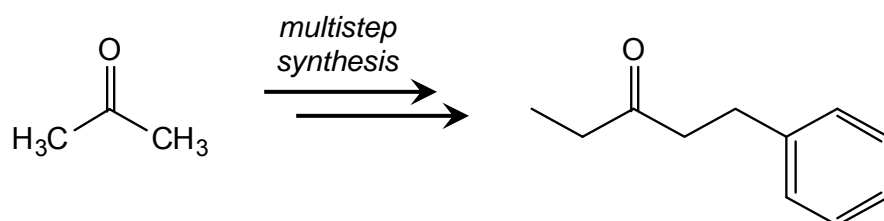
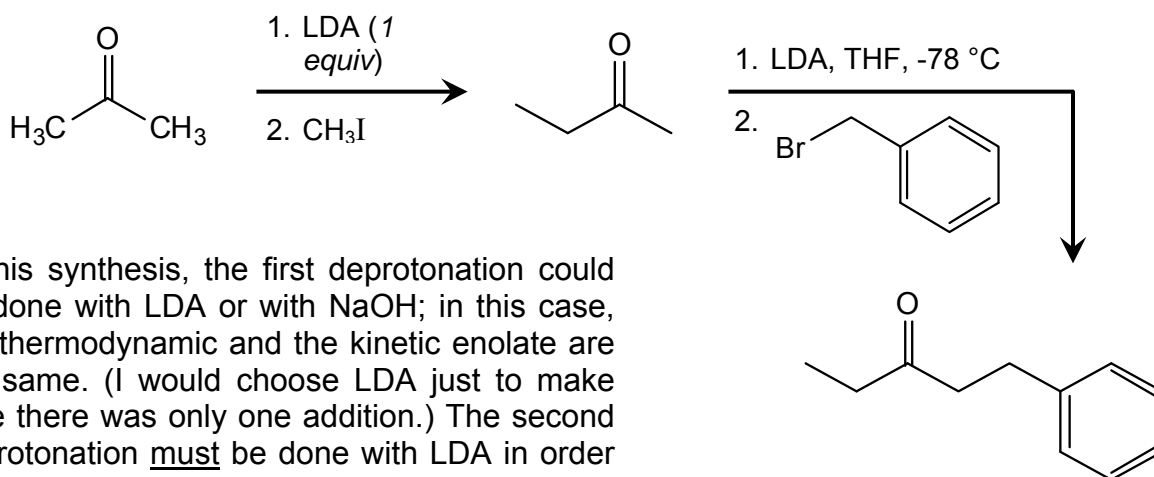


### Workshop 16 Solutions Synthesis with Enolates

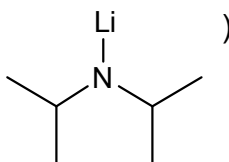


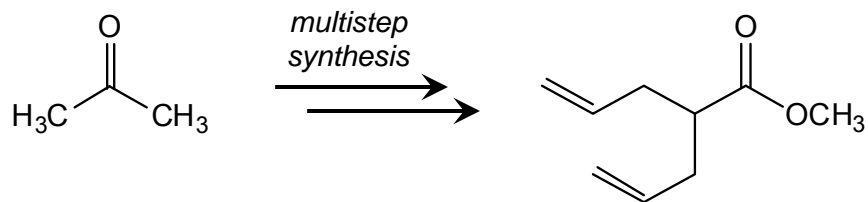
Looks like we need to put a methyl group on one side and a benzyl group on the other. We could do this in either order.



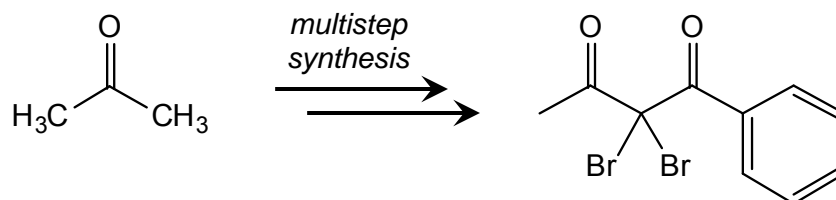
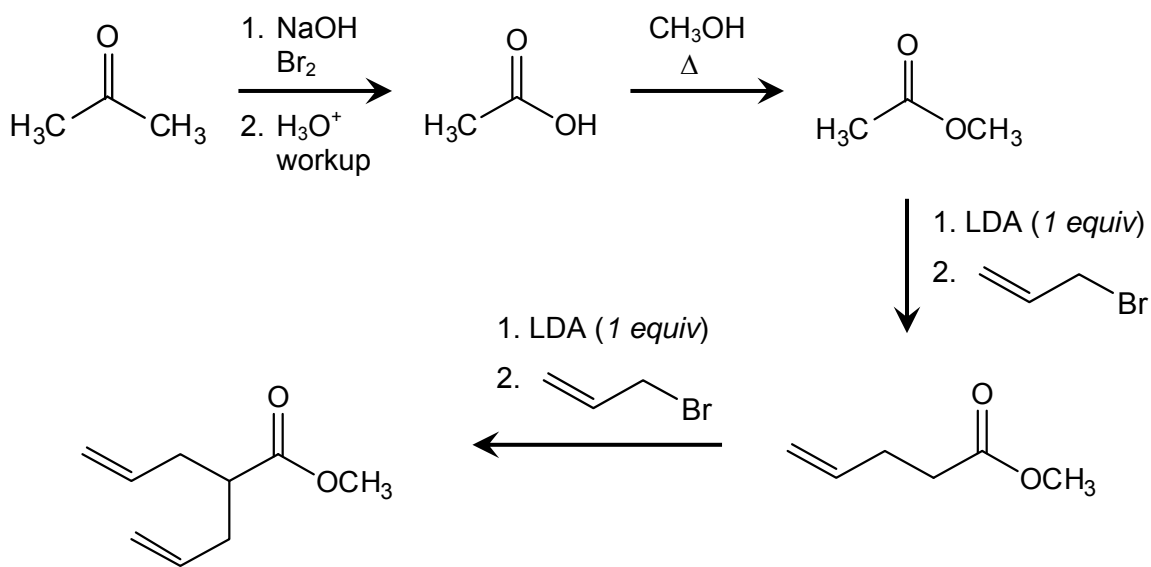
In this synthesis, the first deprotonation could be done with LDA or with NaOH; in this case, the thermodynamic and the kinetic enolate are the same. (I would choose LDA just to make sure there was only one addition.) The second deprotonation must be done with LDA in order to generate the kinetic enolate (to make sure the benzyl group adds on the right instead of the left).

(LDA = lithium diisopropylamide,





Here, we have to add two allyl groups on the left side, and convert the right side to an ester group. Once again, I think we can do this in either order. The right-hand side looks a little strange—how can you break a C-C bond?—but that can be accomplished via the haloform reaction. If we were to do that first,



We can add the benzoyl group via attack of an enolate on benzoyl chloride, and then the bromine atoms after:

