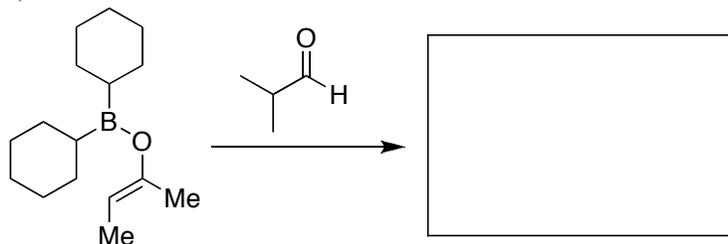


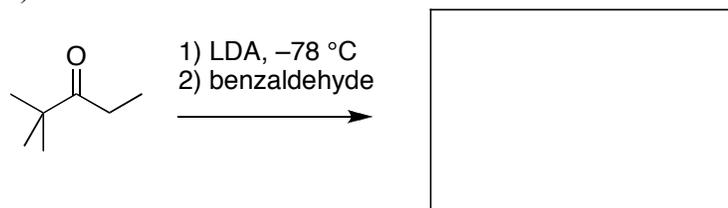
Problem set 5
Chapter 34.

1. Fill in the boxes with the reagents required to produce the stereoisomer shown, or with the MAJOR stereoisomer produced by the reaction conditions given. For **all structures**, indicate whether the structure is achiral, a single enantiomer, or racemic.

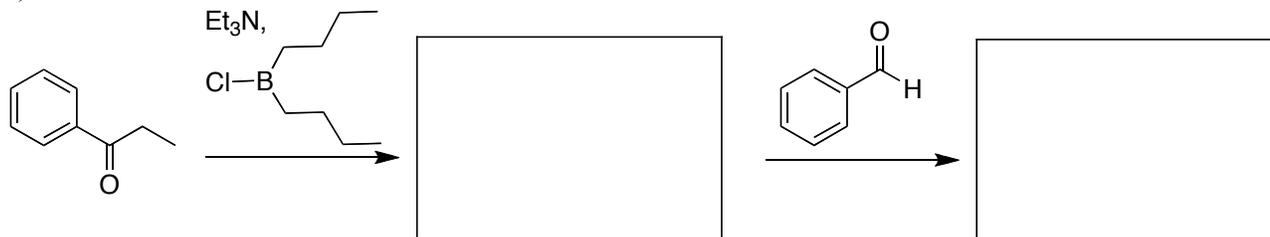
a)



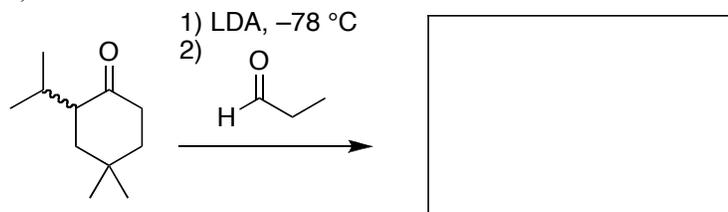
b)



c)

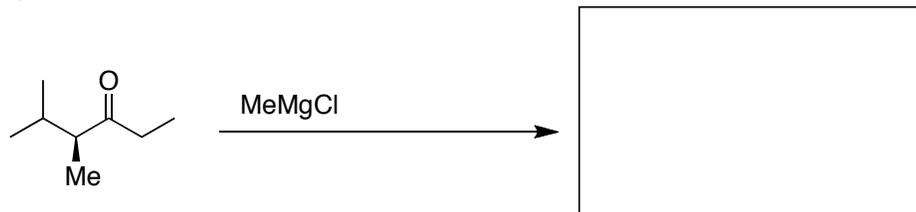


d)

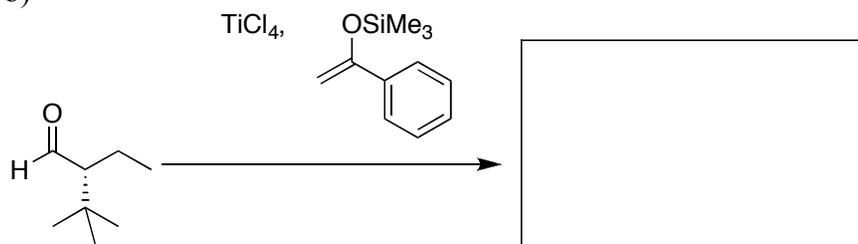


2. Give the product of the following reactions. Explain the origin of the observed stereoselectivity in one short phrase, and draw 3D stereochemical diagrams of **starting materials and products** to illustrate your point.

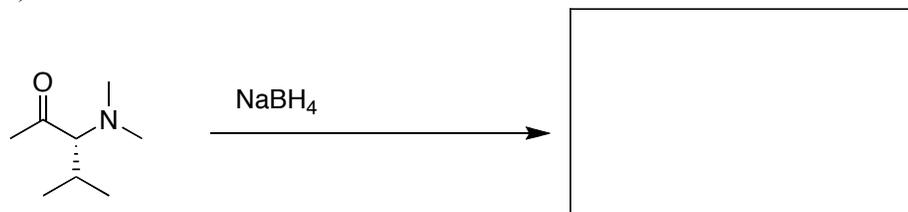
a)



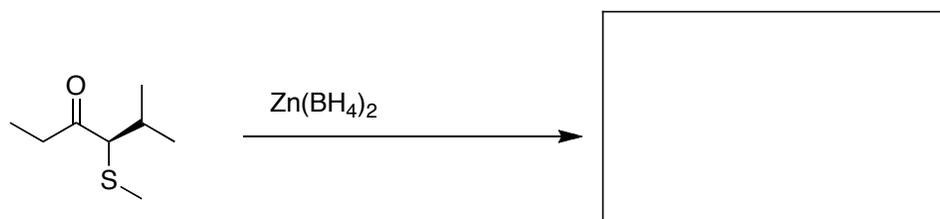
b)



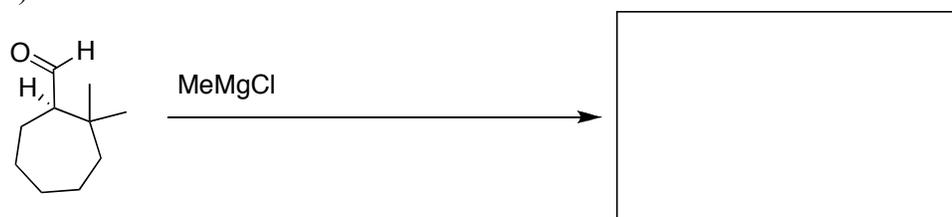
c)



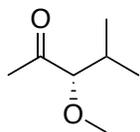
d)



e)



3. In what conformation is the compound below attacked by a nucleophile? Use diagrams and text to clearly indicate WHY this is the most reactive conformation.



END