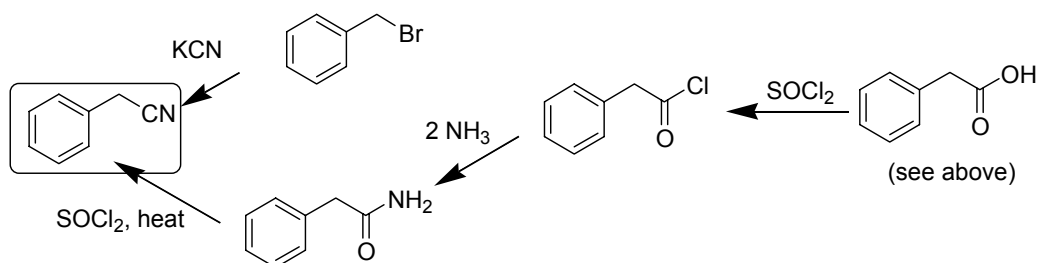
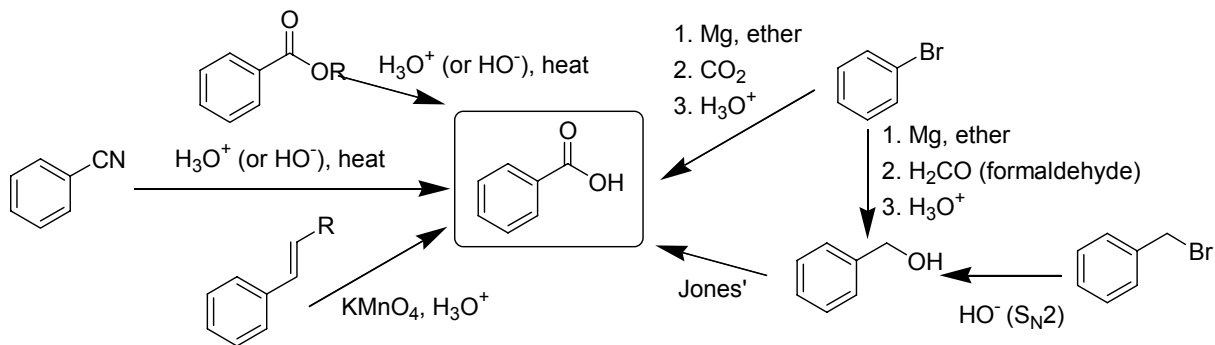
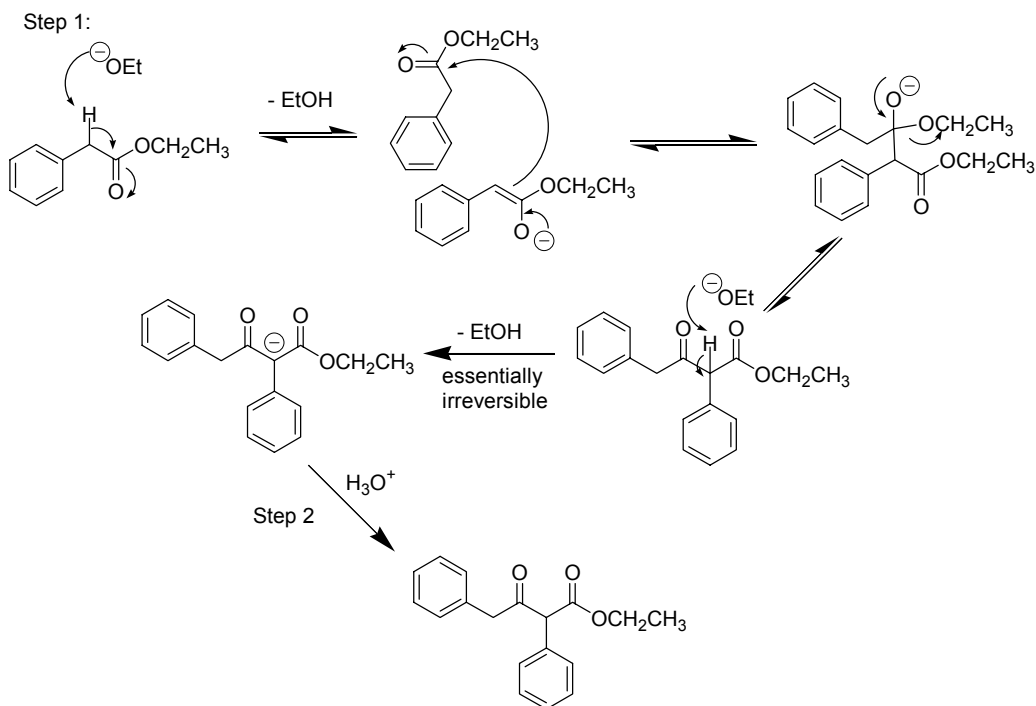


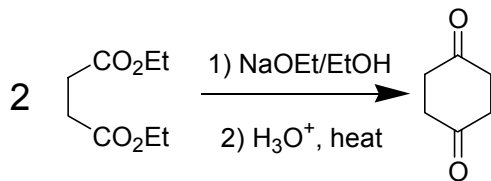
List all the ways you can think of to make the following compounds.



