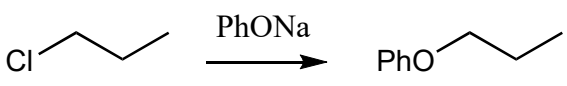
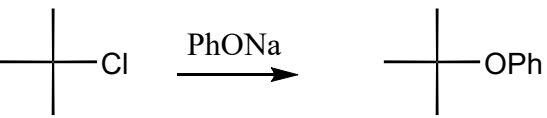
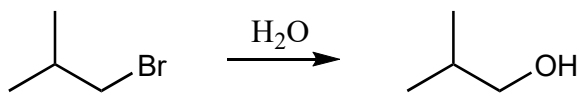
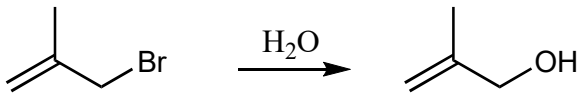
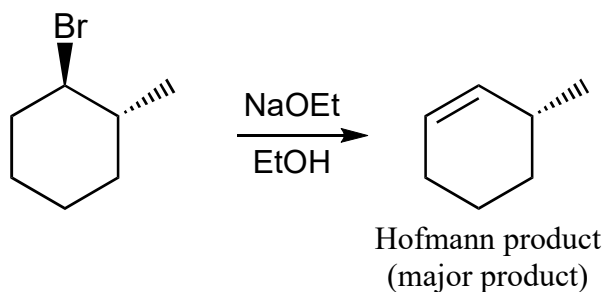


4A) (10 pts) For each of the following pairs of reactions, indicate which one will be faster and briefly explain why. If you expect no significant difference in the reaction rates, say so. **No explain = no credit.**

<p>a. </p> <p>b. </p> <p>Mechanism name? <span style="border: 1px solid black; display: inline-block; width: 100px; height: 20px; vertical-align: middle;"></span></p> <p>Which is faster (a, b or neither)? <span style="border: 1px solid black; display: inline-block; width: 100px; height: 20px; vertical-align: middle;"></span></p> <p><b>Explain briefly:</b></p>	<p>a. </p> <p>b. </p> <p>Mechanism name? <span style="border: 1px solid black; display: inline-block; width: 100px; height: 20px; vertical-align: middle;"></span></p> <p>Which is faster (a, b or neither)? <span style="border: 1px solid black; display: inline-block; width: 100px; height: 20px; vertical-align: middle;"></span></p> <p><b>Explain briefly:</b></p>
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4B) (6 points) The following reaction has an unexpected regiochemical outcome, because it gives only the Hofmann product (rather than the Zaitsev product). Draw the Zaitsev product and explain why it is not formed.



Zaitsev product  
(not formed)

**Briefly explain** why only the Hofmann product is observed: