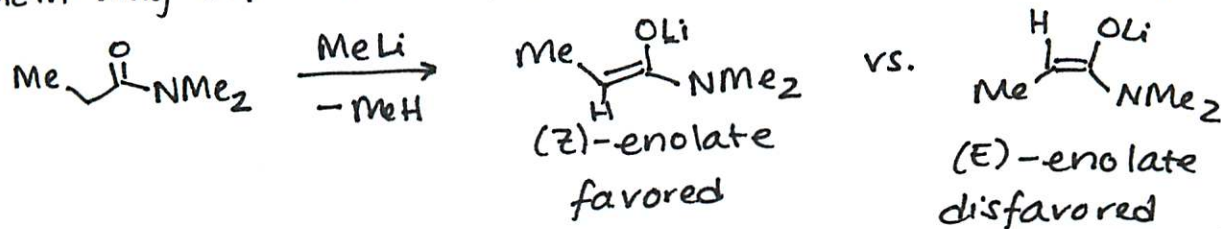


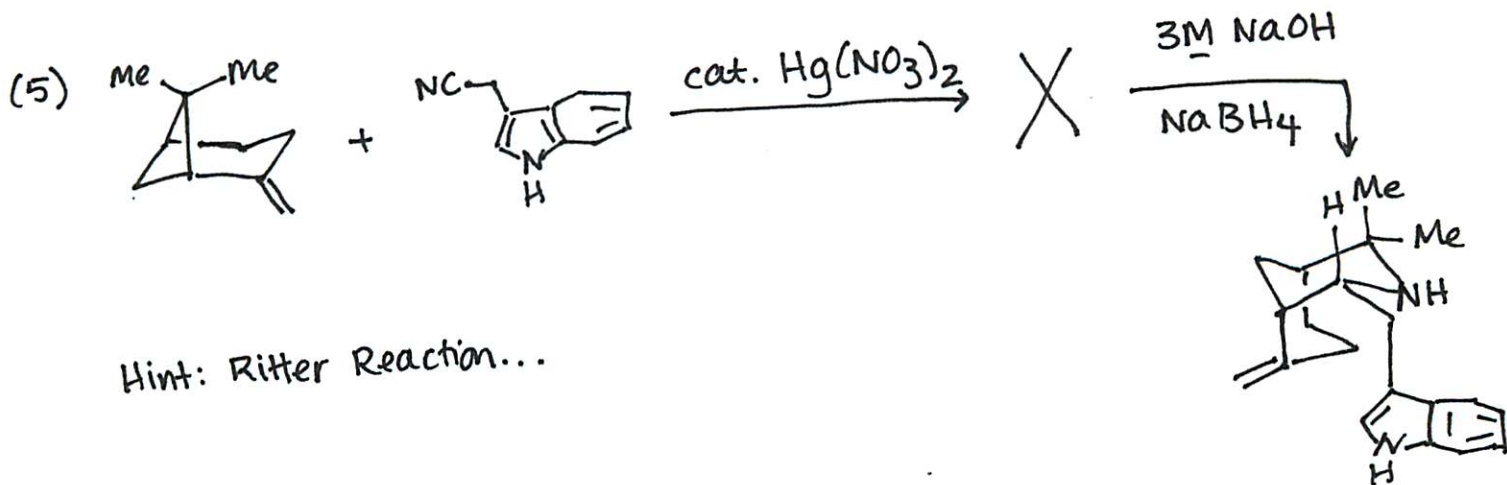
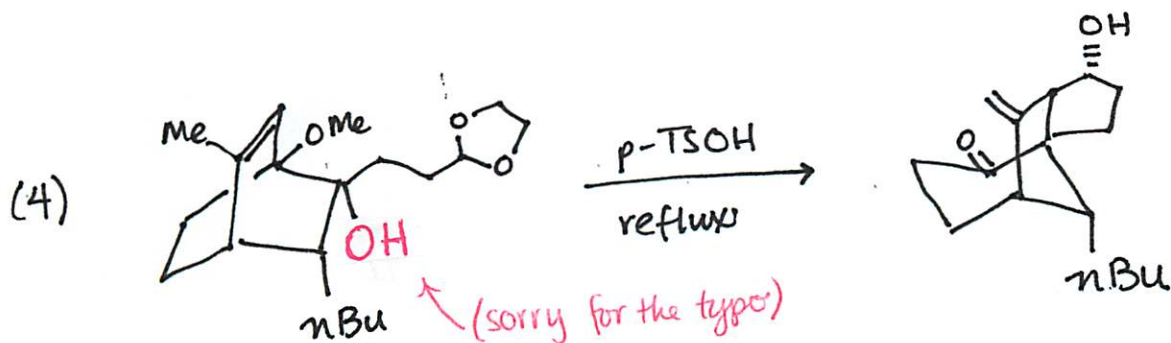
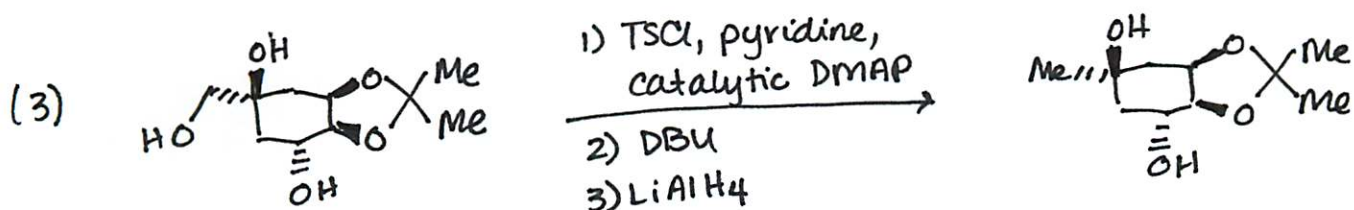
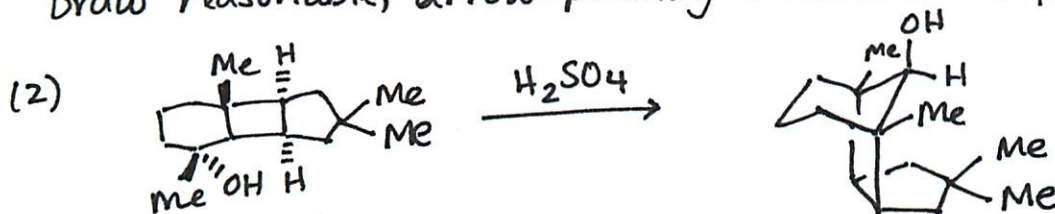
Mechanism Problems → Come prepared to discuss on Monday!