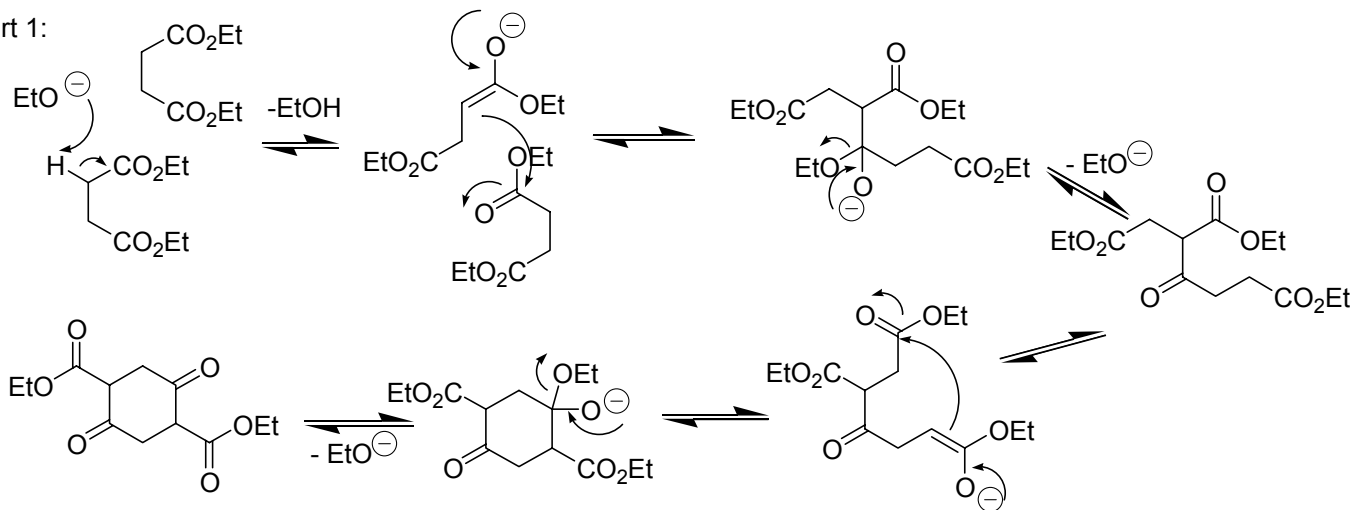
Draw a detailed mechanism for the Claisen condensation between two molecules of ethyl phenylacetate. Clearly indicate which steps are reversible and which are essentially irreversible.



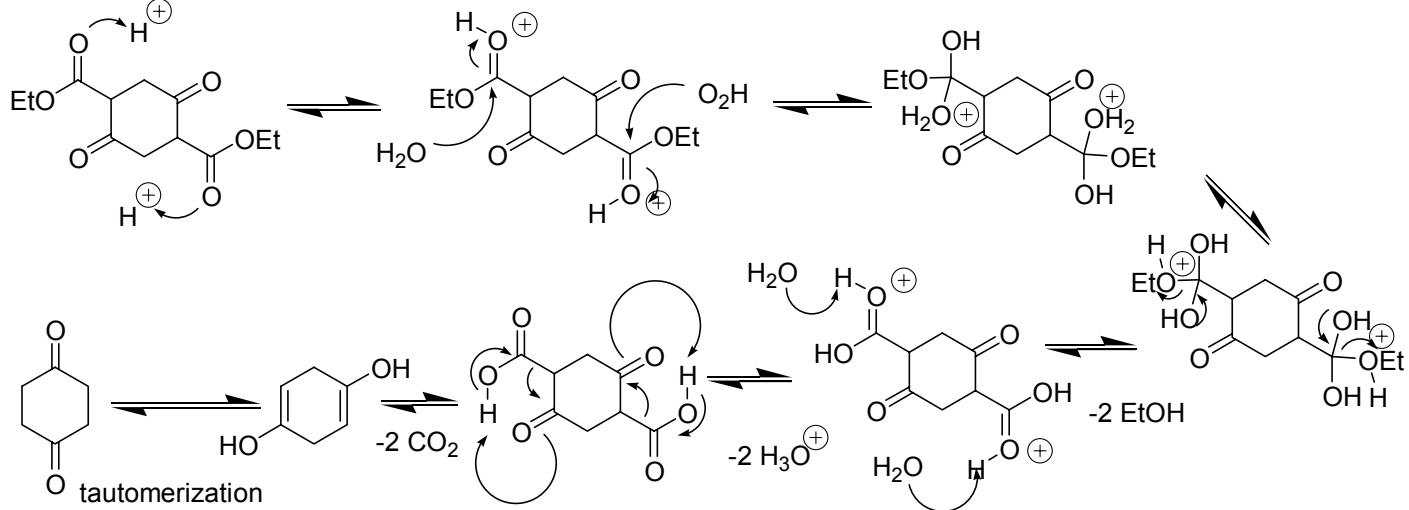
Draw detailed mechanisms for the following reactions:

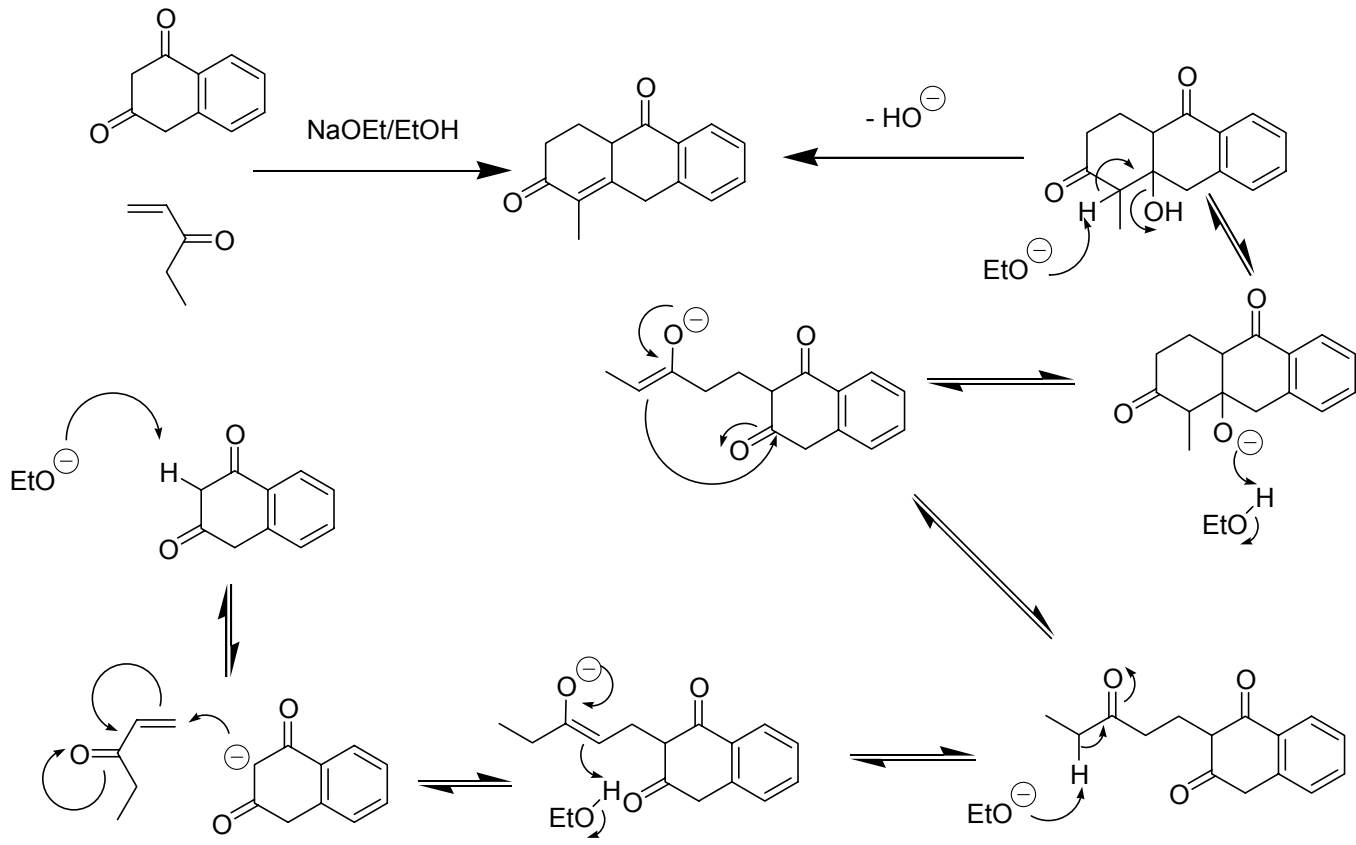


Part 1:

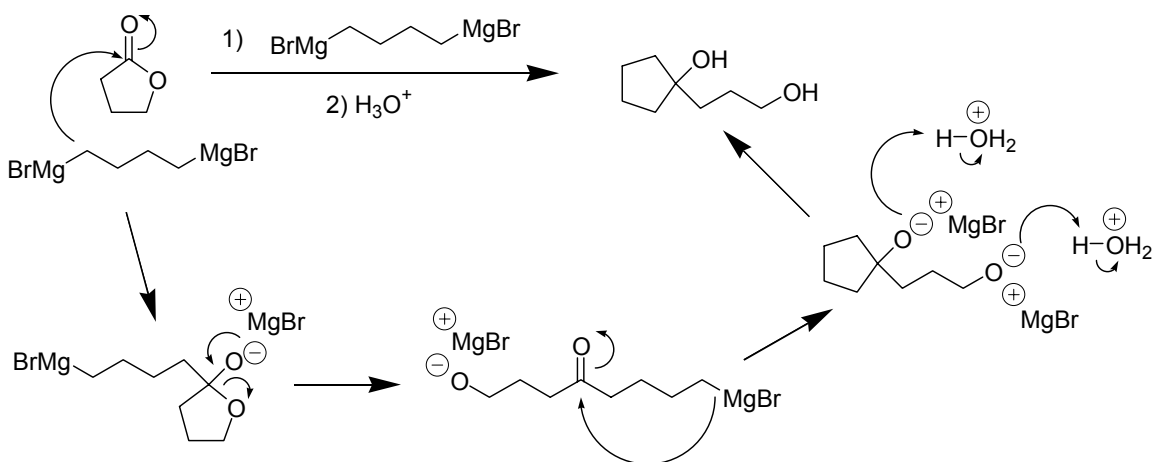


Part 2:

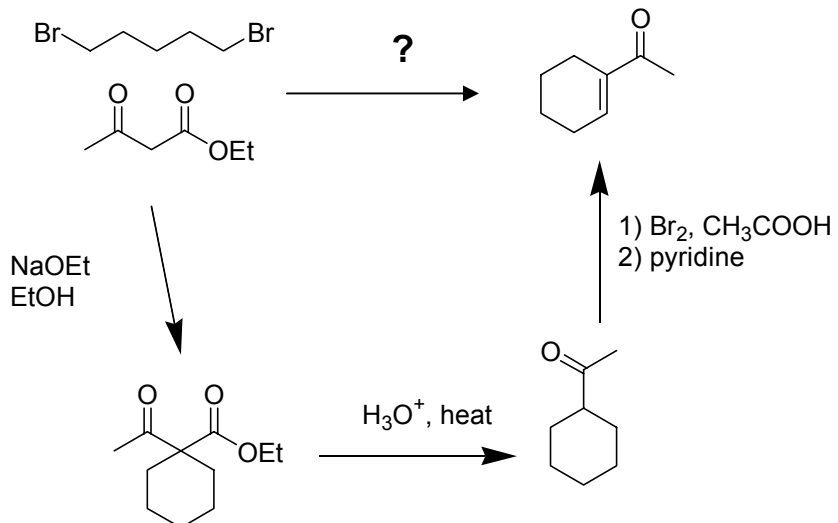


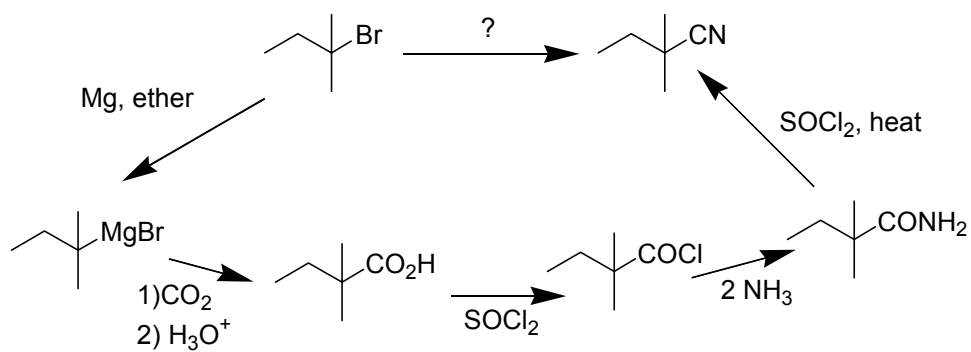


Draw a detailed mechanism for the following reaction:



Propose efficient synthetic routes for the following transformations





Treatment of the tertiary halide directly with  $\text{CN}^-$  will lead to complications with elimination.

