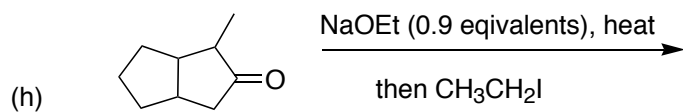
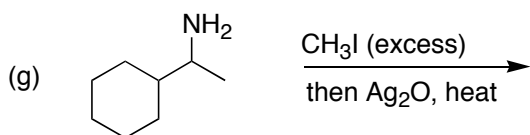
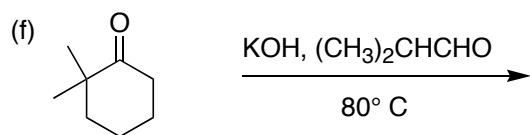
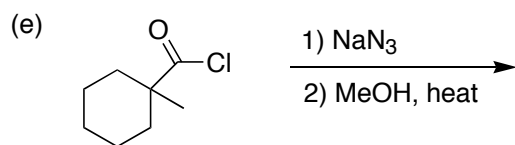
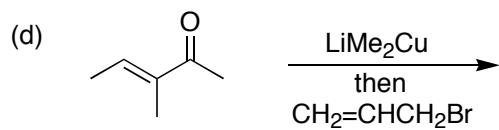
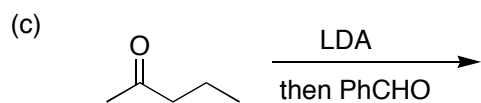
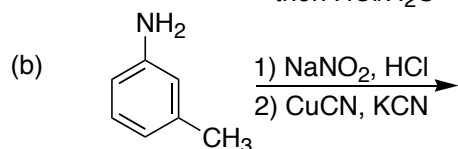
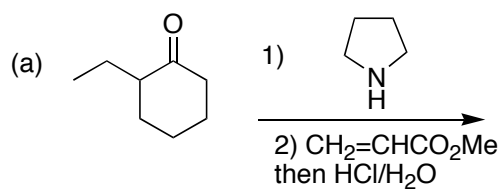
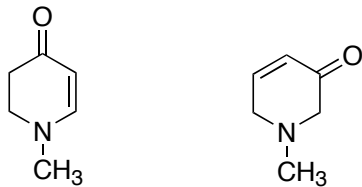


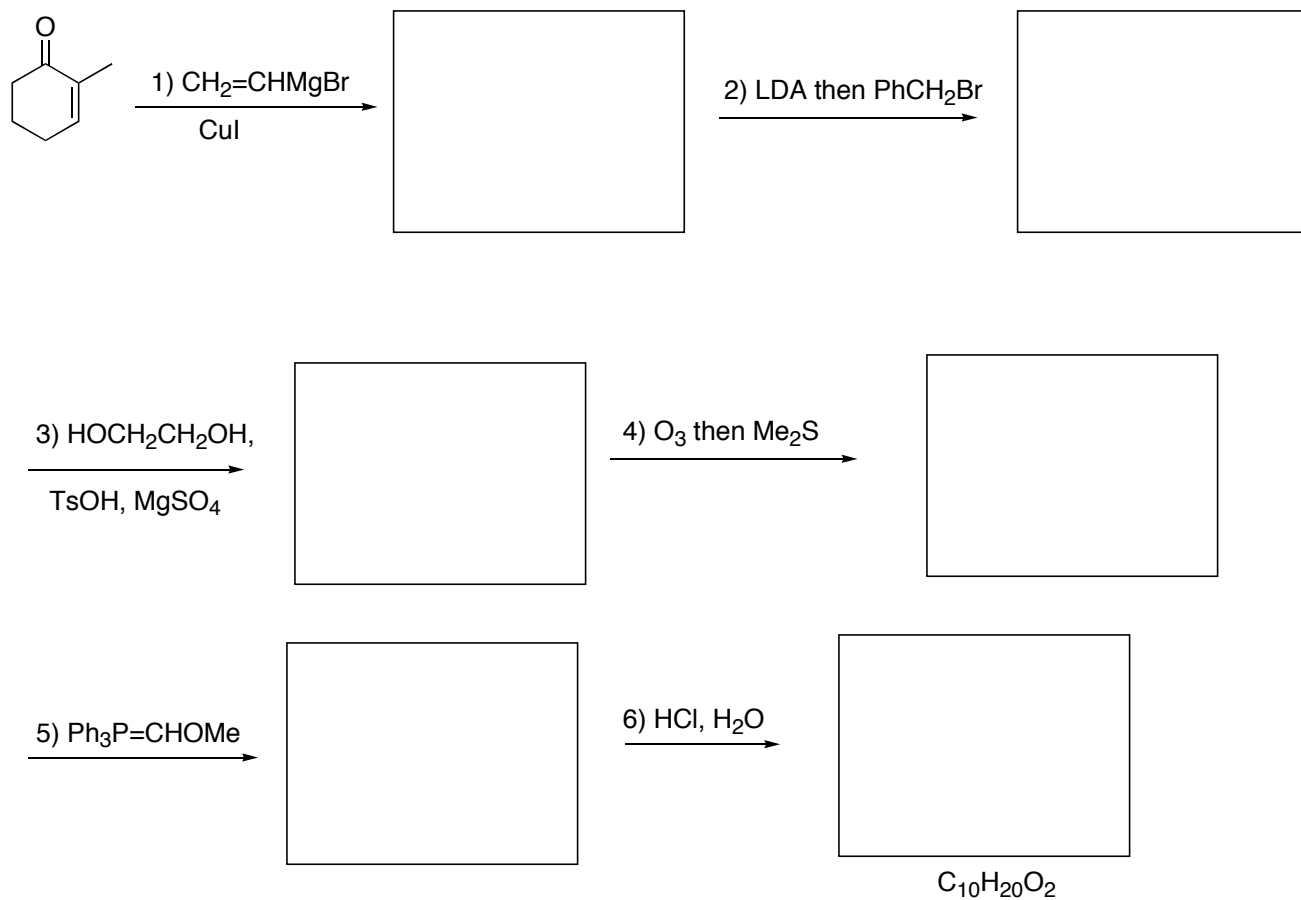
(1) Predict the major product from each reaction. If you expect no reaction, indicate.



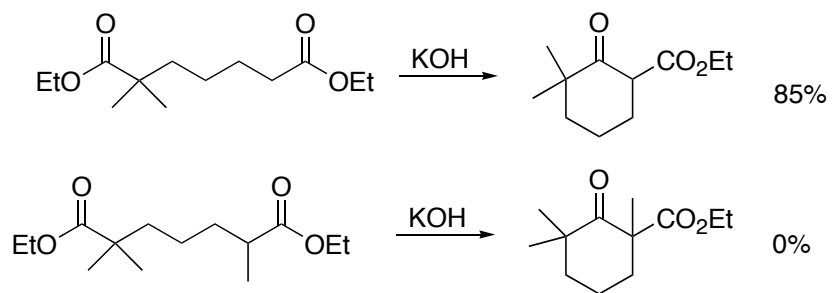
(2) Which of these two compounds is more basic and why?



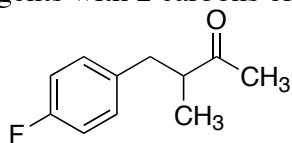
(3) Fill in the compounds in the following roadmap (only show the major product for each step)



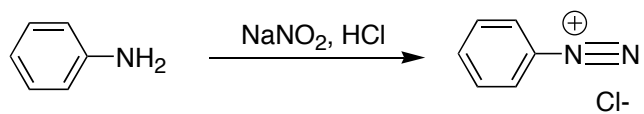
(4) Explain the following observations



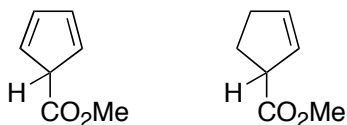
(5) Using benzene and ethylacetoacetate, synthesize the following molecule. You may use any inorganic reagents or organic reagents with 2 carbons or less.



