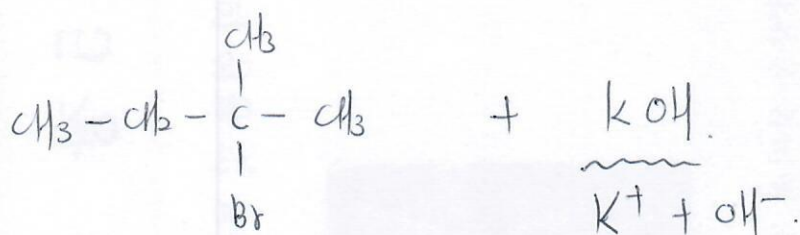
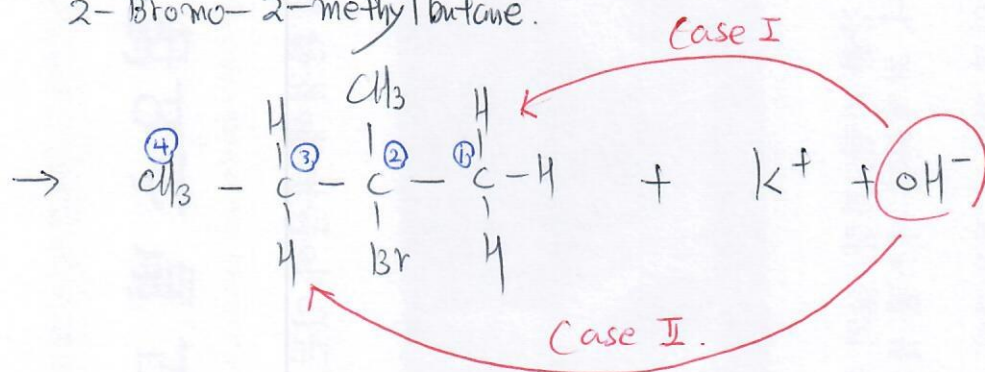


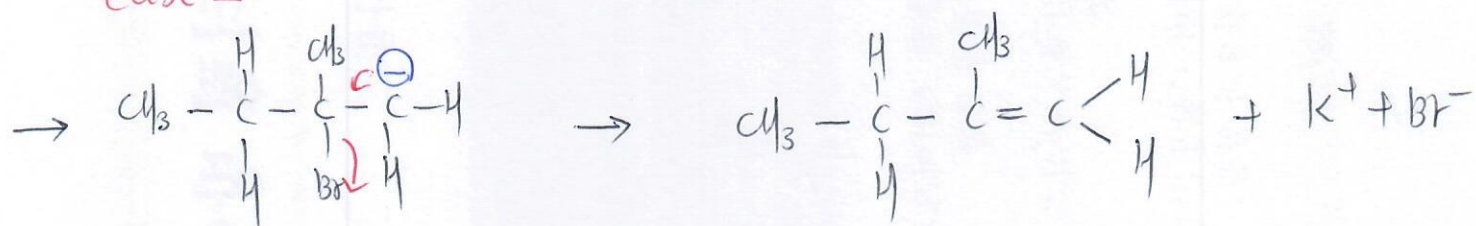
Problem 8-1.



2-Bromo-2-methylbutane.



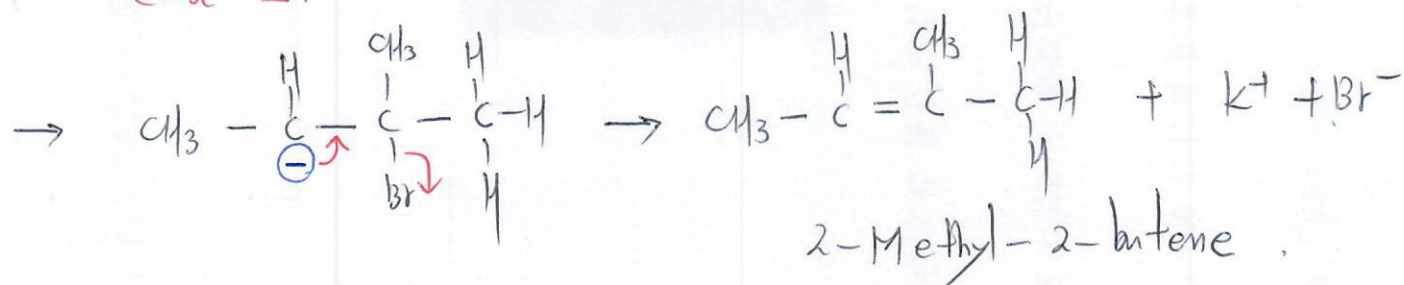
Case I



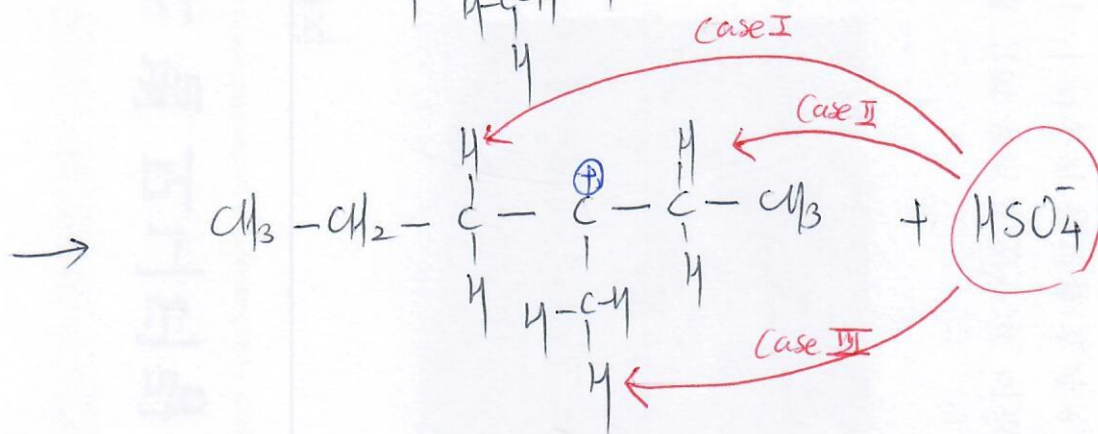
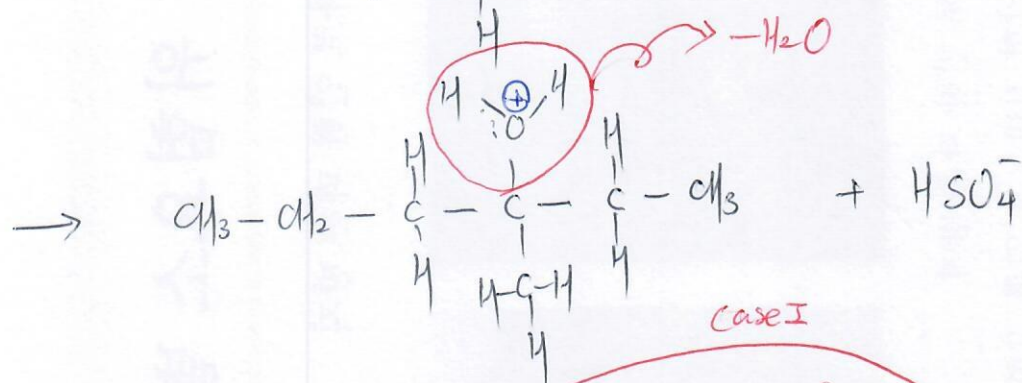
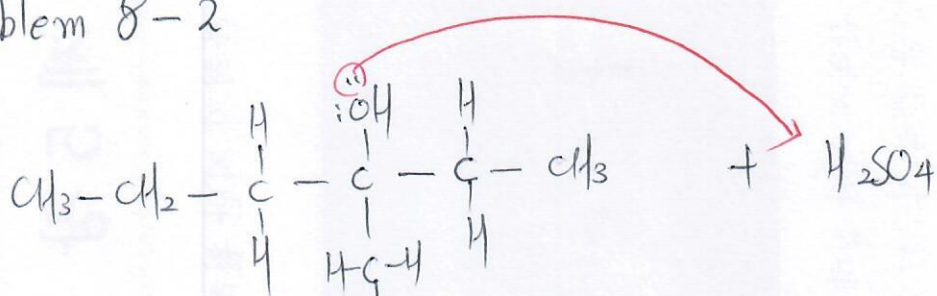
1° Carboanion.

2-Methylbutene

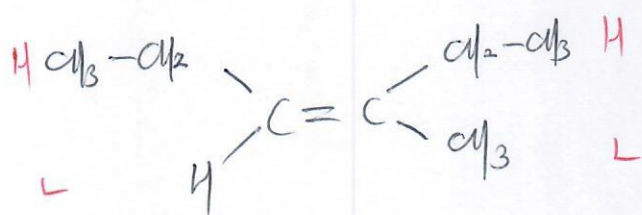
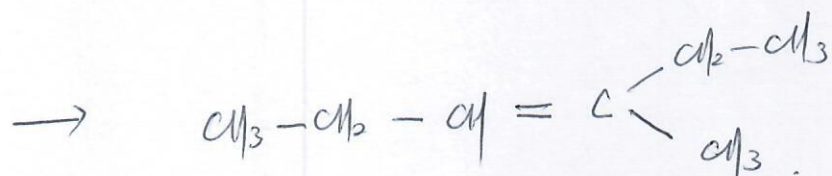
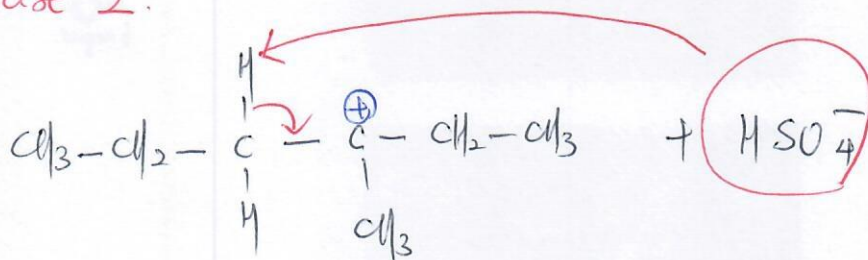
Case II.



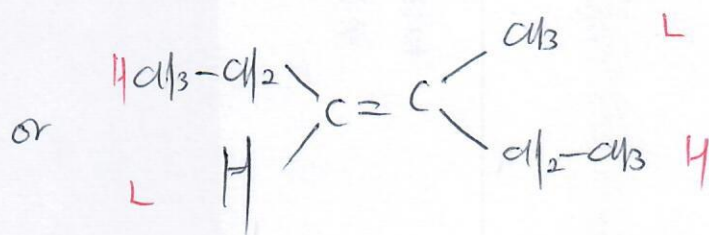
Problem 8-2



Case I.

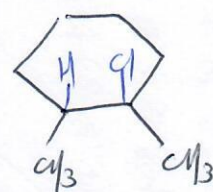
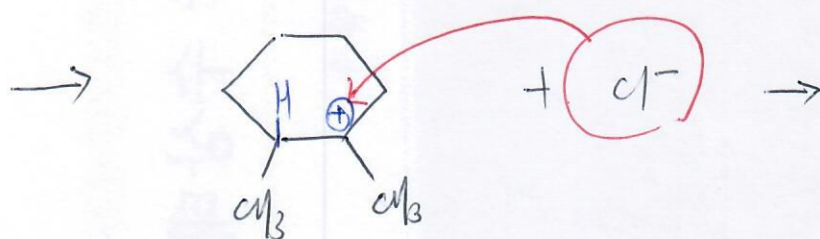
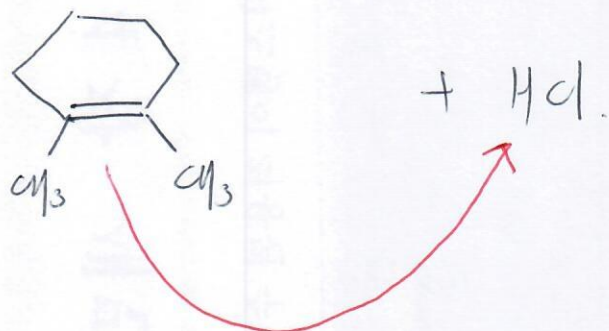


(Z) - 3-methyl-3-hexene



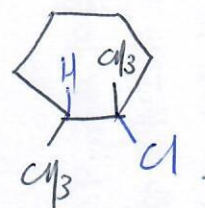
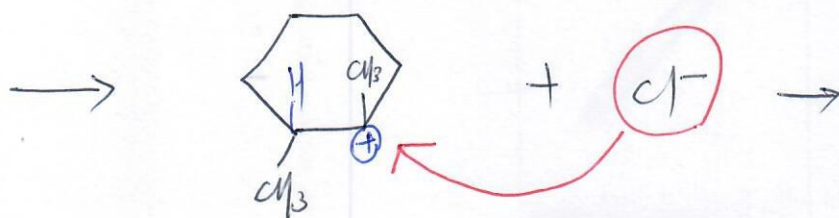
(E) - 3-methyl-3-hexene

Problem 8-4.