NOTE: IF I DON'T ASK YOU TO EXPLAIN STEREOCHEM, YOU DON'T NEED TO.

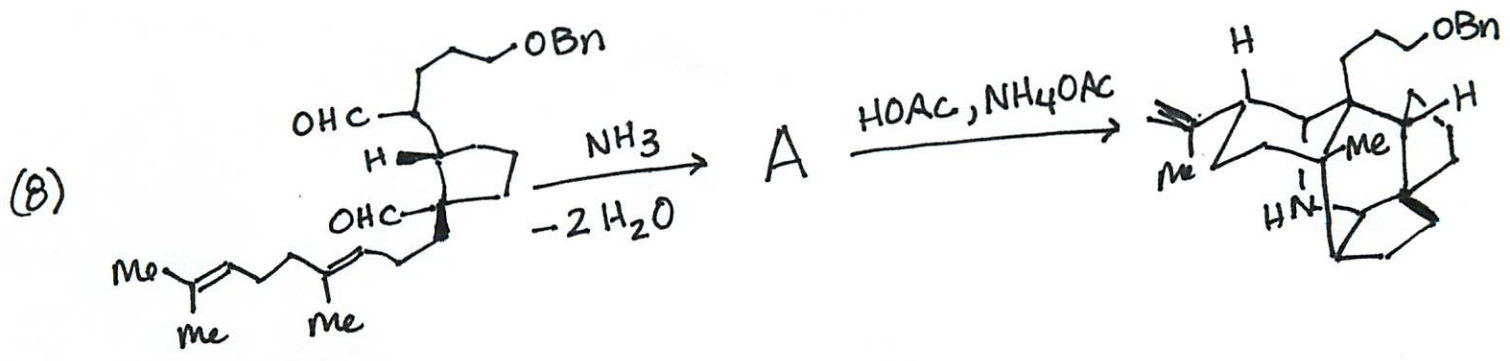
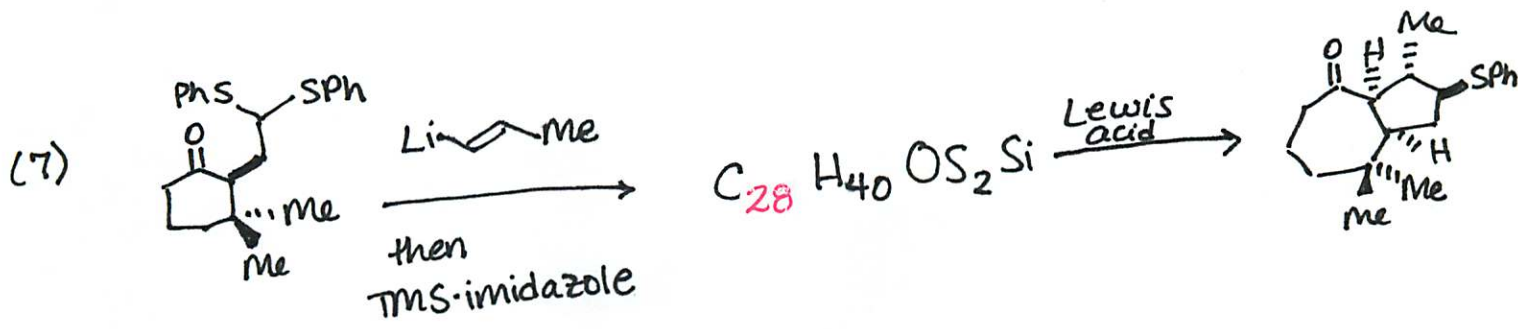
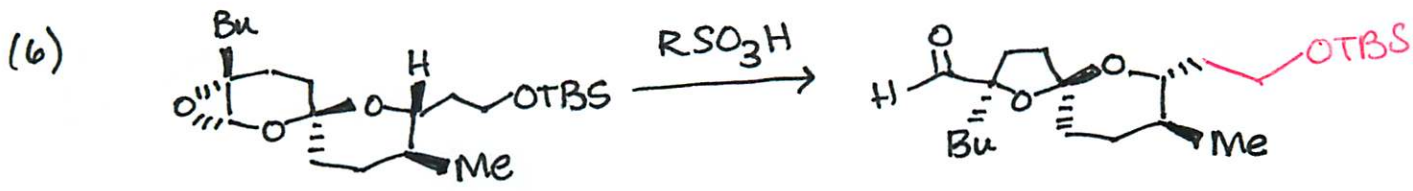
(1) Explain why deprotonation of amides results in (Z)-enolates.



