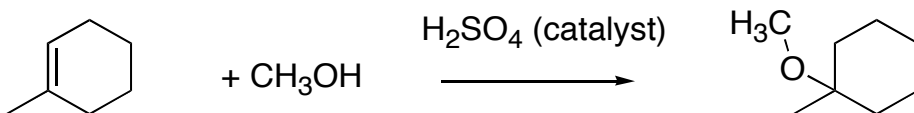
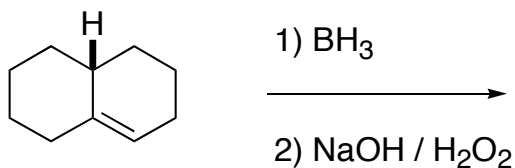
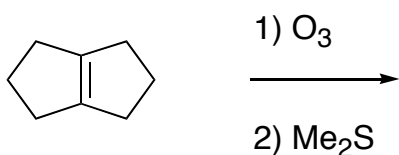


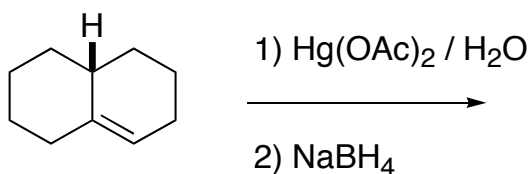
1) (4 pts) Write a mechanism (using curved arrow notation) for the following reaction. Make sure that you show all proton transfers. CH_3OH is in excess.



2) (6 pts) Provide the major organic products from each of the following reactions:



(assume the BH_3 comes from the same side as bridgehead hydrogen)



(assume the Hg^{+2} comes from the same side as bridgehead hydrogen)