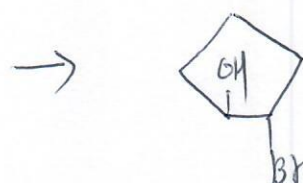
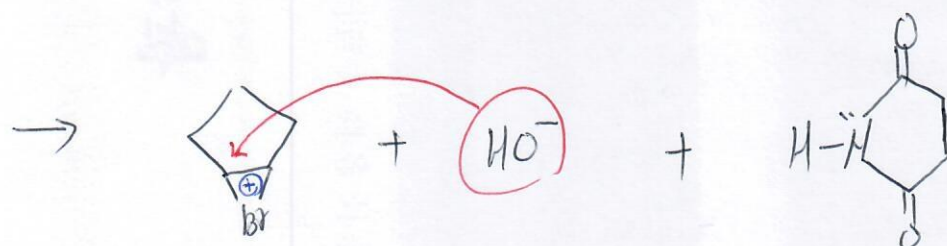
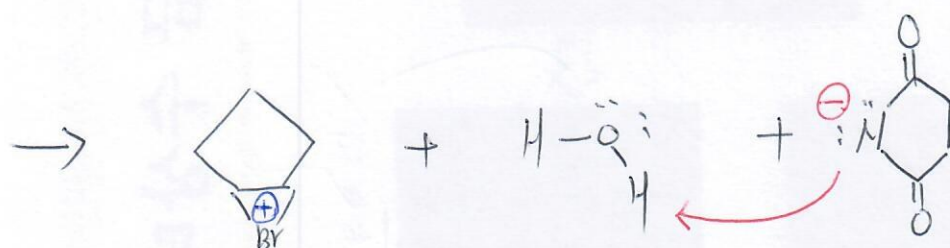
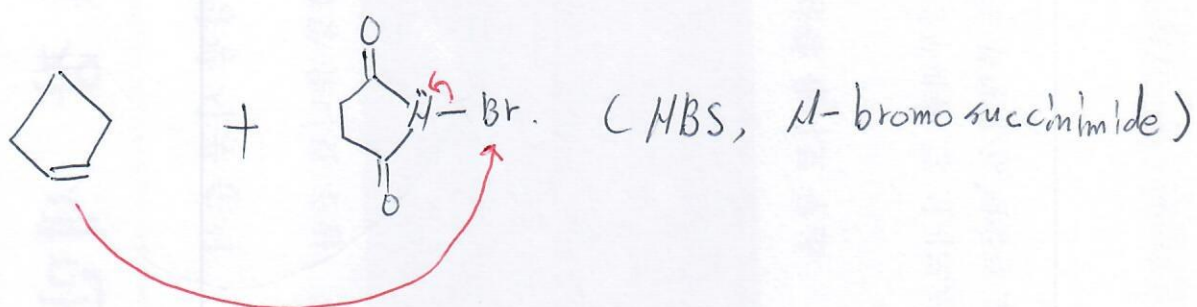
(trans configuration)
1-chloro-1,2-dimethyl
cyclohexane

or



(cis - configuration)
1-chloro-1,2-dimethyl
cyclohexane.

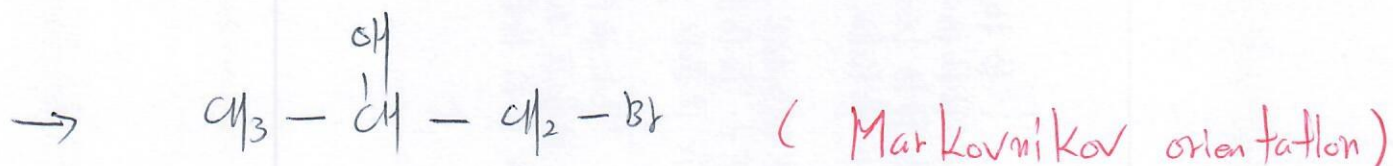
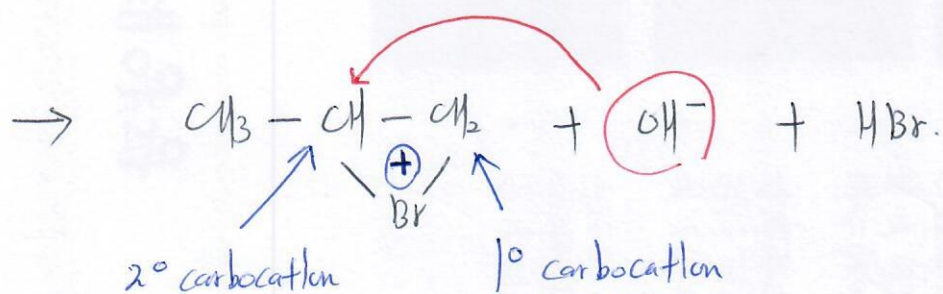
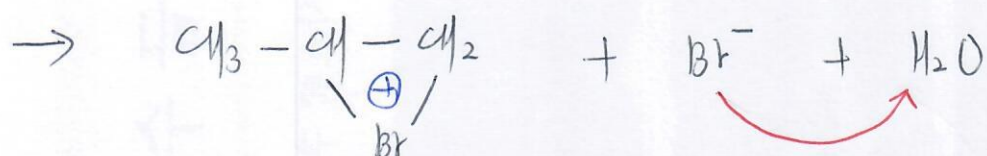
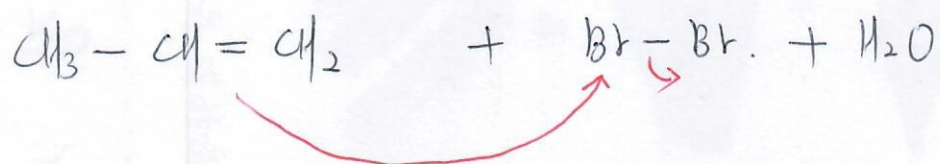
problem 8-5



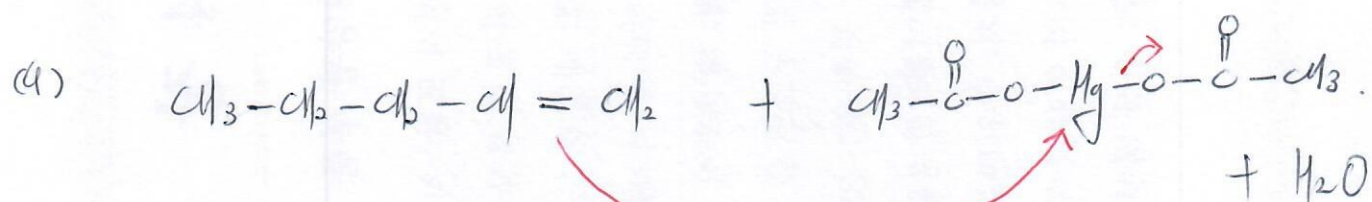
trans-configuration.

2-Bromocyclohexanol.