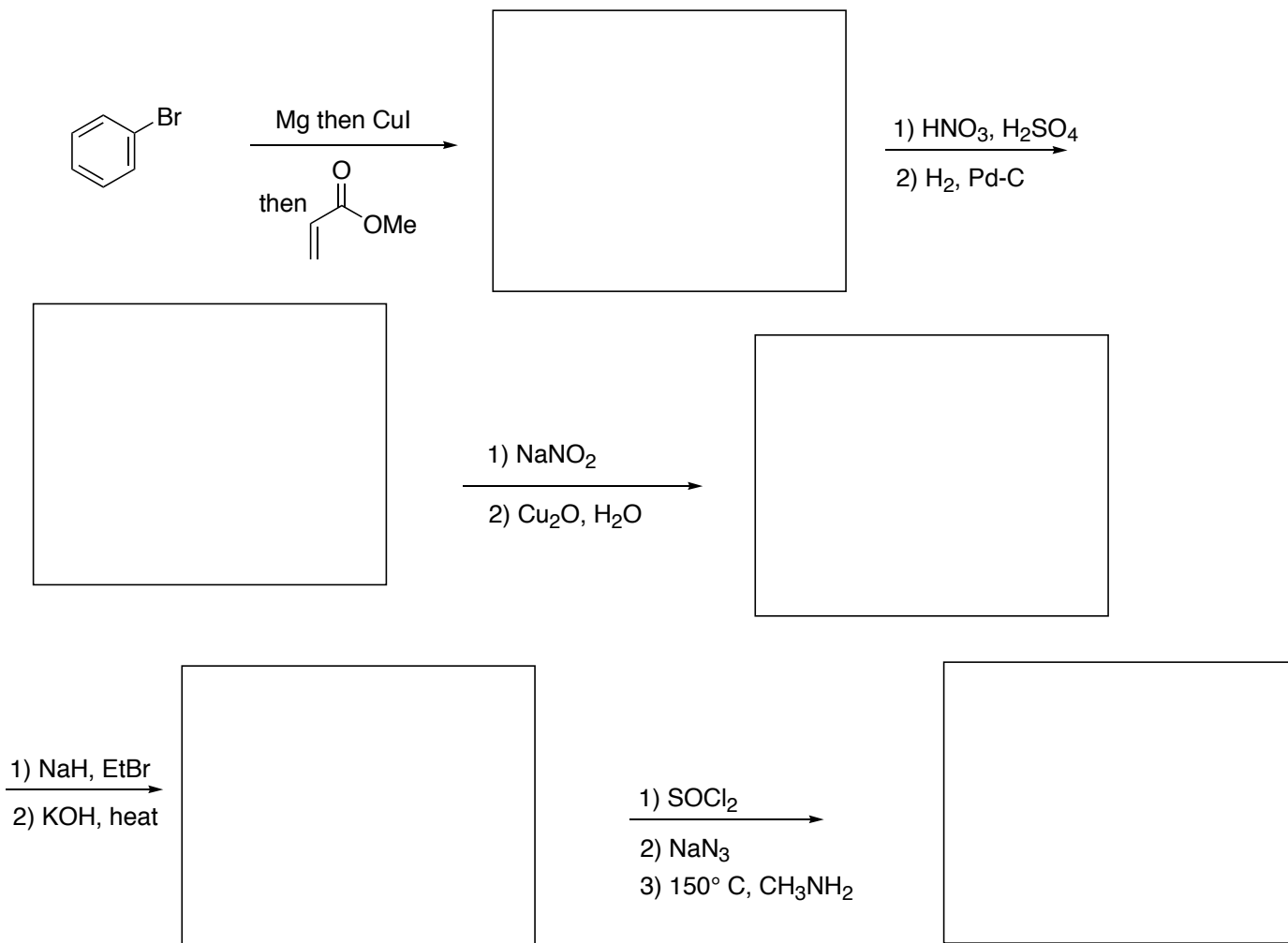
(6) Give a detailed mechanism for the following reaction



(7) Which compound has the most acidic hydrogen and why?



(8) Fill in the compounds in the following roadmap (only show the major product for each step)



(9) List the reagents (in order) needed to accomplish the following transformations