Draw reasonable, arrow-pushing mechanisms for the following rxns:



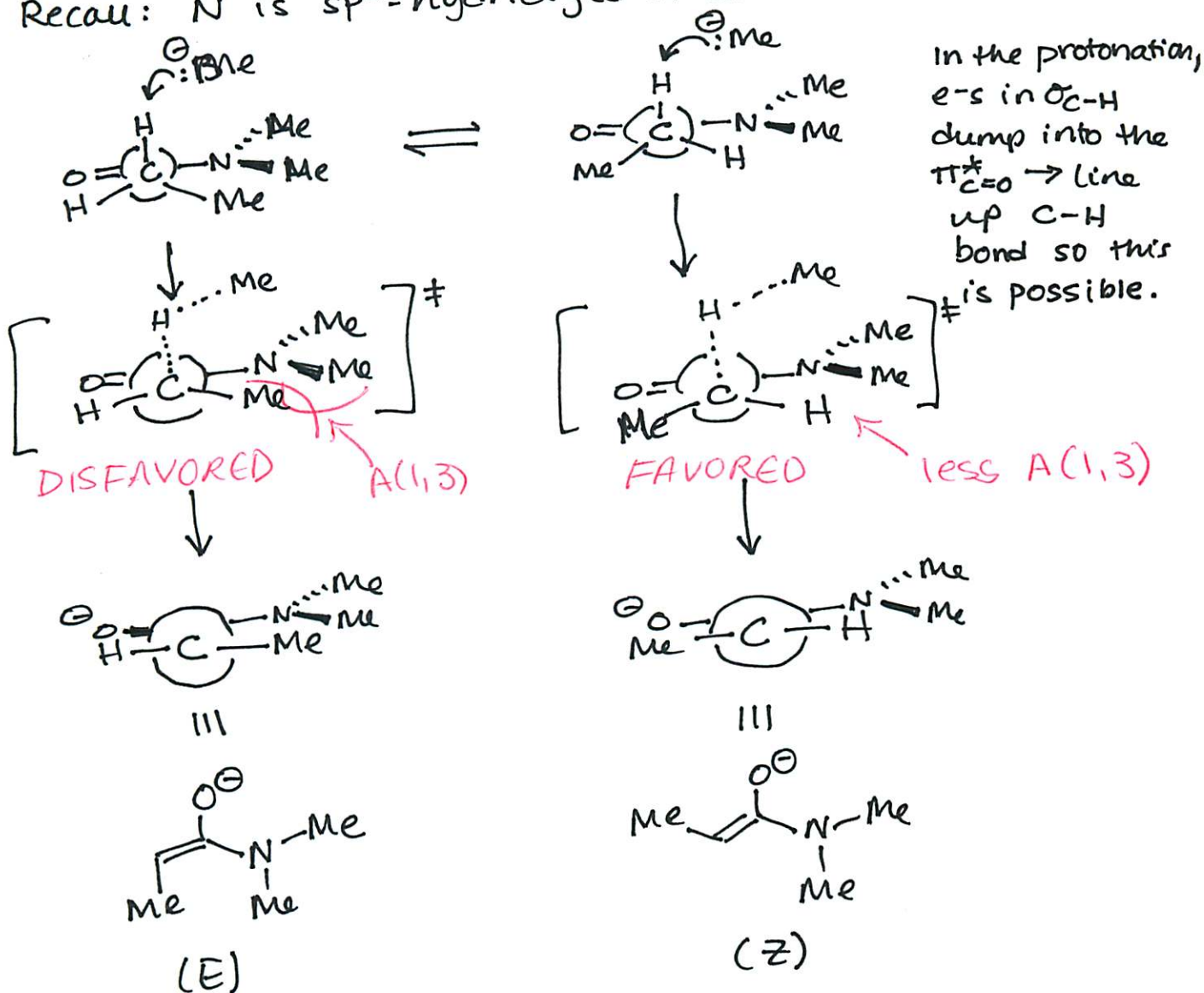
Hint: Ritter Reaction...

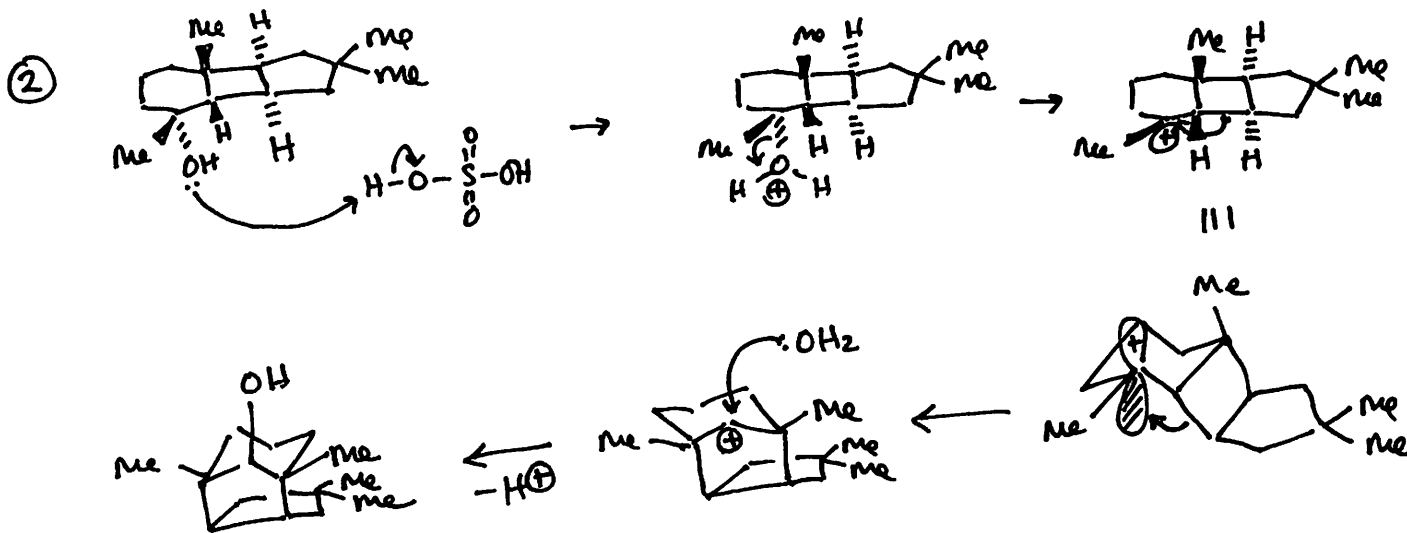


Answer Key

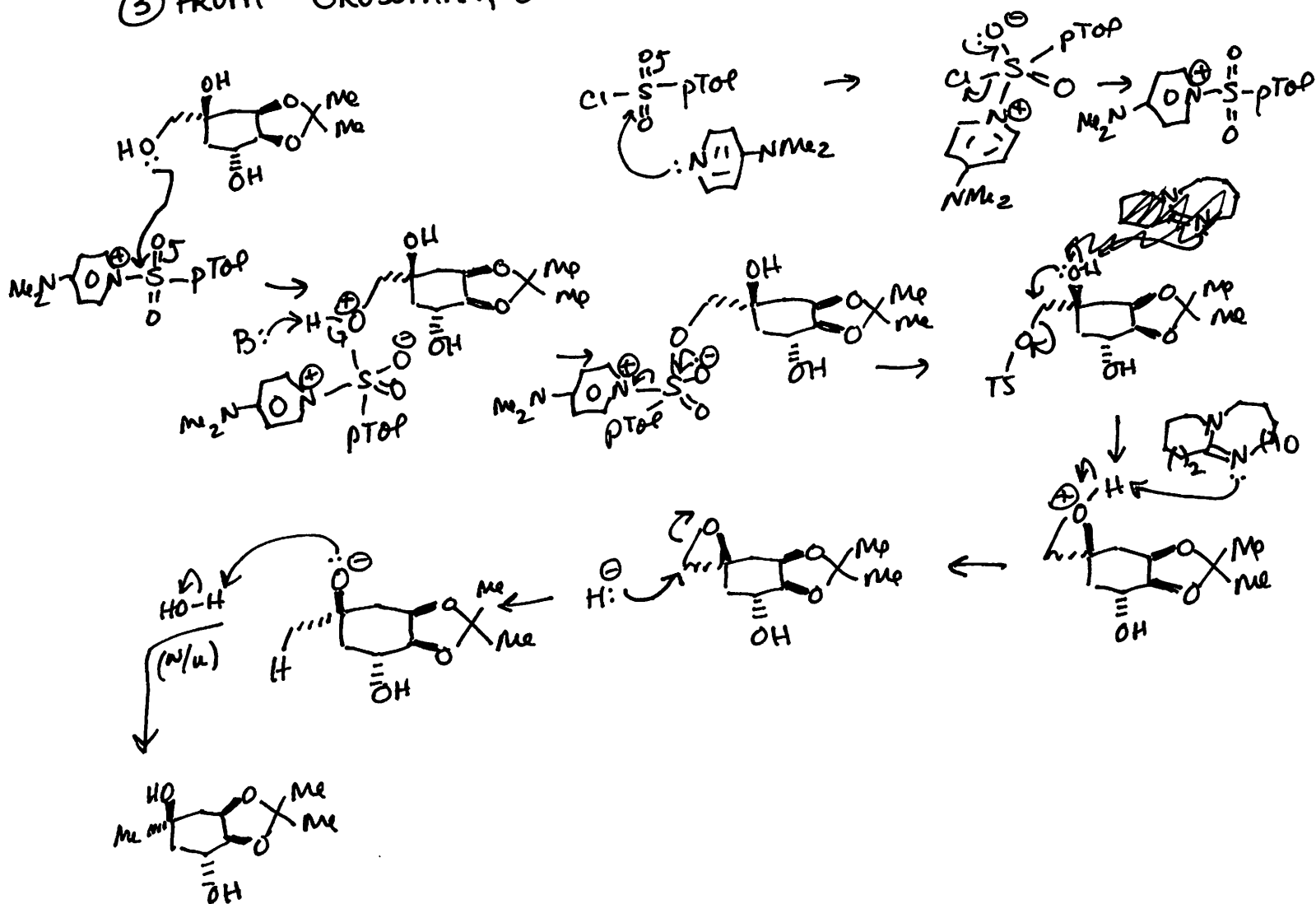
(1) MeLi = strong base, so selectivity is due to kinetic control (not thermodynamic)... need to analyze transition states (not products).

