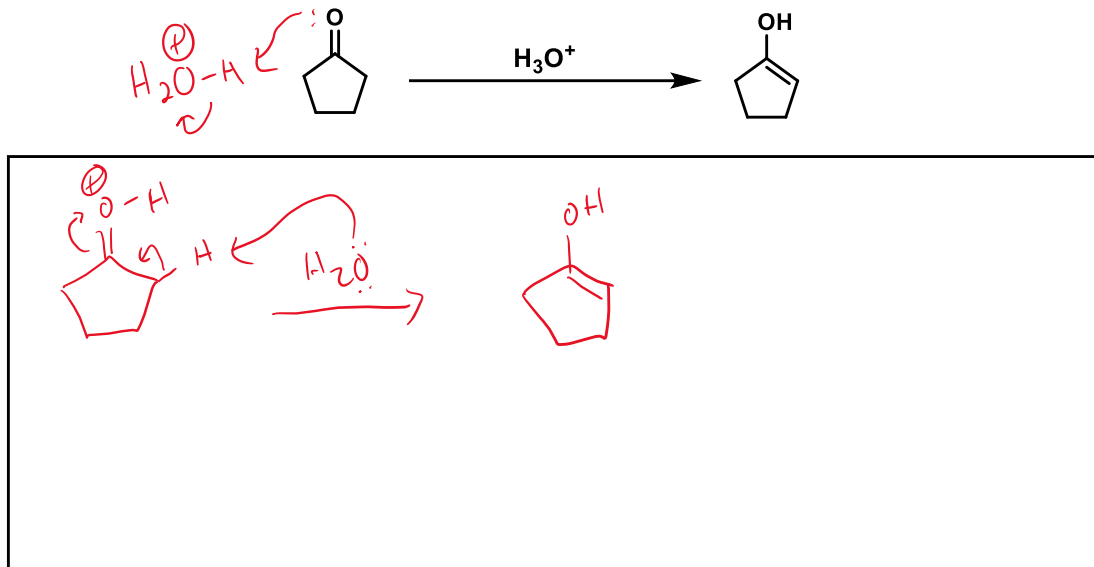
Quiz 5

1. Fill in the missing products, reactants, or reagents below.

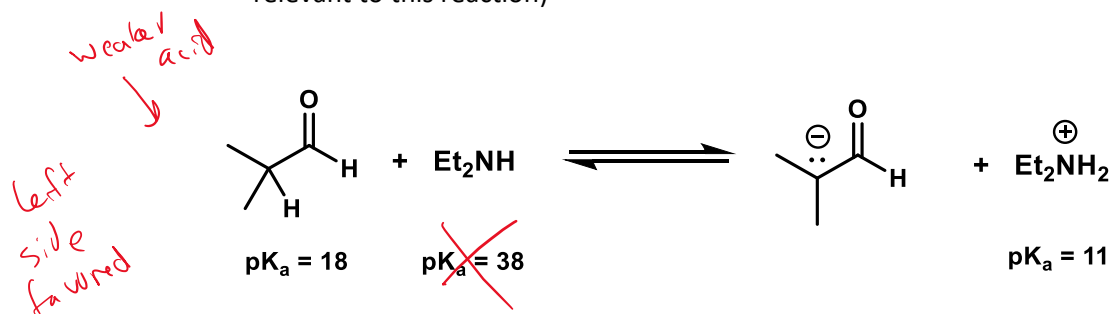


Et = ethyl group

2. Provide a step-wise mechanism for the following transformation.



3. For their lab synthesis project, a student plans to use Et_2NH (diethylamine) as a base to form an enolate ion, as shown by the reaction below. Do you think this is a good choice? Use pK_a values to calculate K_eq , and use this to explain your answer. (hint: one of the given pK_a values is not relevant to this reaction)



Equilibrium constant calculation:

$$K_\text{eq} = 10^{-7}$$

Explanation: *No! roughly 1 enolate for every 10^7 aldehyde (though, exact ratio depends on $[\text{Et}_2\text{NH}]$)*

*left side very favored
~ no rxn.*