

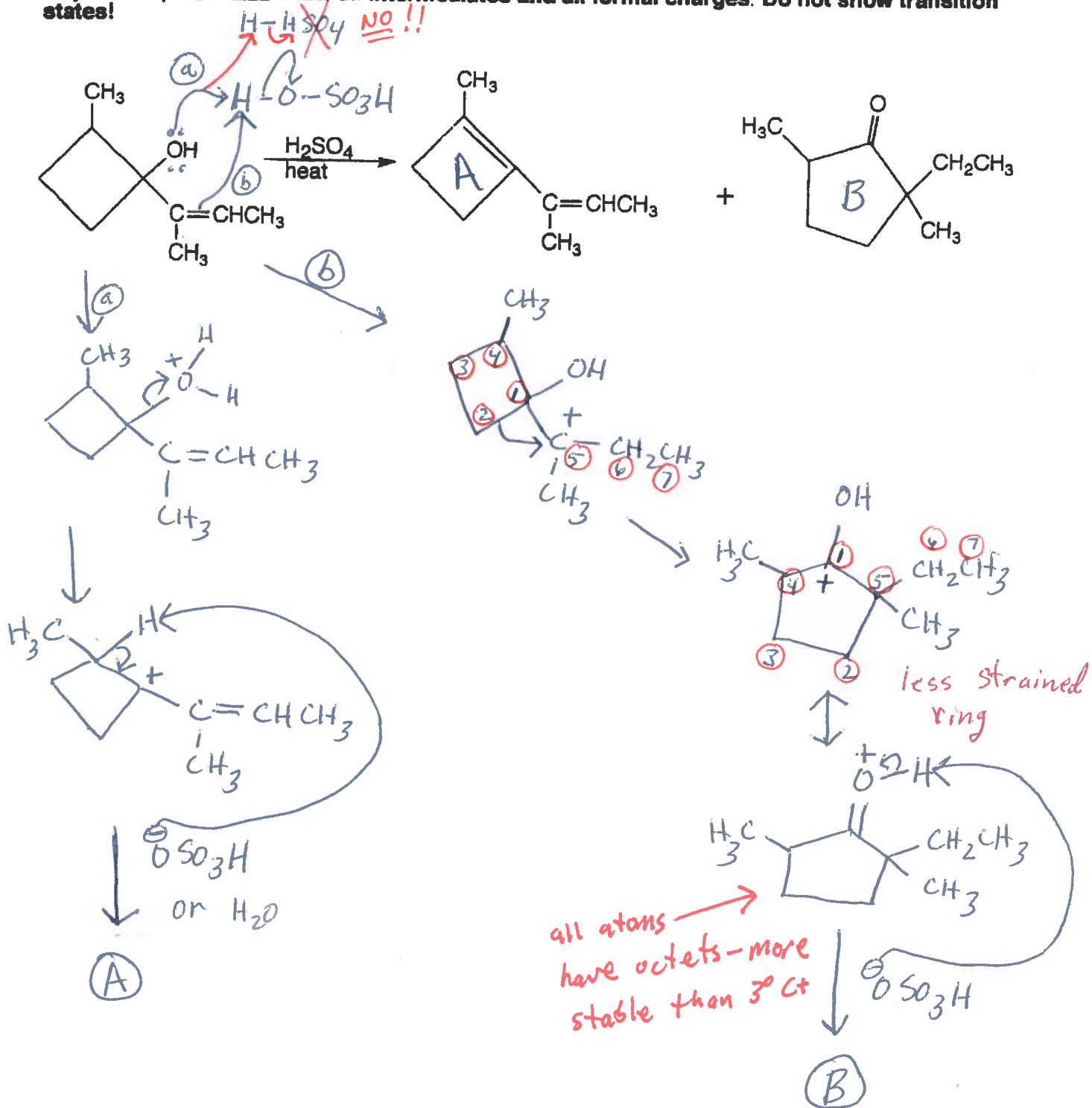
MAD ORG. CHEM. MIN.... So it begins

LAST NAME _____ FIRST NAME _____

PSID # _____ CIRCLE CLASS TIME: 10AM 1PM

Can you still work problems this challenging?

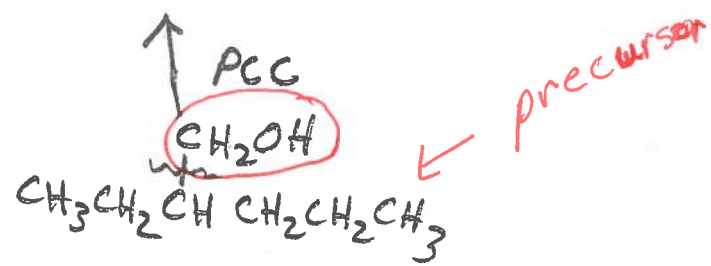
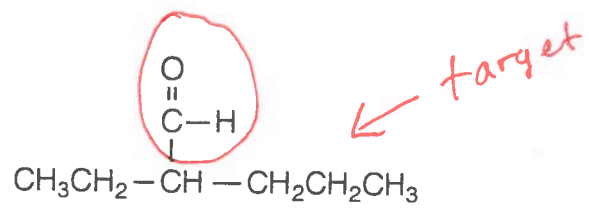
The reaction presented below produces several products. Provide clear mechanisms to explain the formation of the two products shown. Use curved arrows to indicate "electron flow". Remember to show only one step at a time. Show all intermediates and all formal charges. Do not show transition states!



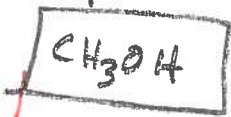
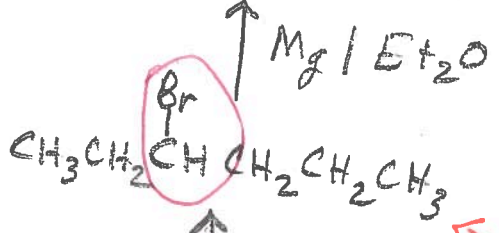
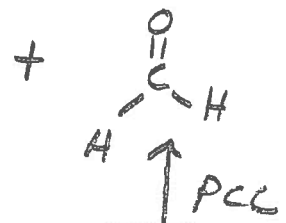
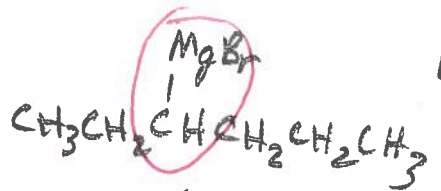
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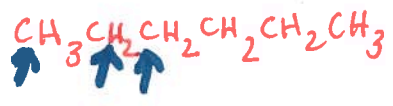
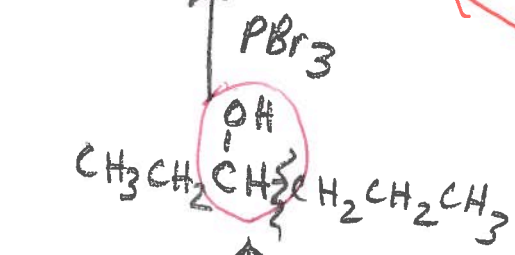
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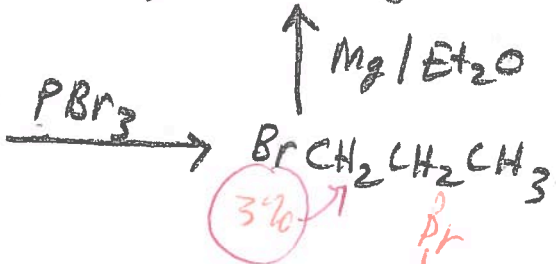
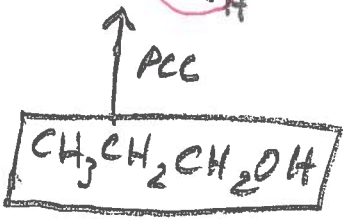
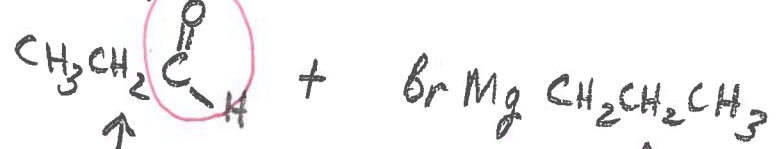
↑ then H_3O^+



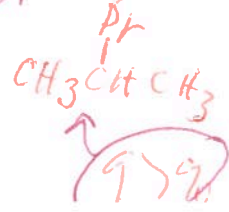
~~$\text{Br}_2 / \text{light}$~~ NO!! Not selective



↑ then H_3O^+



↑ $\text{Mg} / \text{Et}_2\text{O}$



~~$\text{PBr}_2 / \text{H}_2\text{O}$~~ !!!
 $\text{CH}_3\text{CH}_2\text{CH}_3$