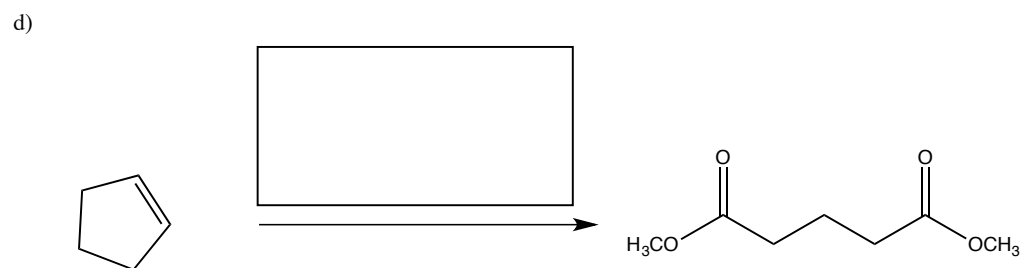
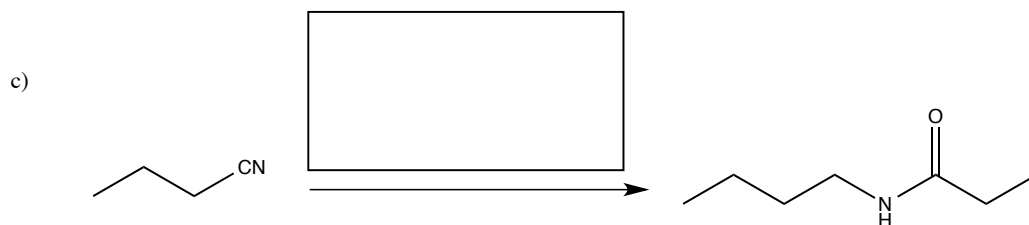
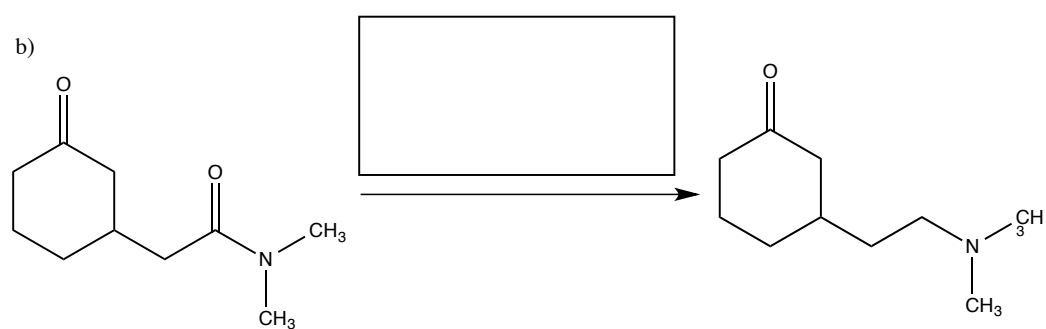
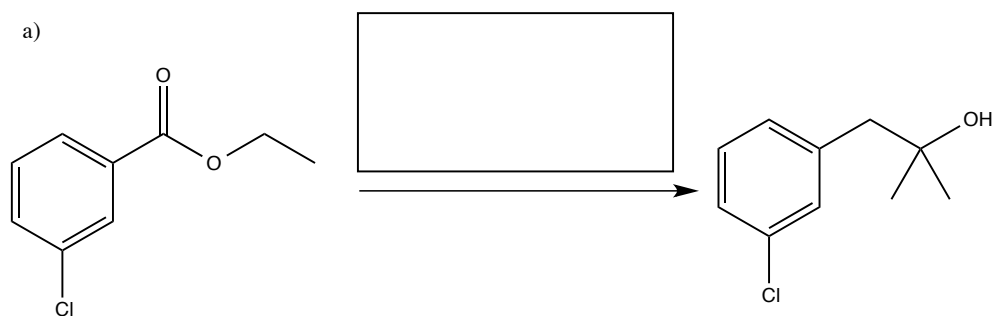
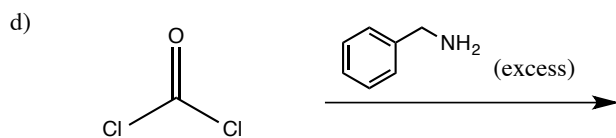
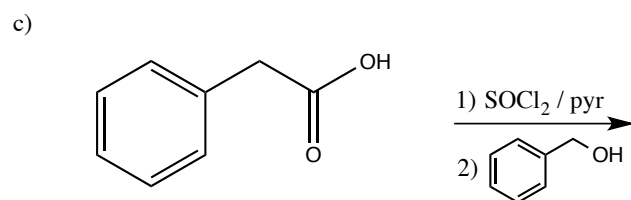
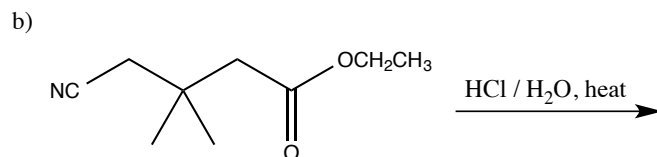
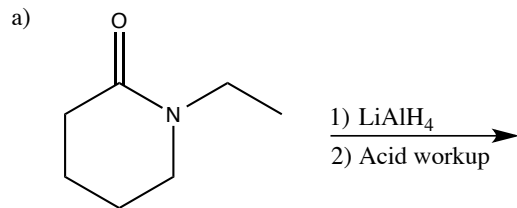


Practice Problems on Carboxylic Acid Derivatives

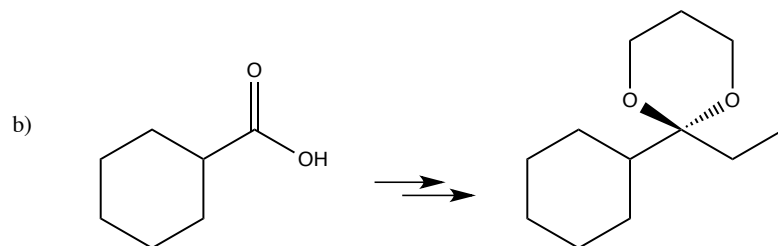
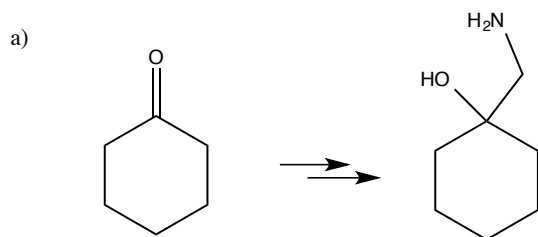
1. For each of the following reaction provide the necessary reagents for the synthesis in good yield.



2. Provide the product(s) from each of the synthesis shown below.



3. For each of the following transformations propose a multi-step synthesis in good yield.



4. Propose a plausible arrow-pushing mechanism for the following transformation.

