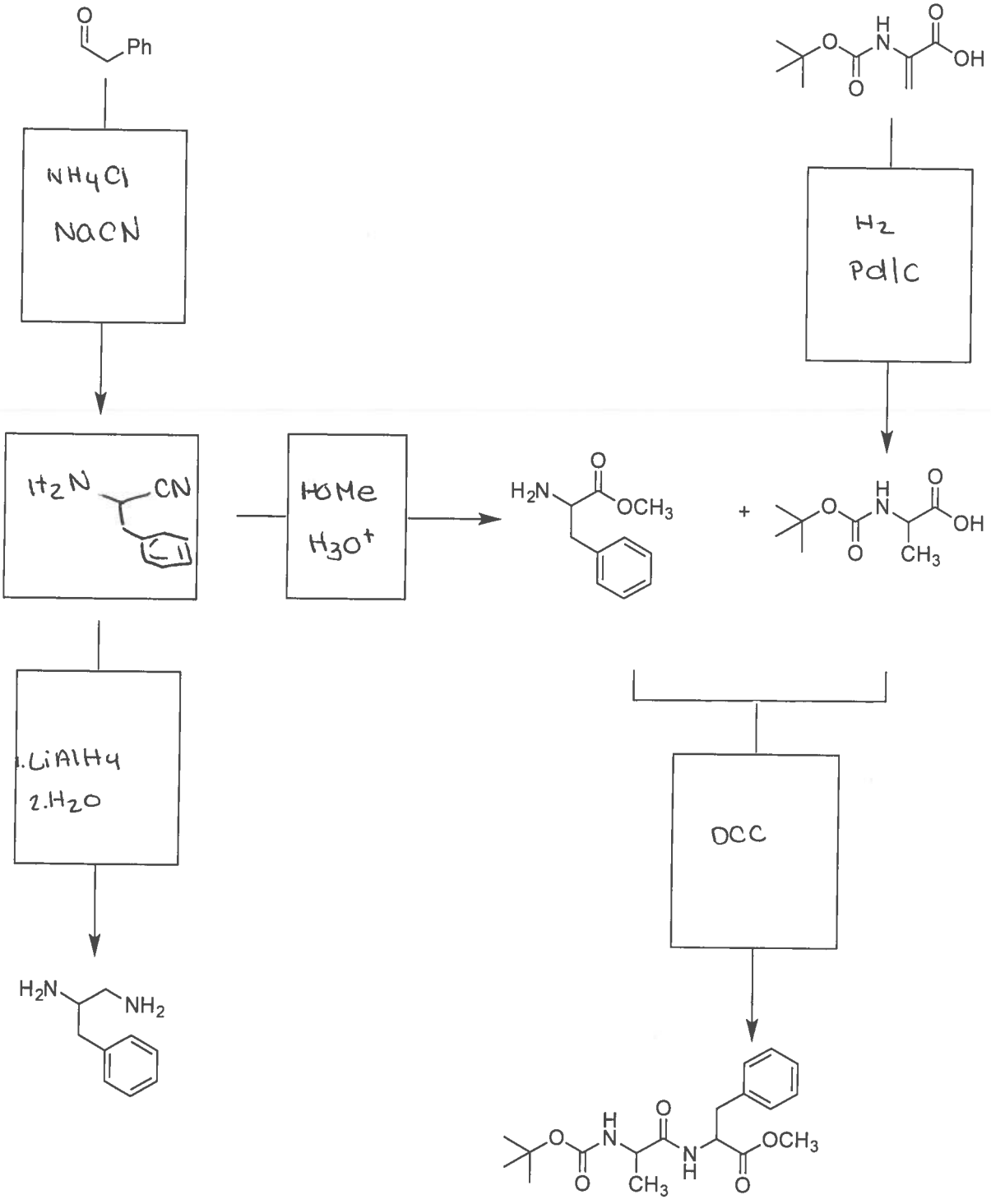
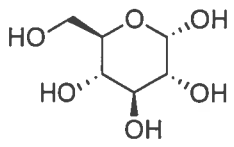
Worksheet 8, Chem 51C, Jarvo

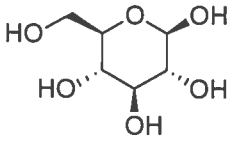
1. Fill in the boxes with the appropriate starting material, reagent or major product. You can ignore stereochemistry.



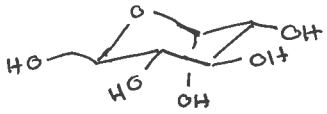
2.

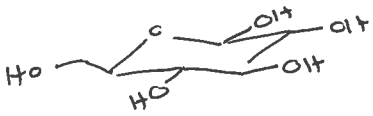
Draw the three-dimensional chair represenations of the following carbohydrates:



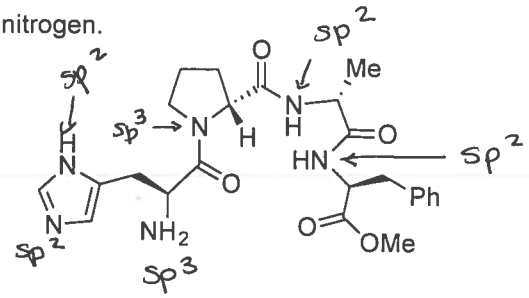


What are the names of these compounds? sugars
What is the relationship between them?
diastereomers

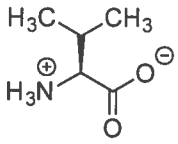




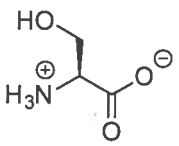
b. Label the hybridization of each nitrogen.



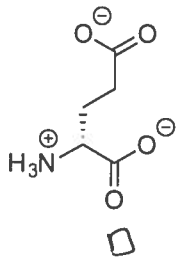
c. Label the following amino acids as D or L



L



L

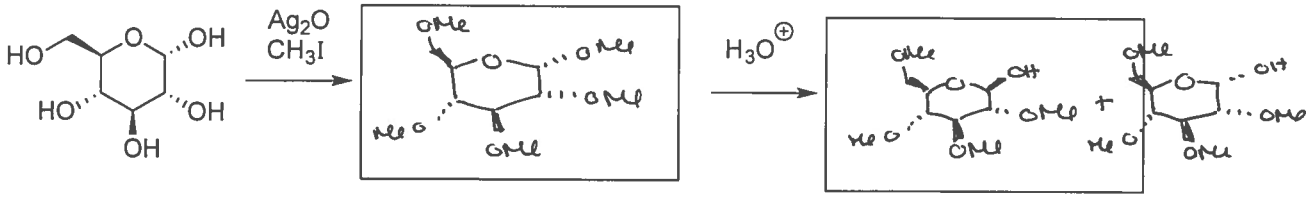


D

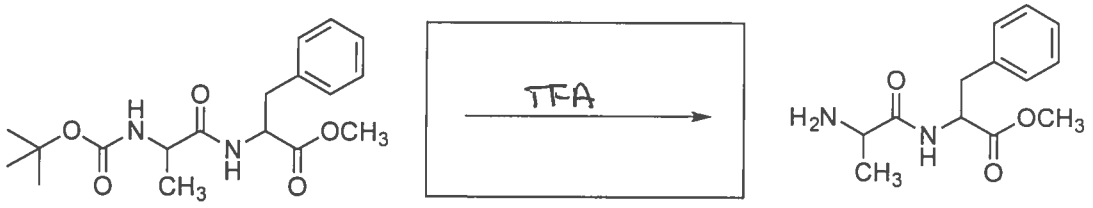
d. Draw and label with their names any 5 L-amino acids

2. Fill in the boxes with the appropriate starting material, reagent or major product.
Show stereochemistry where appropriate

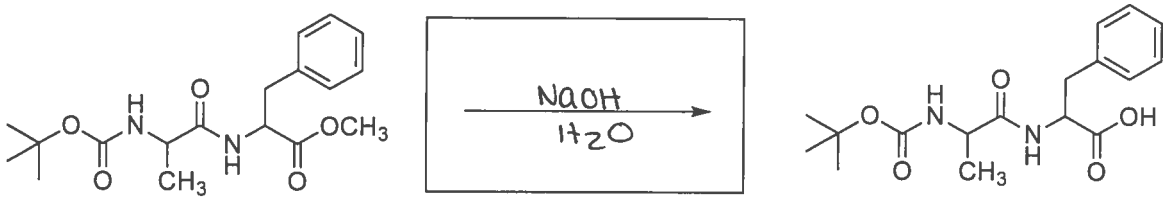
a.

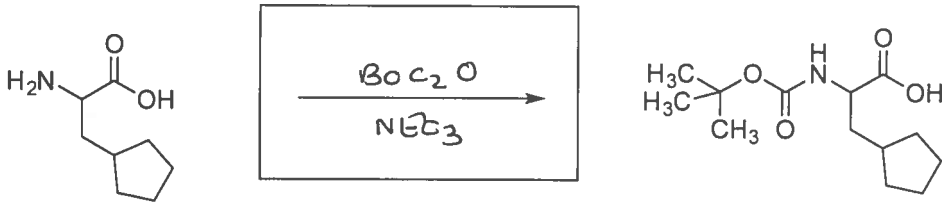


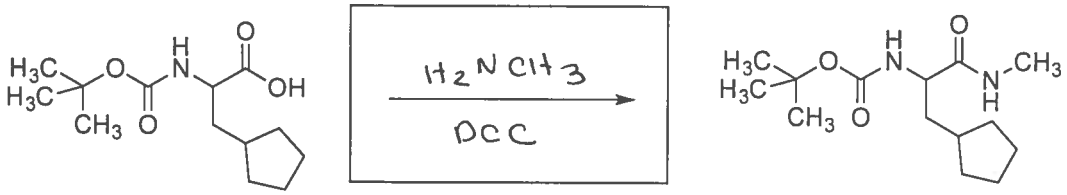
b.



c.

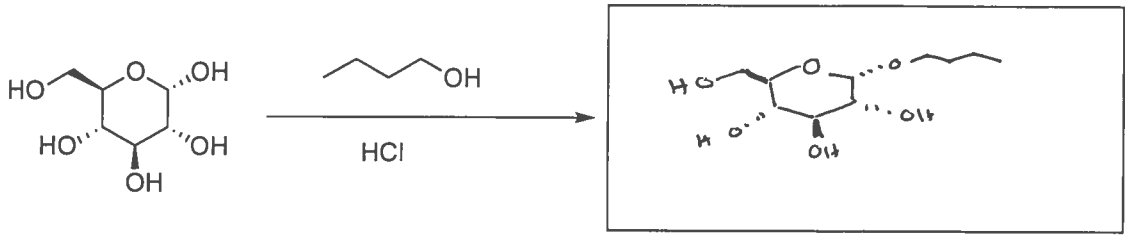




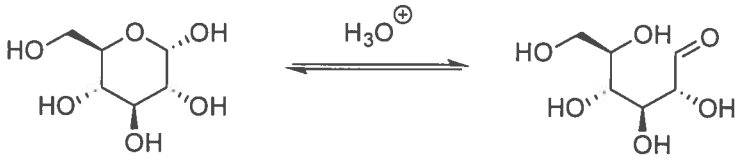


3. Fill in the blank and provide an arrow-pushing mechanism.

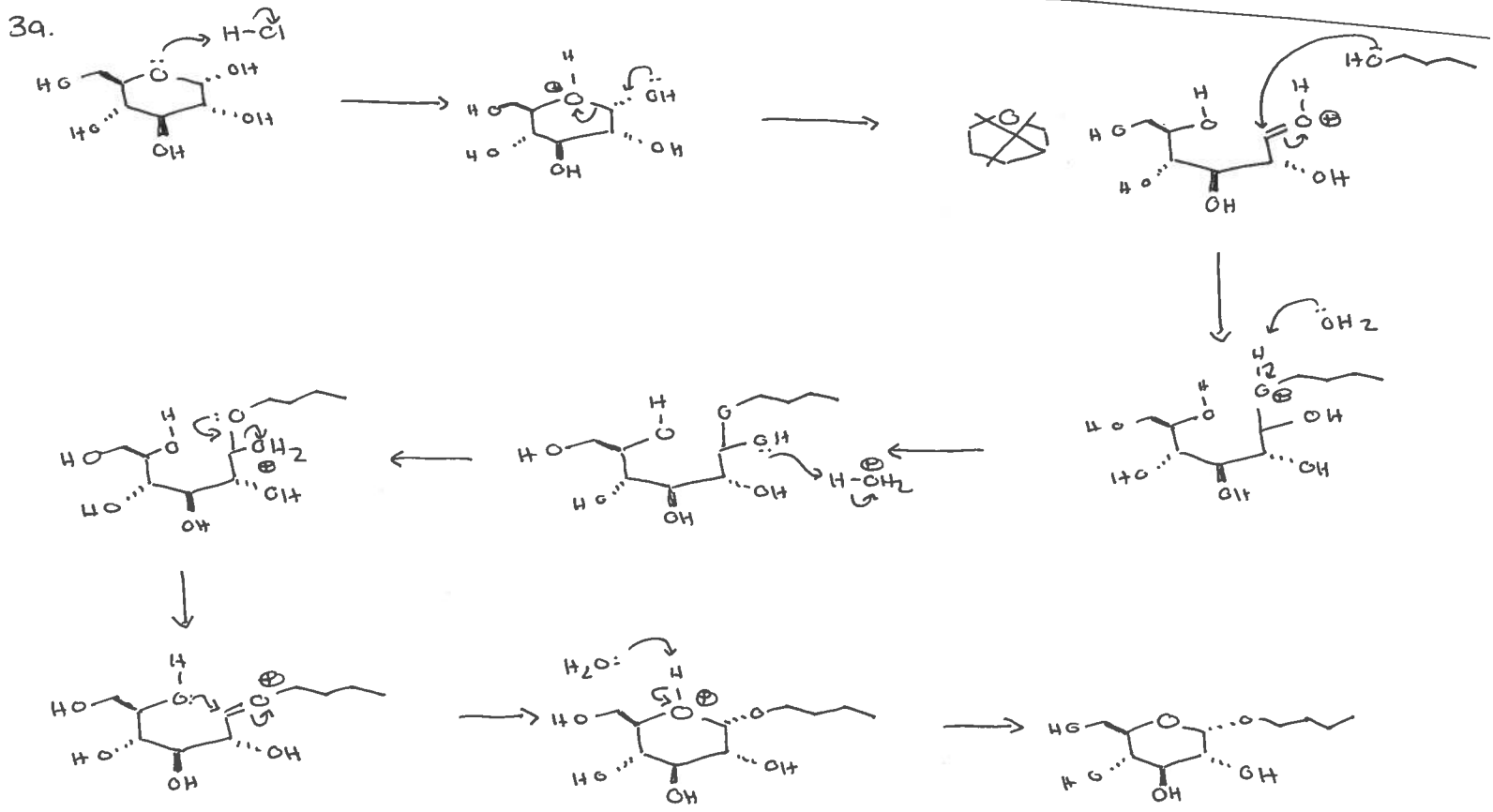
a.



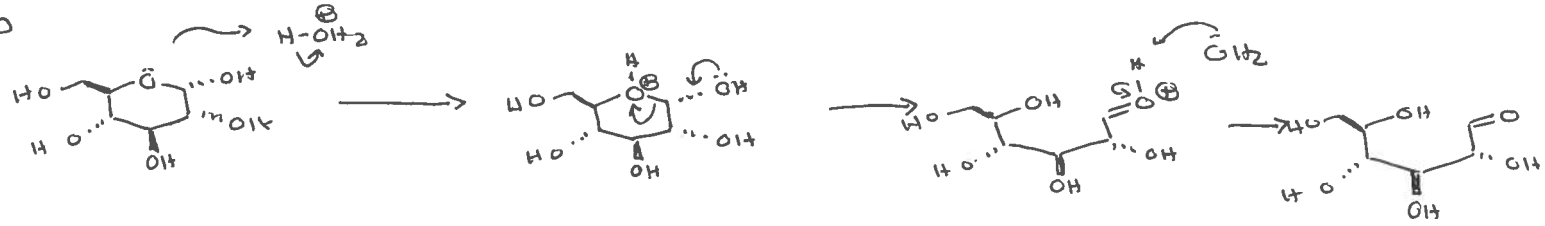
b. Provide a mechanism:



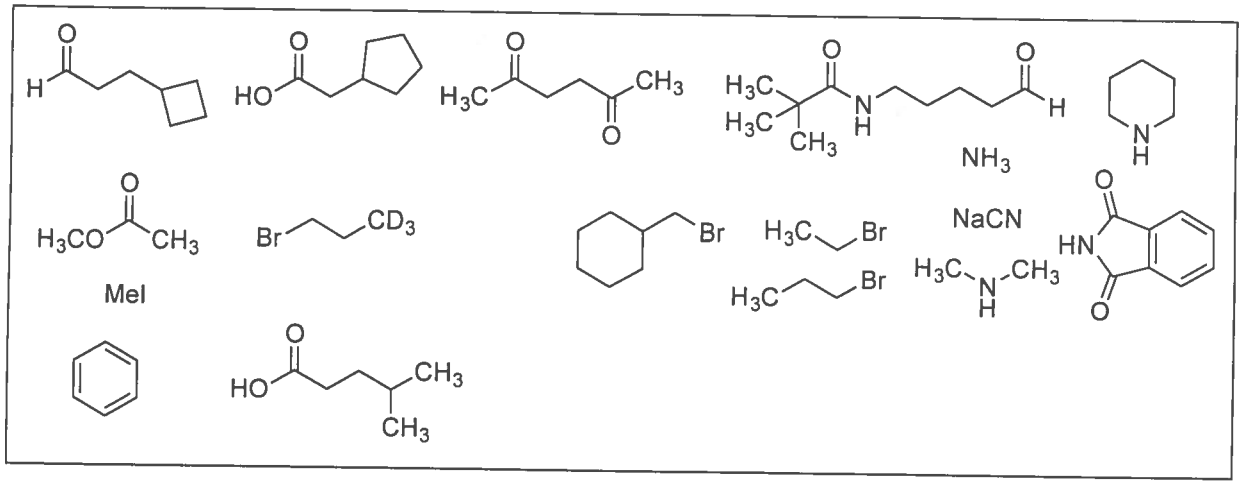
3a.



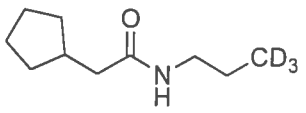
3b



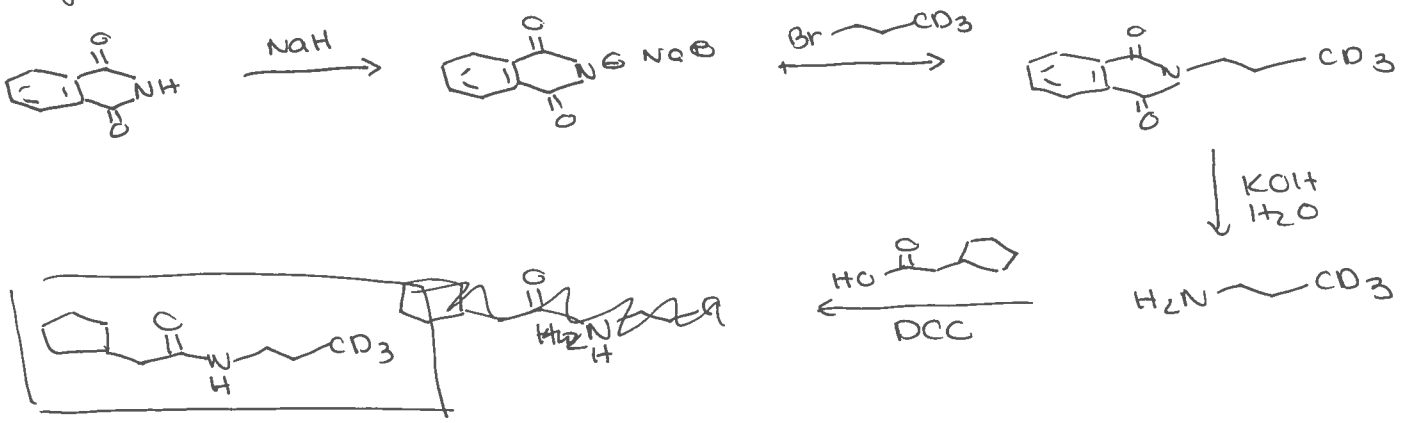
5. Propose syntheses of the targets shown below.
All carbons in the product must come from the starting materials provided, you can use any reagent you wish.



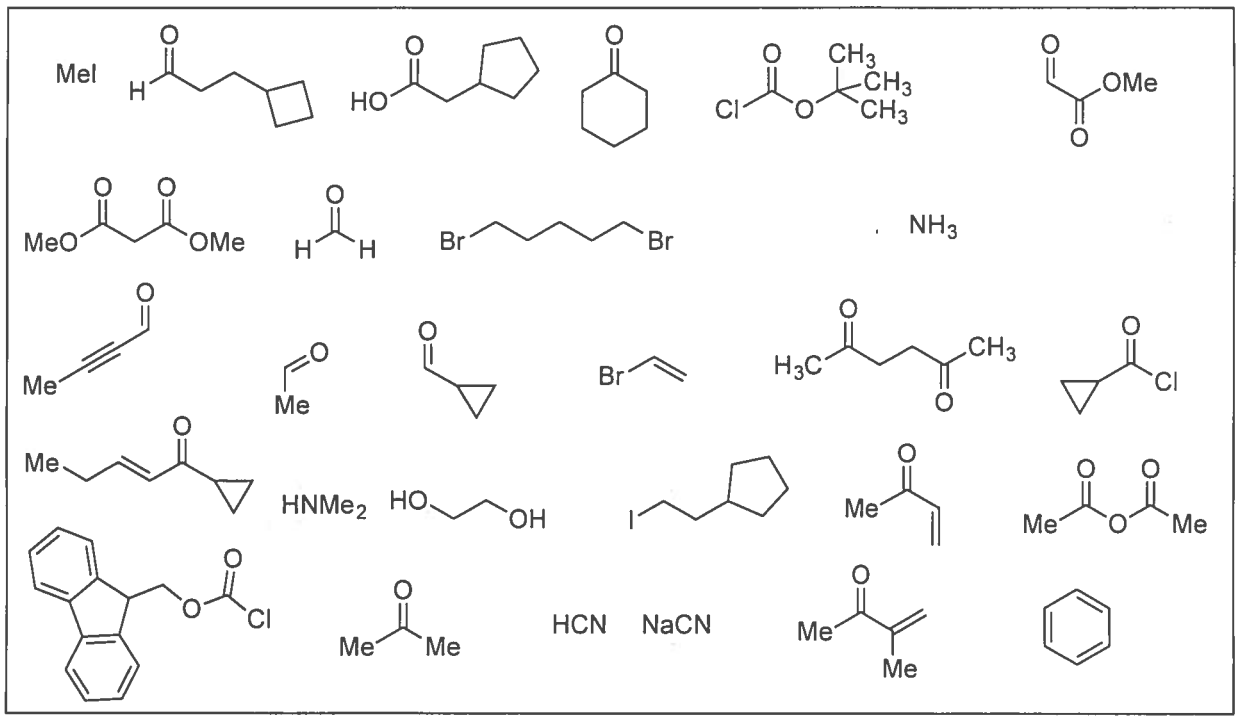
Target C.



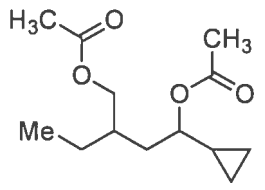
Target B. C



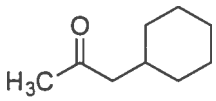
6. Propose syntheses of the targets shown below.
All carbons in the product must come from the starting materials provided, you can use any reagent you wish.



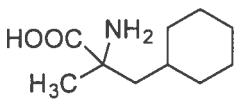
Target D.