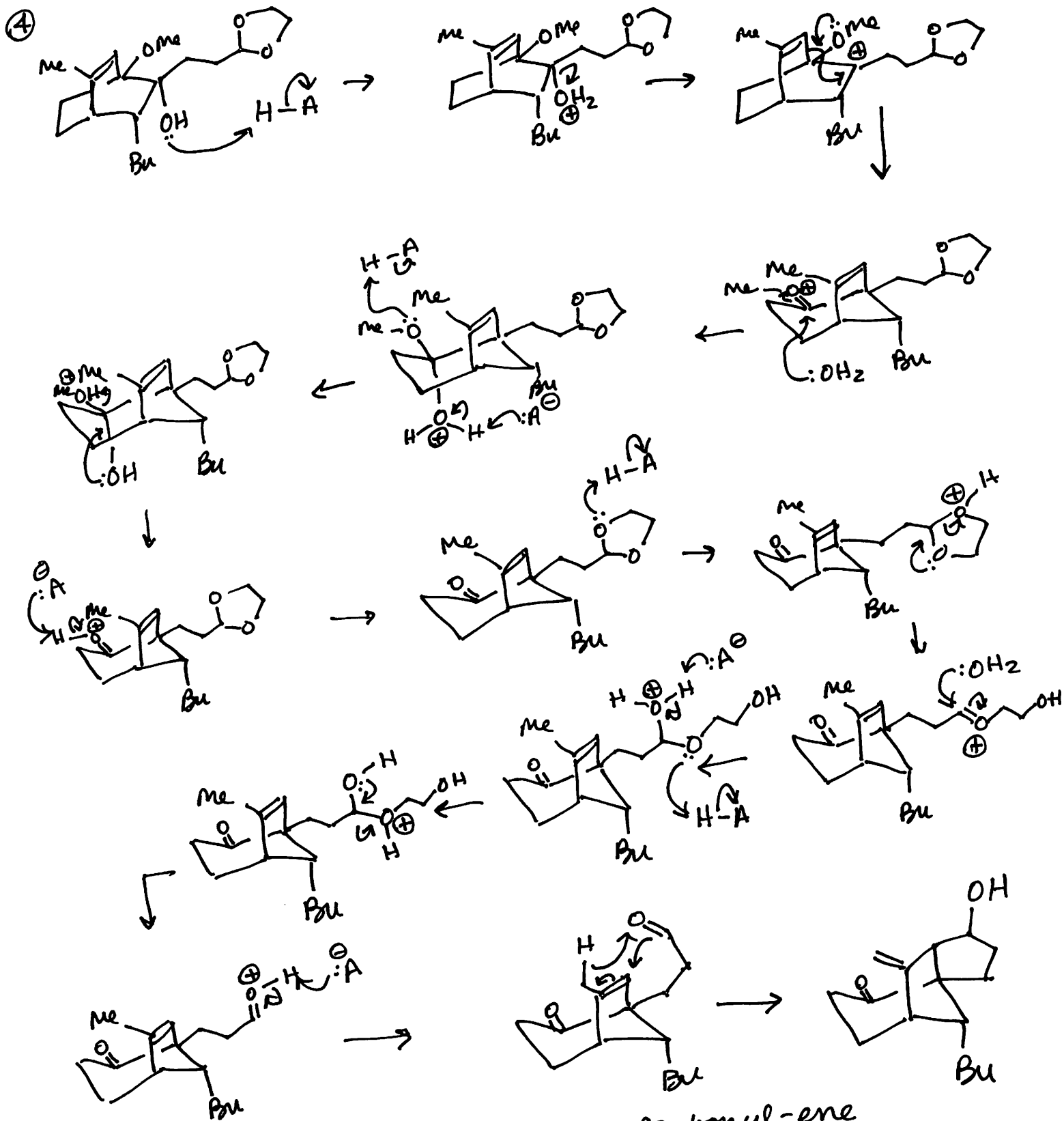
Recall: N is sp^2 -hybridized in amides.





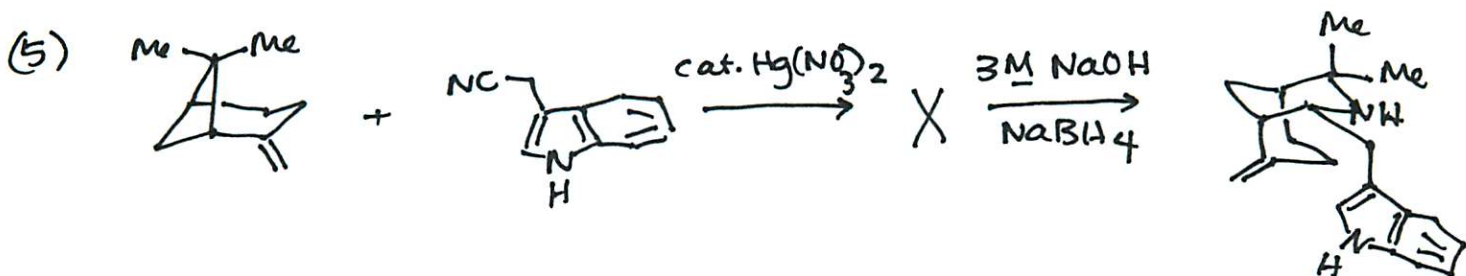
③ FROM GROSSMAN, CHAPTER 2, #2i. (on last year's midterm)





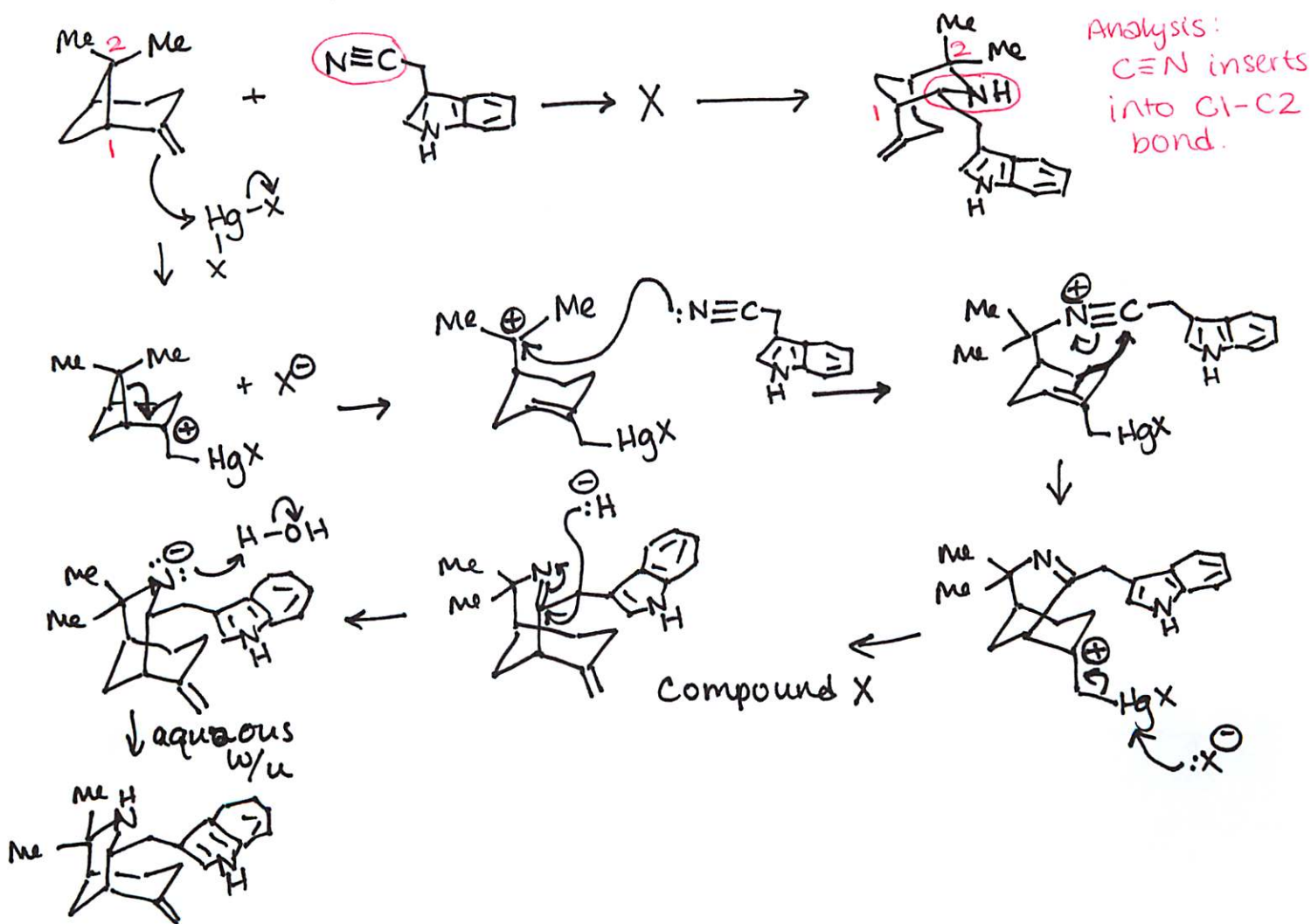
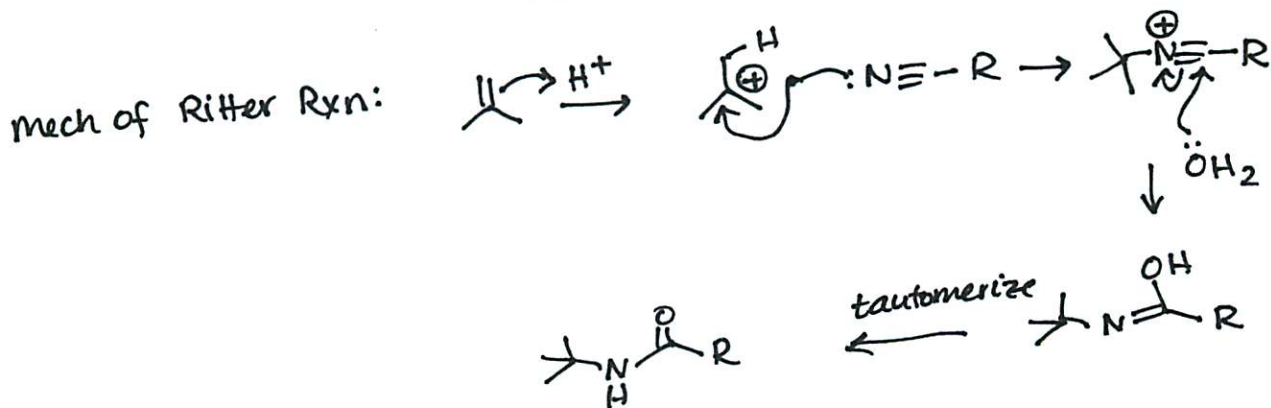
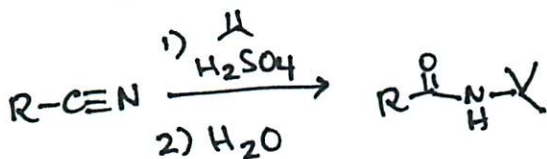
carbonyl-ene
 reaction
 (credit also given for
 stepwise mech)

