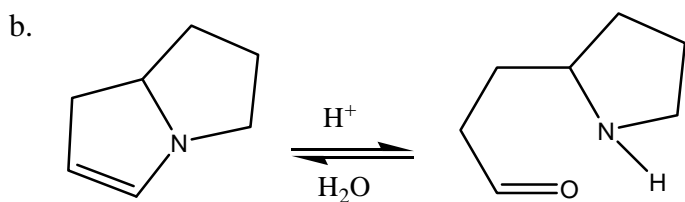
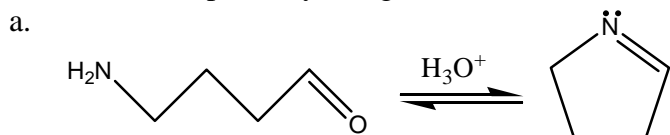
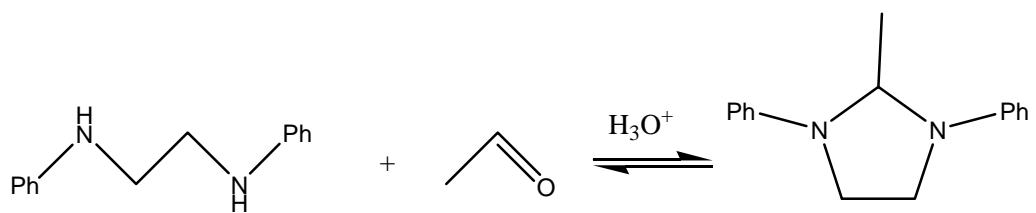


**Chapter 19 Worksheet**

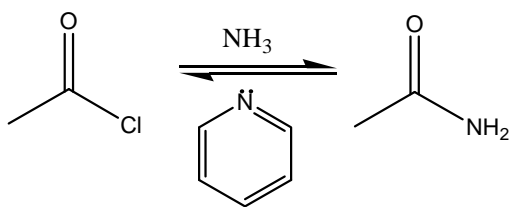
1. Propose a mechanism to account for the following reactions. Be sure to show each step clearly using curved arrows to show the movement of electrons.



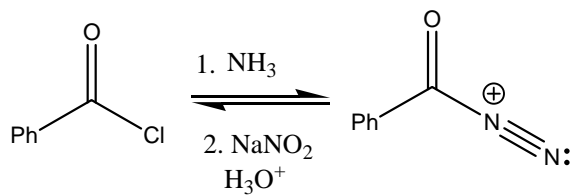
c.



d.

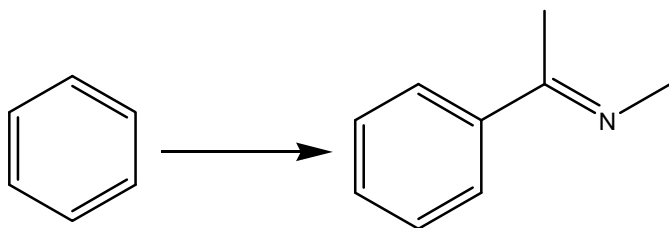


e.

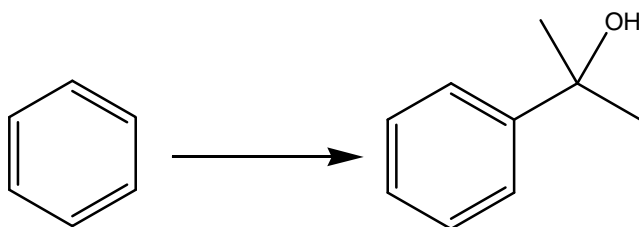


2. Propose a series of reactions that will lead to the product in good yields. You can use any other reagents as to complete the synthesis.

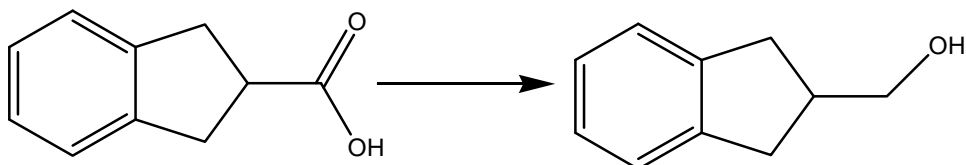
a.



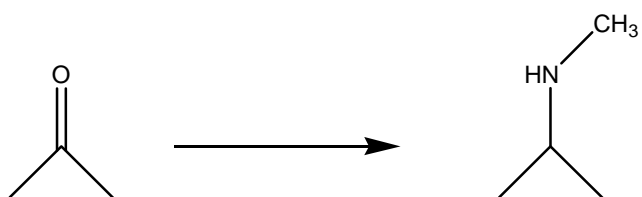
b.



c.



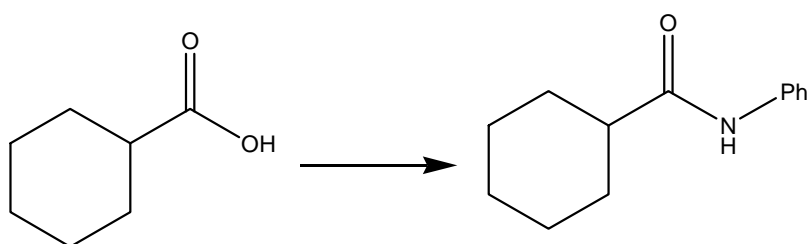
d.



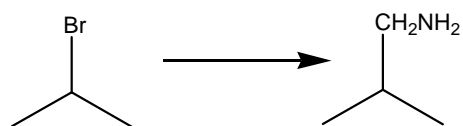
e.

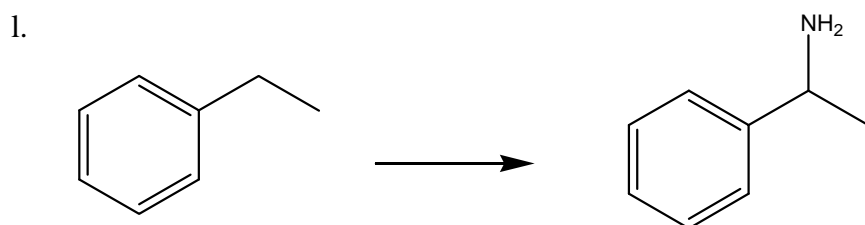
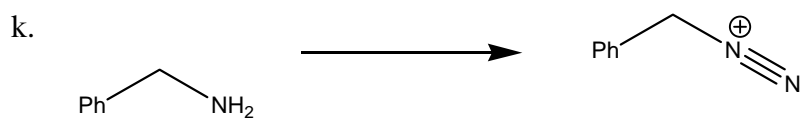
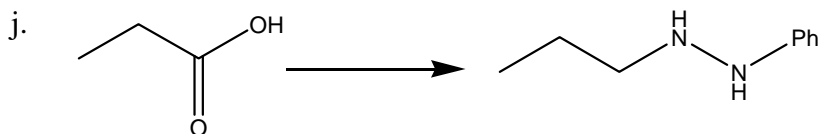
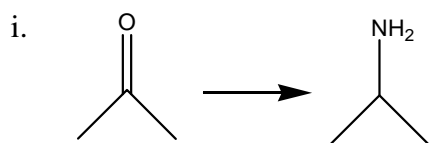
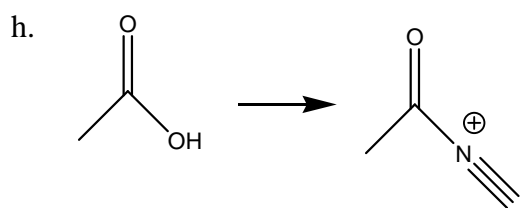