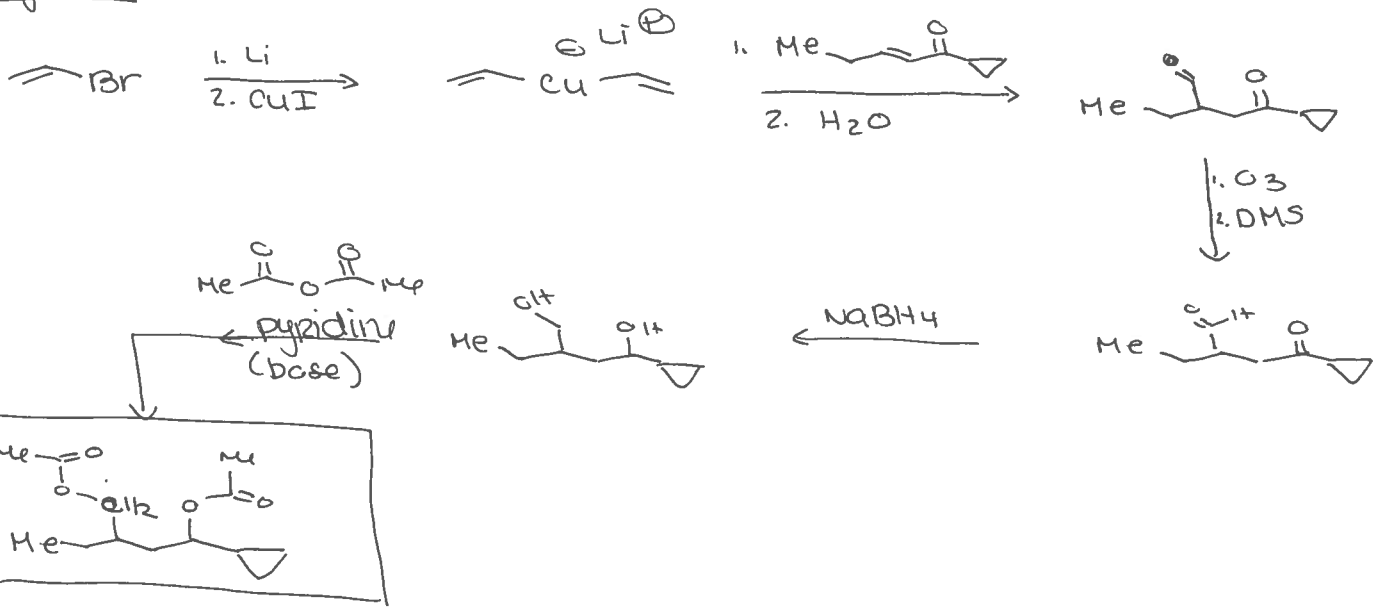
Target E.



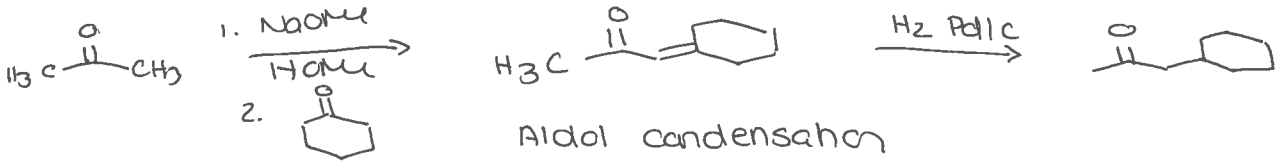
Target F.



Target D:

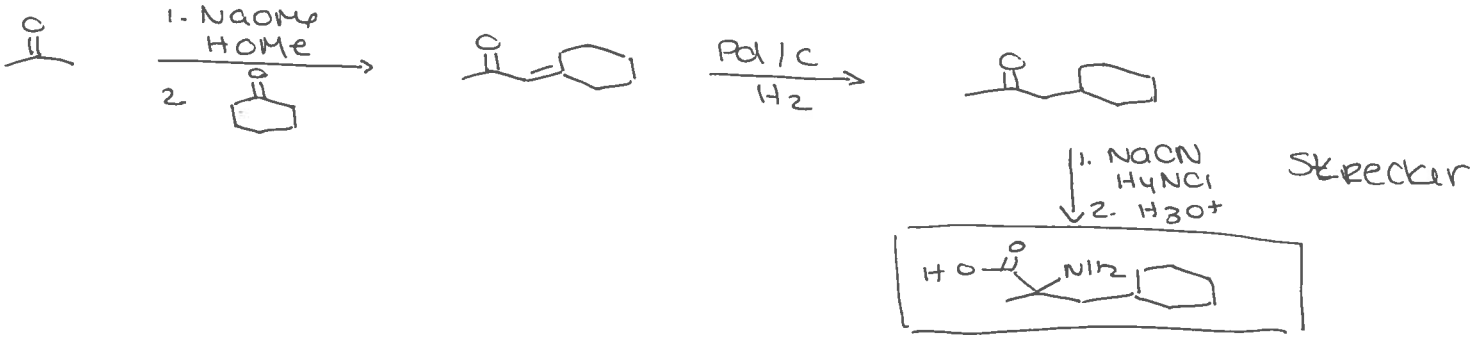


Target E:



Aldol condensation

Target F



Strecker