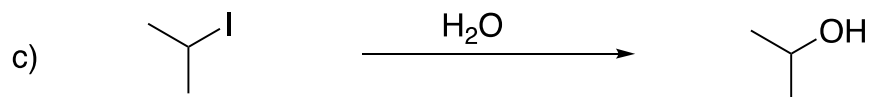
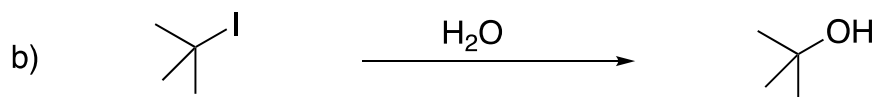
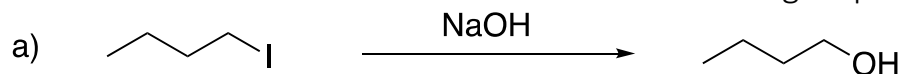


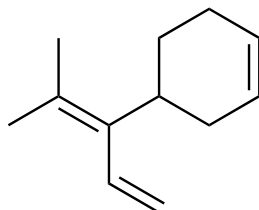
9 Thermodynamics

9.1 Draw the mechanism for the following reactions. Draw the energy profile for each reaction and indicate the rate determining step.



9.2 If the reactions in question 9.1b and 9.1c above both underwent an S_N1 mechanism which reaction would occur more rapidly? Explain.

9.3 Rank the **rate** of reaction for all of the alkenes in the following molecule with HCl and provide a justification of your ranking.



9.4 Predict the product and Draw the mechanism for the following reactions. Draw the energy profile for each reaction and indicate the rate determining step.