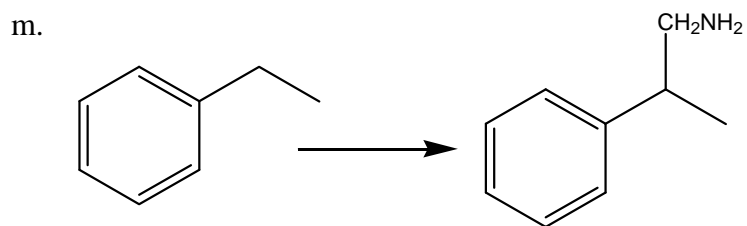
f.



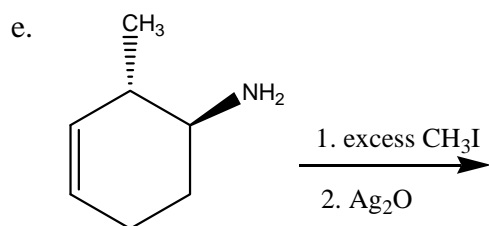
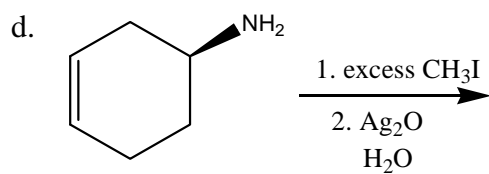
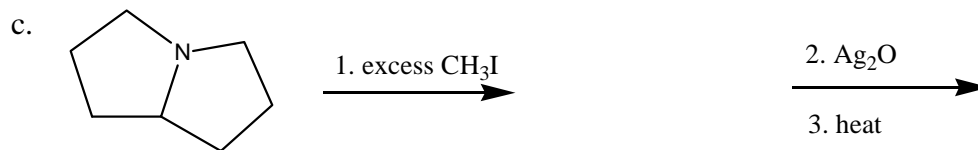
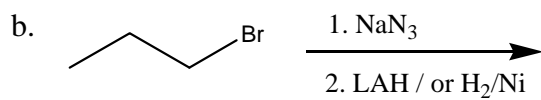
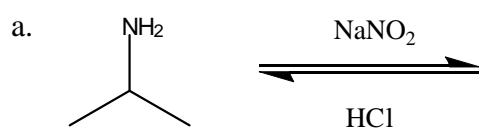
g.

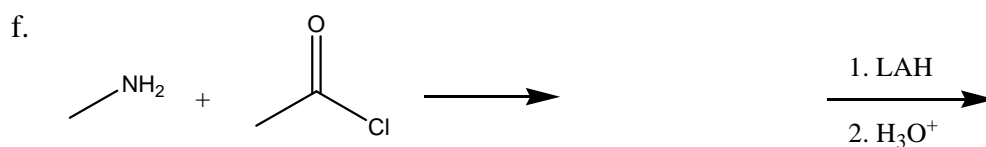




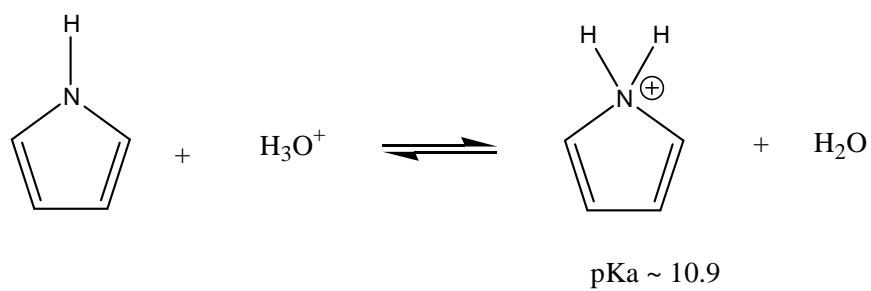


3. Predict the products of the following reactions.





4. Why does pyrrole have a low basicity?



5. Propose a series of reactions that produce the product in high yields.

