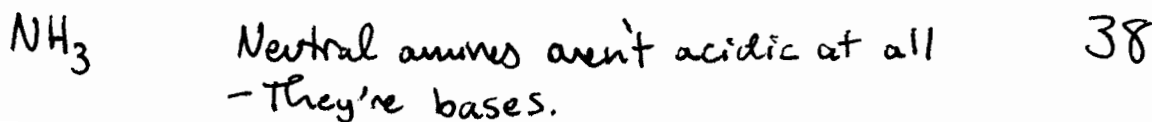
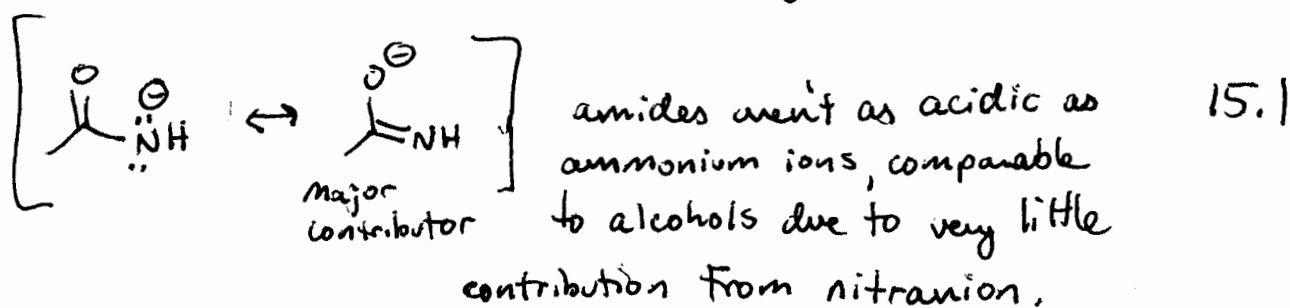
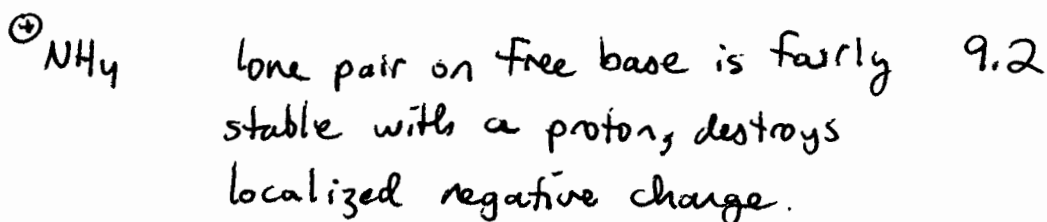
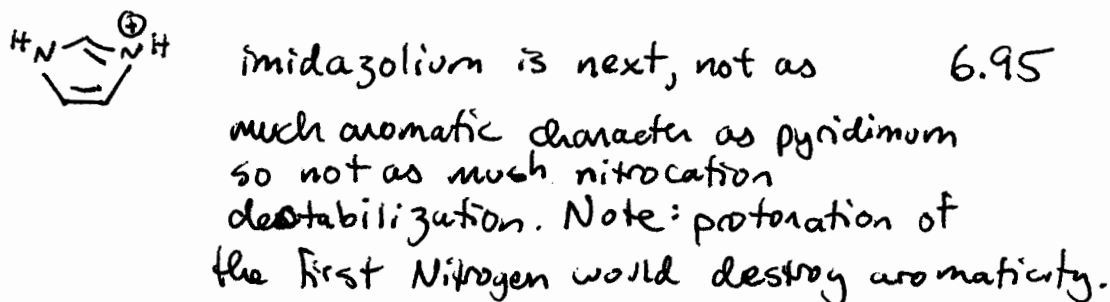
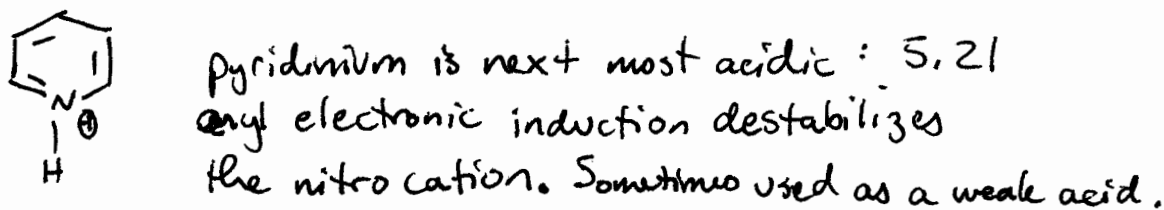
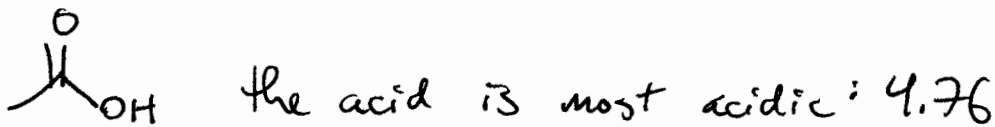
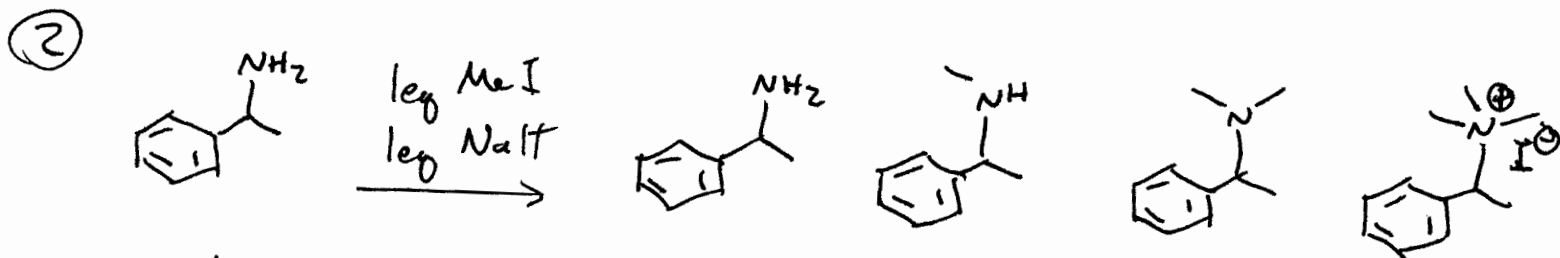


# ANSWERS

- ① Recall as pKa increases, strength of X-H bond increases or acidity decreases

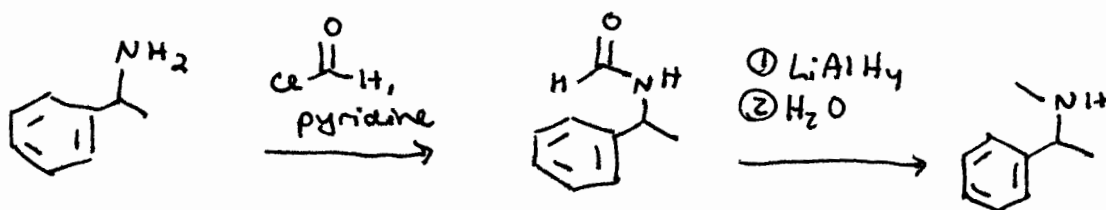


# ANSWERS



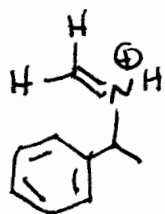
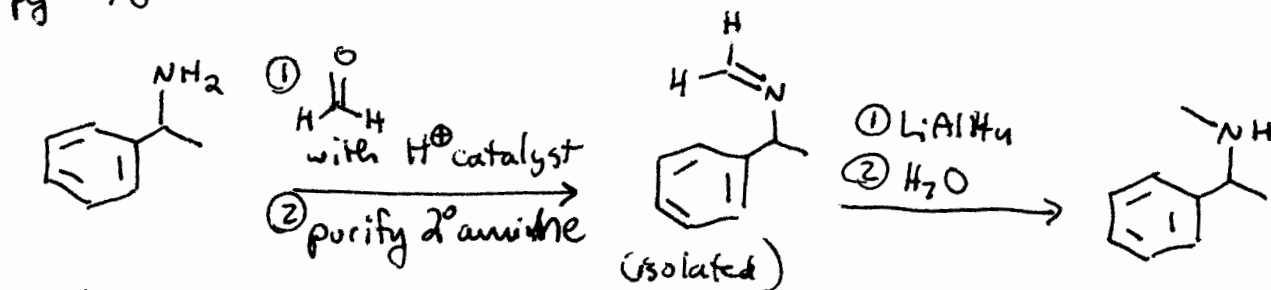
\* Note:  $\text{MeI} + \text{NaH} \rightarrow \text{No Reaction}$   
because hydride is not nucleophilic, just basic.

③ Pg 880



multiple addition doesn't occur because amides are poor nucleophiles.  
Other reductions are possible.

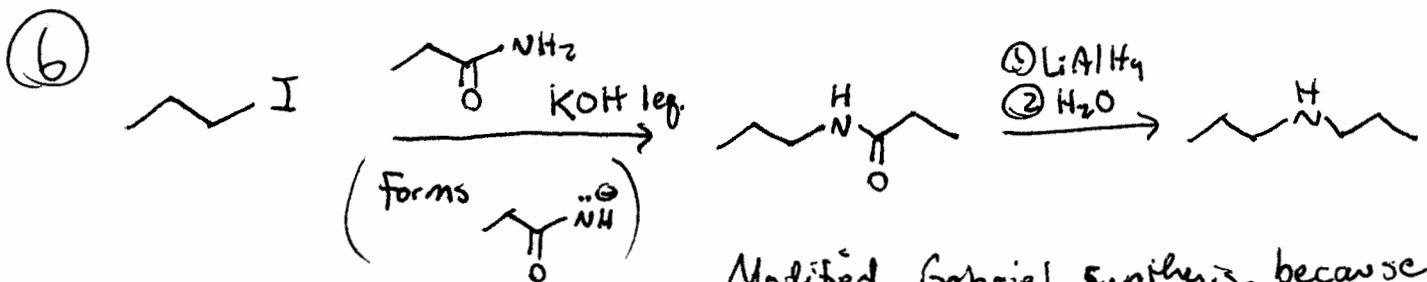
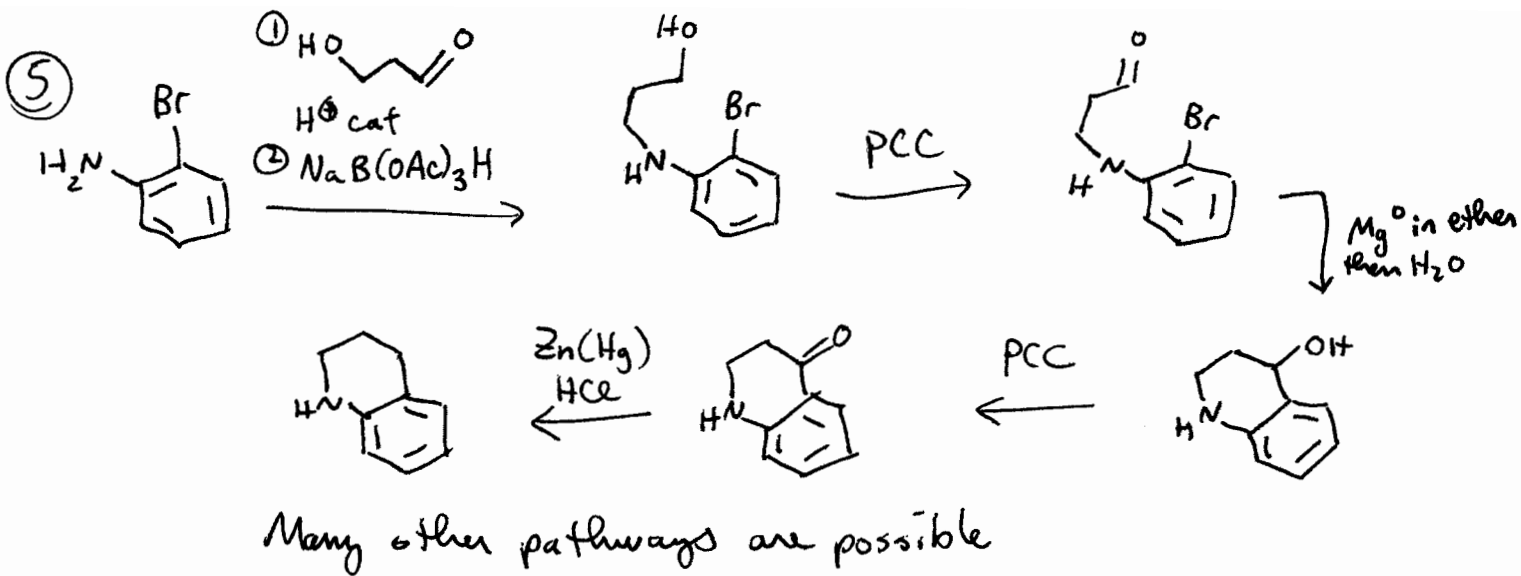
④ Pg 878



ammonium ions are difficult to purify, and react with  $\text{HCHO}$  after reduction to overalkylate.

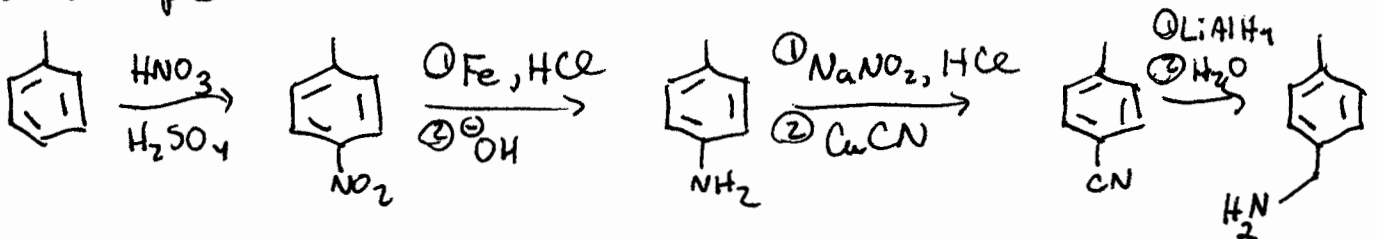
So use ONLY catalytic amounts of acid.

Again, other reductions besides  $\text{LiAlH}_4$  are possible.



Modified Gabriel synthesis, because deprotonated amide is a good nucleophile and neutral amide is not.  
 Other pathways possible.

⑦ For example:



⑧ For example:

