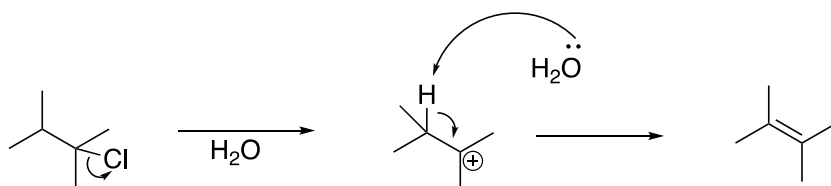


9.5 Provide the Energy Diagram for the following reaction mechanism, assume the C-Cl bond breaking step is the rate determining step.



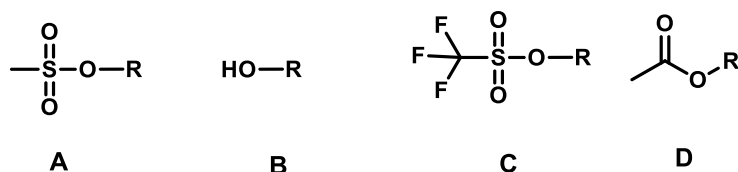
10 Substitution Reactions

10.1 Please rank the nucleophilicity of the following compounds, no justification needed



_____ < _____ < _____ < _____
 Least nucleophilic Most nucleophilic

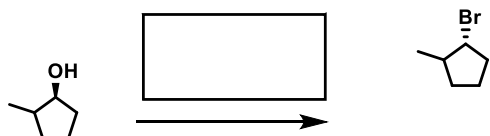
10.2 Please rank the leaving group ability, no justification needed



_____ < _____ < _____ < _____
 Worst leaving group Best leaving group

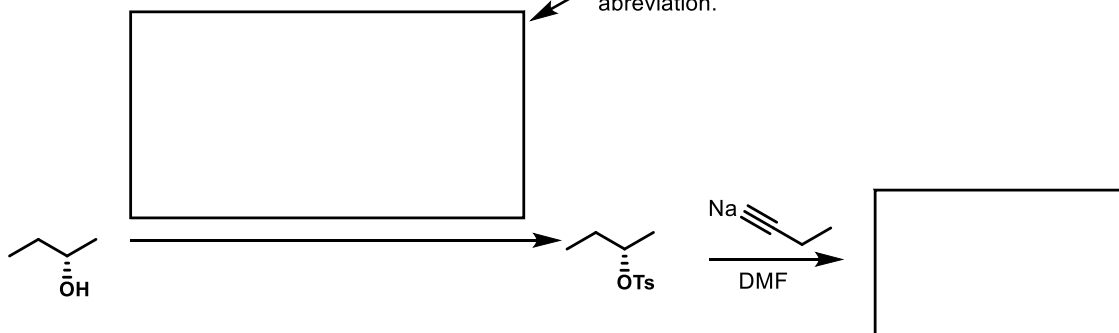
10.3 Fill in the missing reagent(s) or products for the following reactions:

A

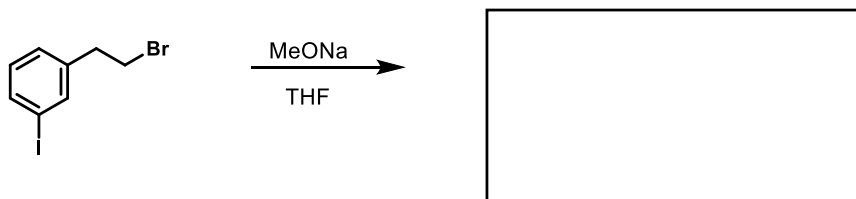


draw full structure of reagent, do not just write the abbreviation.

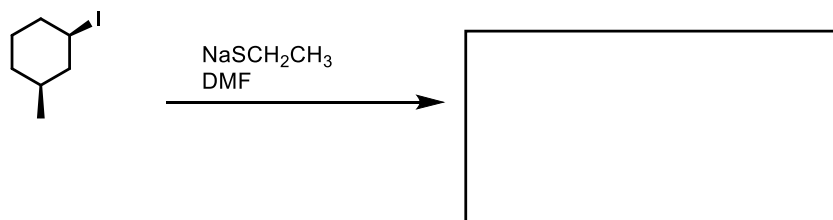
B



C



D



E