(on last year's midterm)

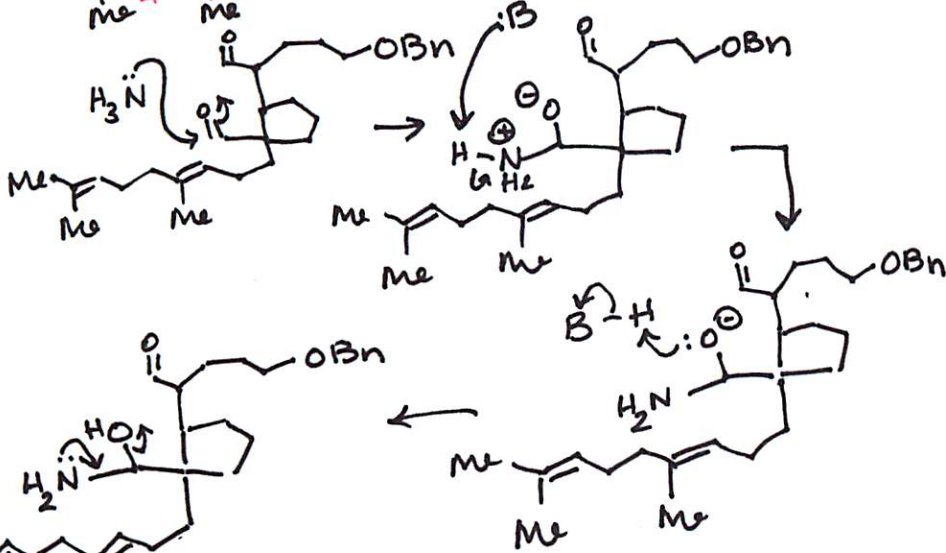
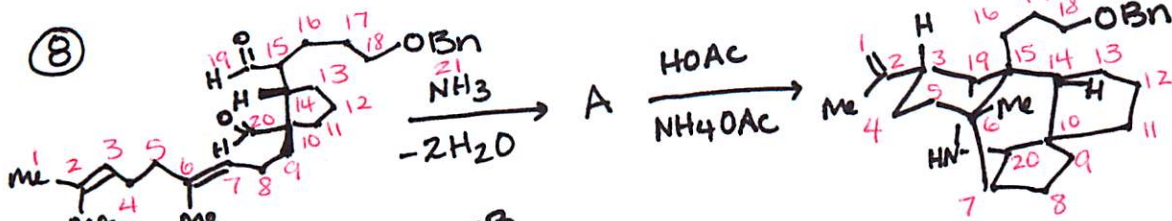


Ref: Stevens, R.V.; Kenney, P.M. Chem Commun 1983, 384.

Hint: Ritter Rxn...

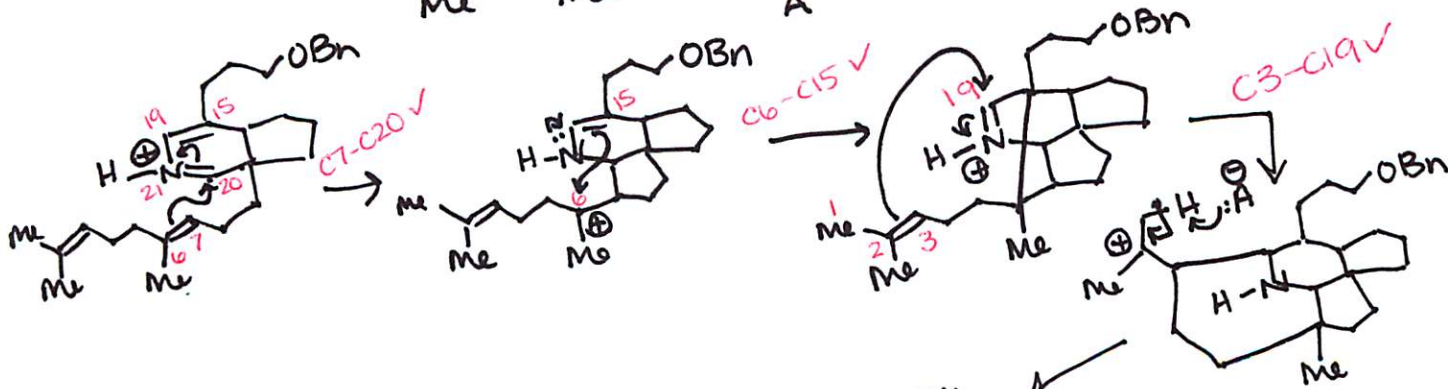
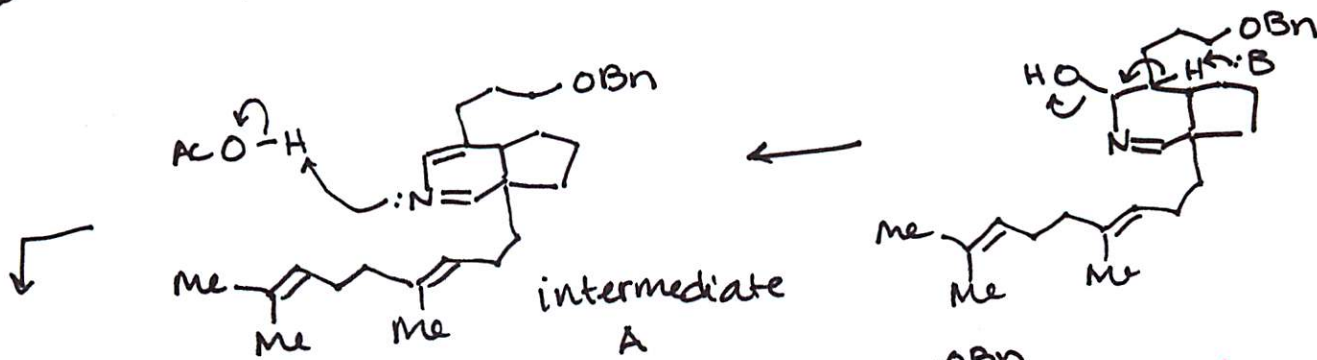
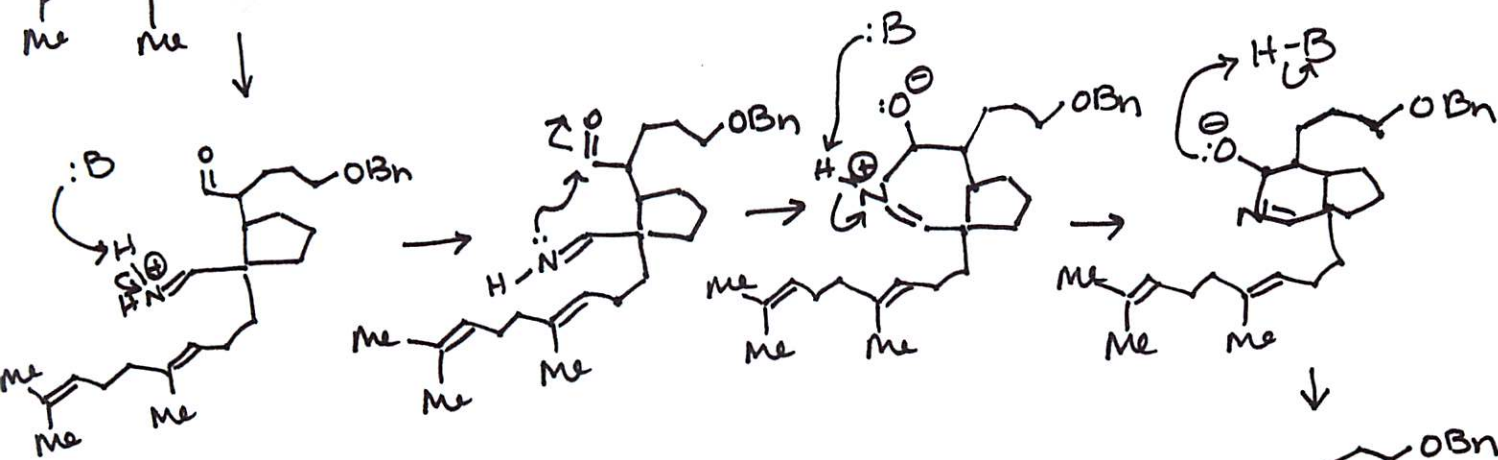


8



Break
 T16=C7
 C20=O
 C15-H
 C19=O
 C1-H

Make
 C6-C15
 C7-C20
 C20-N21
 C9-N21
 C9-C3
 T11=C2



Reference: J. Org. Chem. 1992, 57, 2544.

RLt
☺