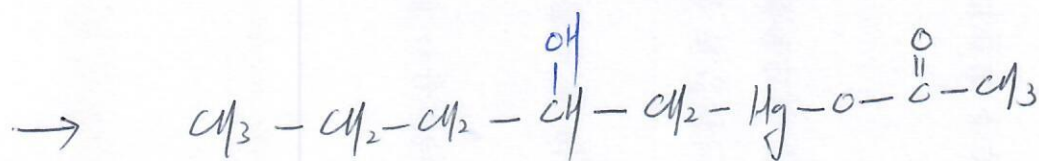
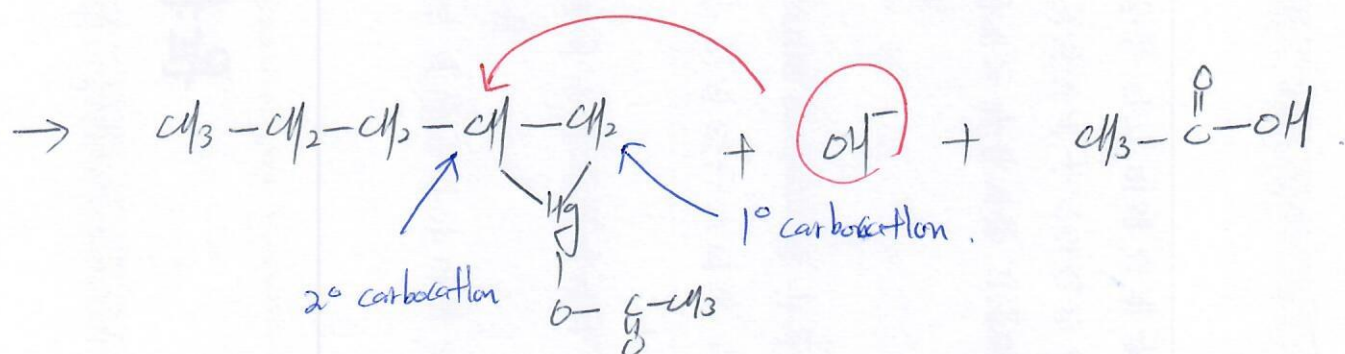
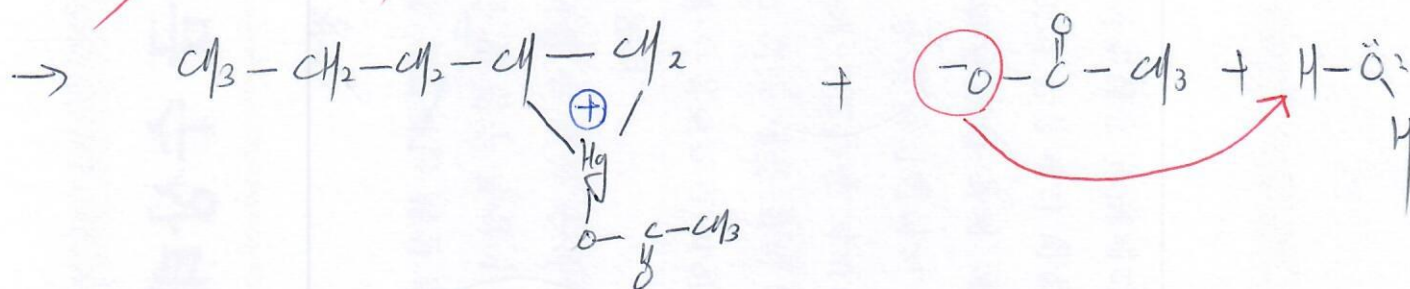
Problem 8-6.



Problem 8-7.-1



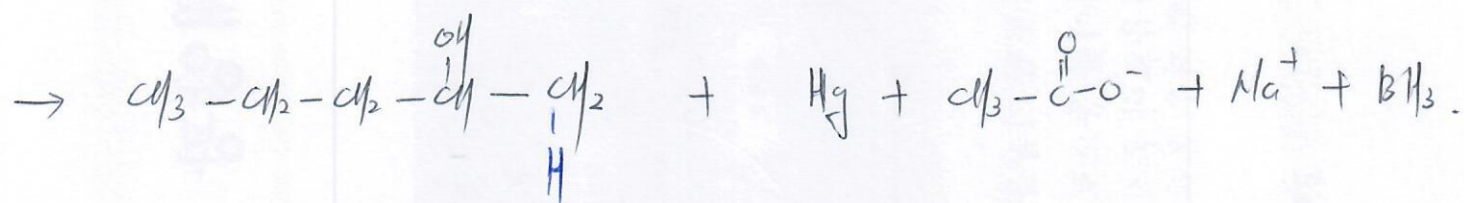
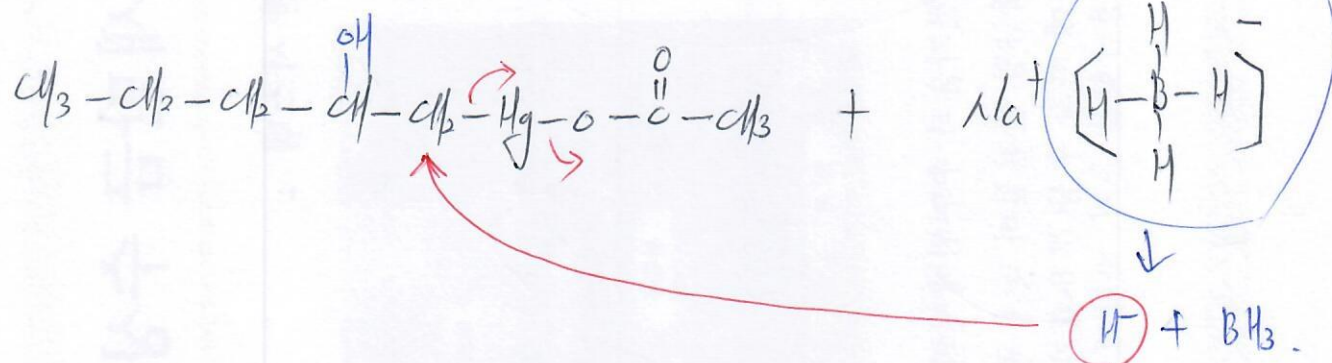
< Oxymercuration >



\rightarrow next.

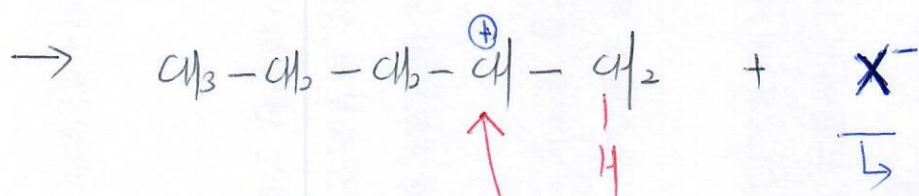
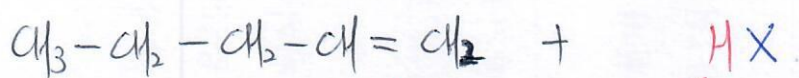
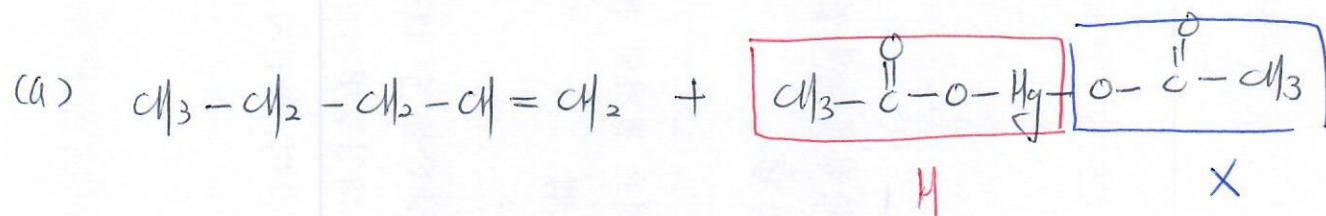
problem 8-7-2

< Demercuration >



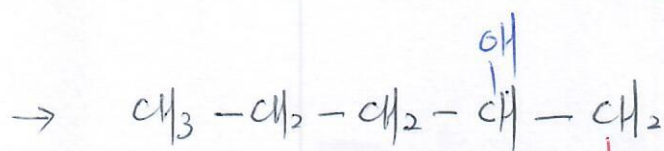
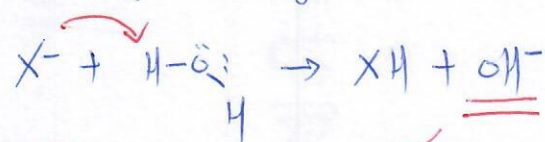
Problem 8-7-3.

Another method



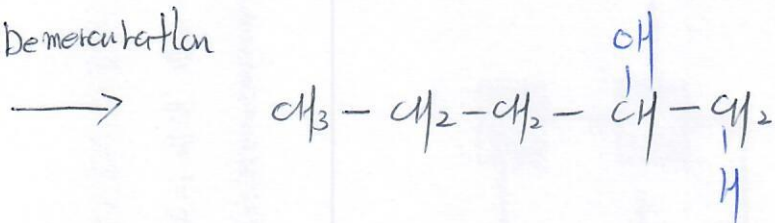
X^- is weak anion

\rightarrow changes strong anion from H_2O



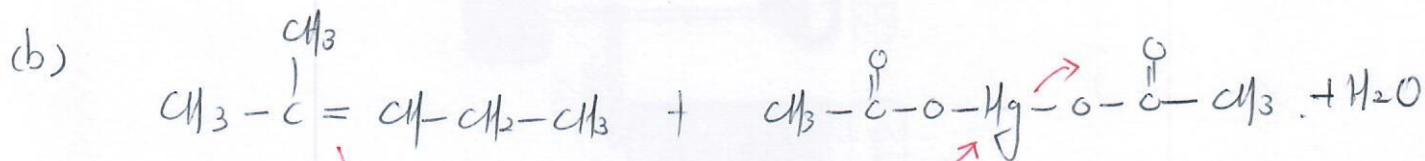
The red H is not proton. $\text{CH}_3 - \overset{\text{O}}{\parallel} \text{C} - \text{O} - \text{H} \text{g}^+$ comes from $\text{CH}_3 - \overset{\text{O}}{\parallel} \text{C} - \text{O} - \text{H} \text{g} - \text{O} - \overset{\text{O}}{\parallel} \text{C} - \text{CH}_3$.

Demercuration

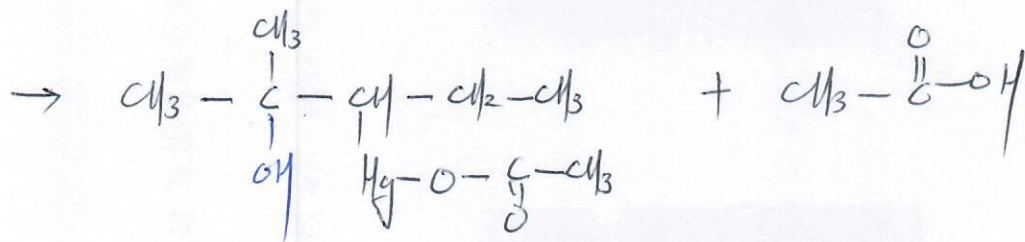
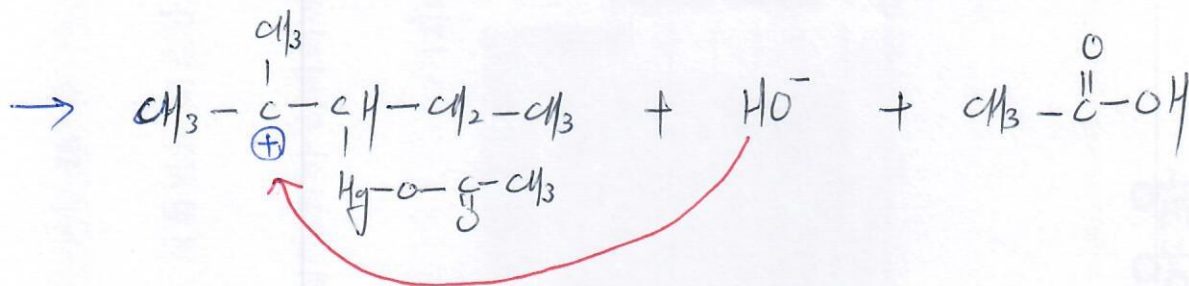
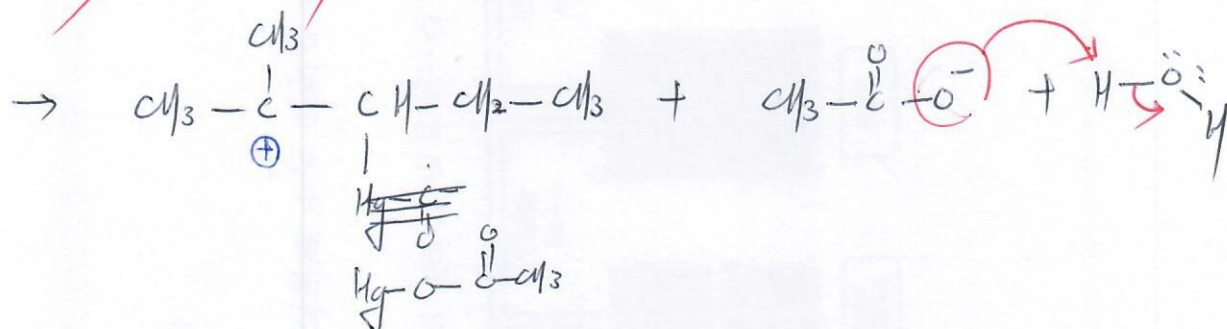


This mechanism is same to Markovnikov's rule.

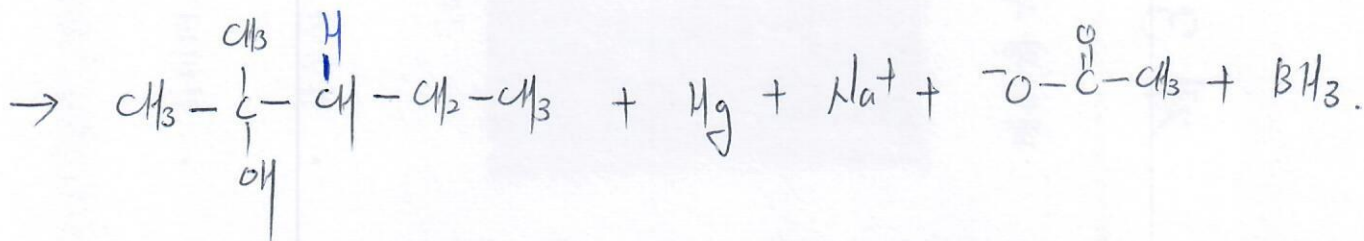
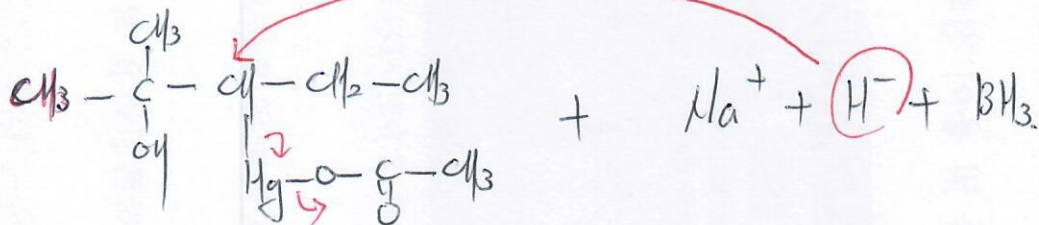
problem 8-7-4.



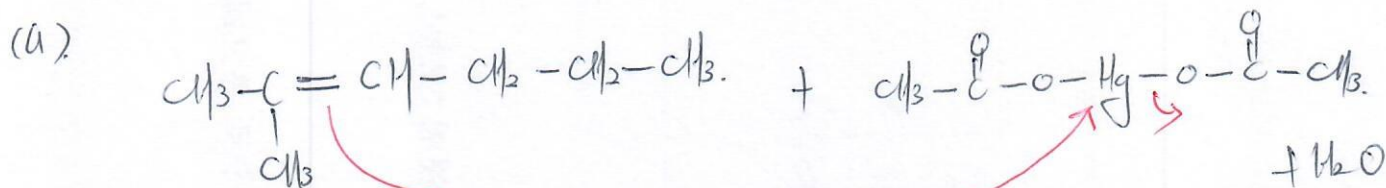
< Oxymercuration >



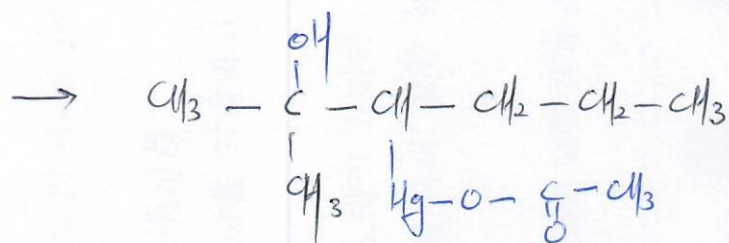
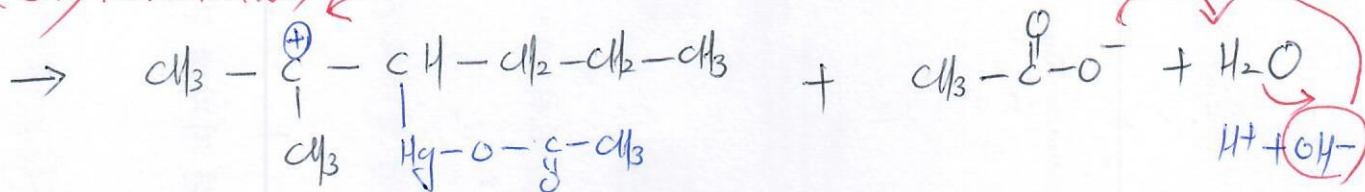
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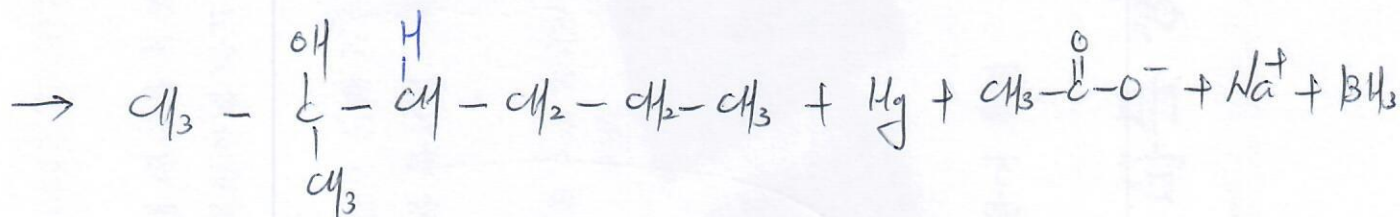
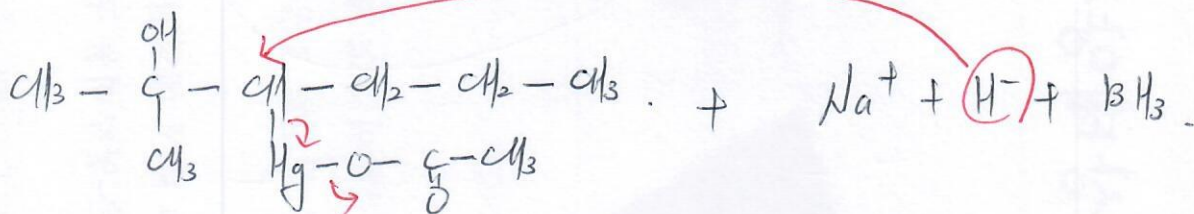
problem 8-8-1



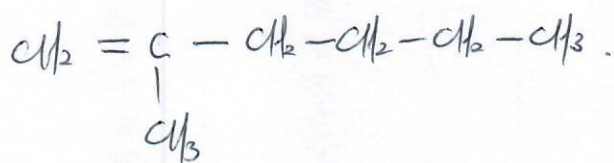
< oxymercuration >



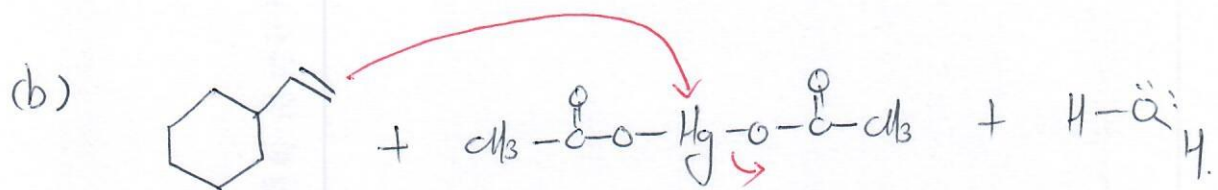
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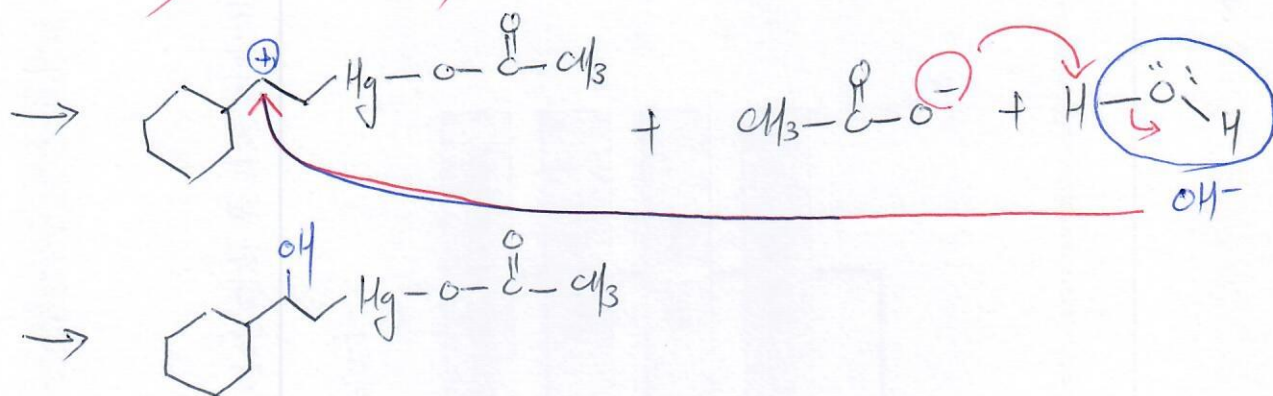
Another chemical



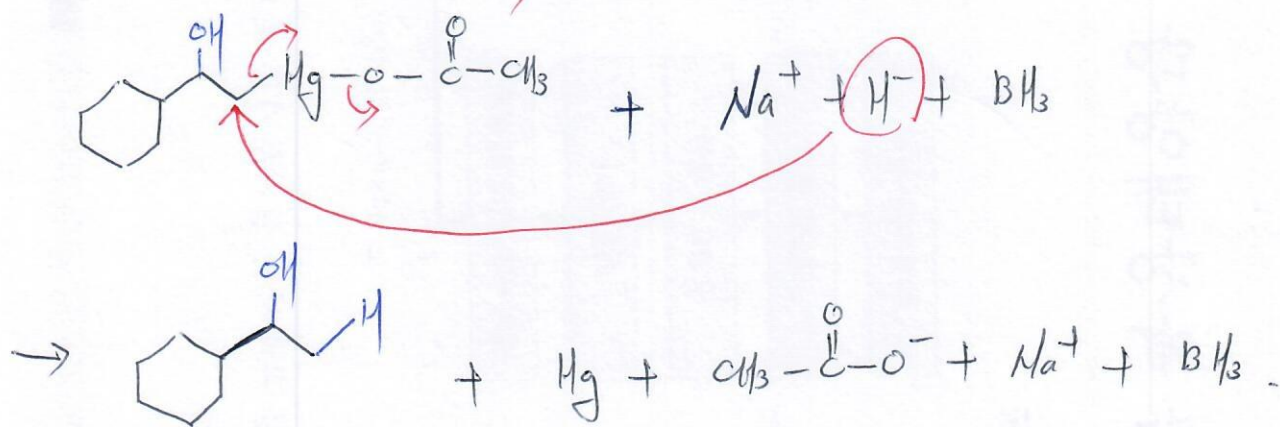
Problem 8-8-2.



< Oxymercuration >

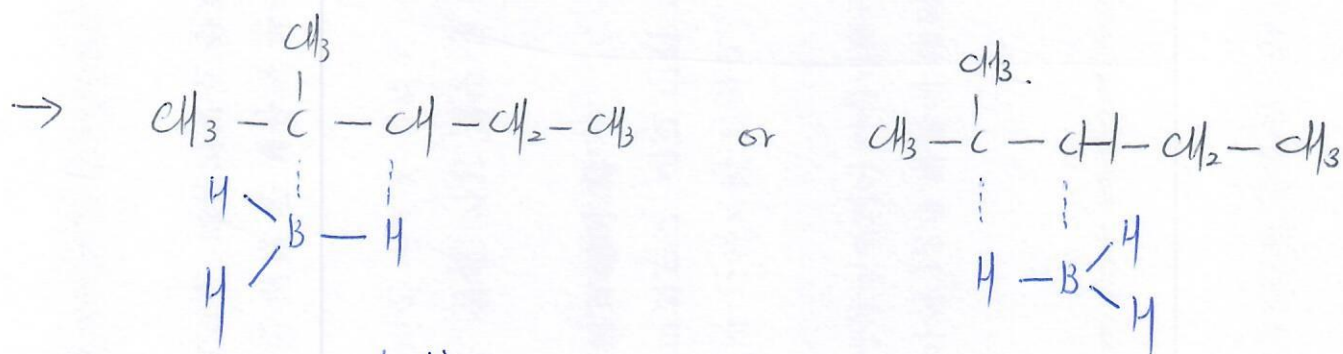
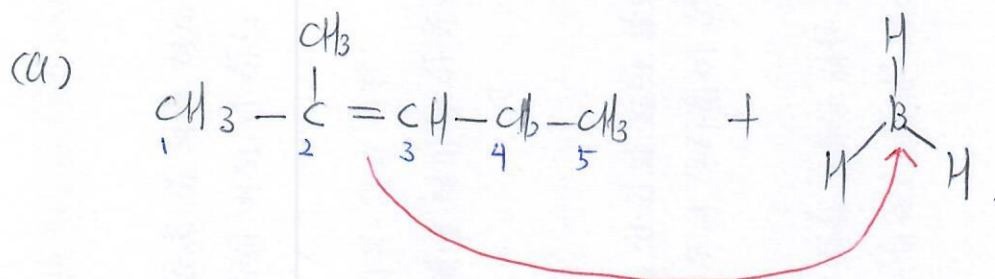


< Demercuration >



problem 8-9.-1

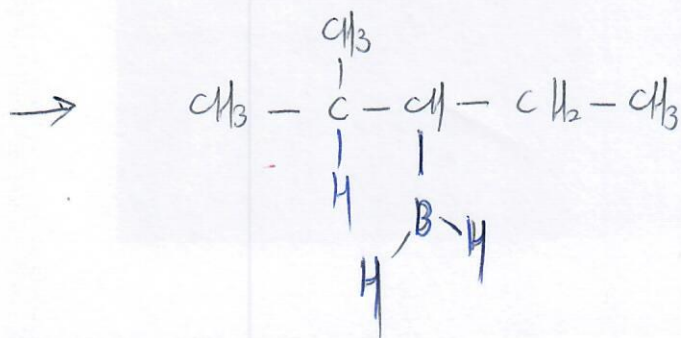
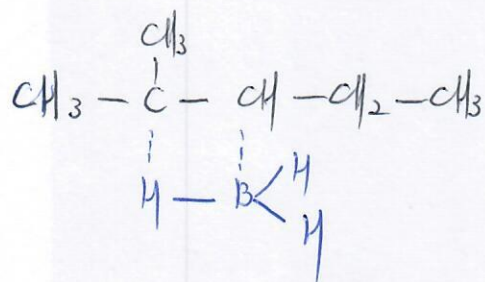
Q1 what's the products from hydroboration-oxidation.



C2 is ~~secondary~~ ^{tertiary} carbon that means C2 has 2 substituents

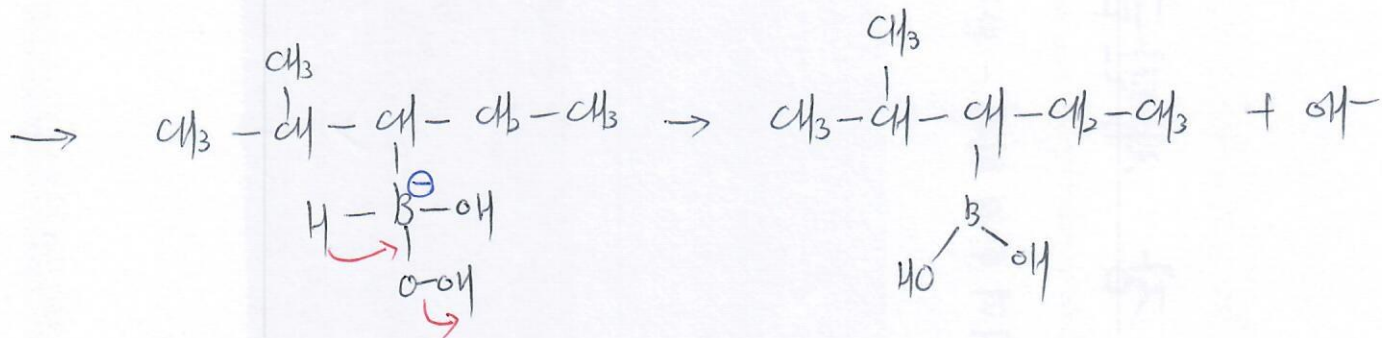
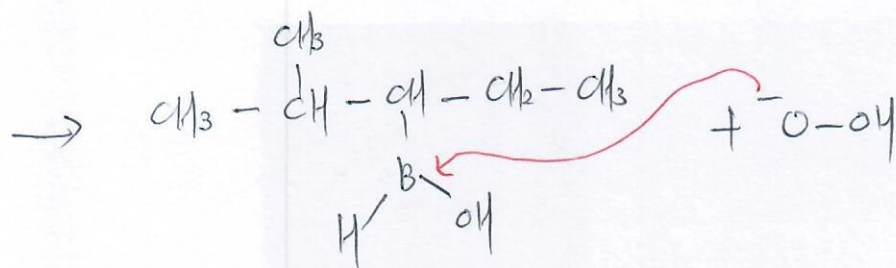
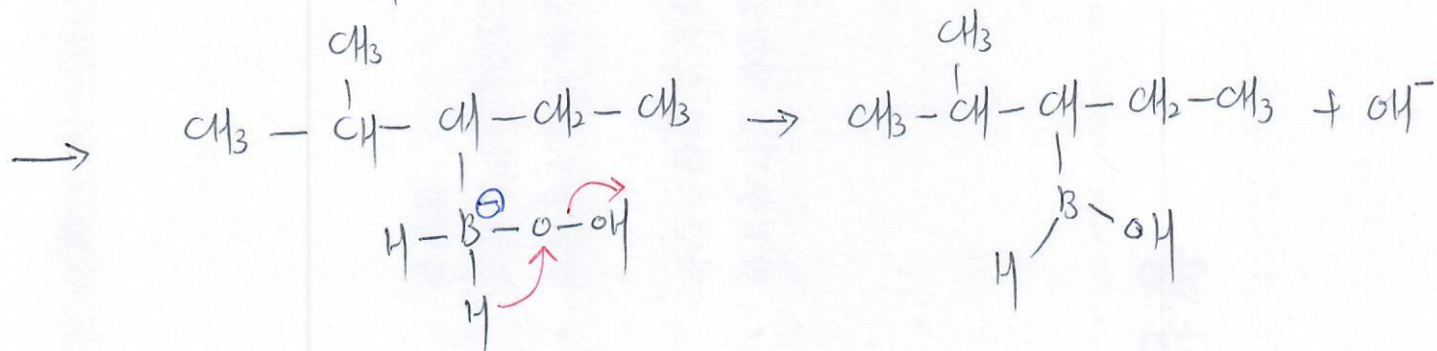
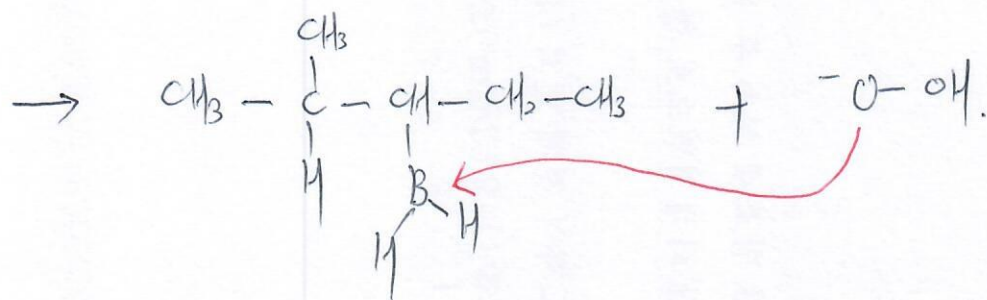
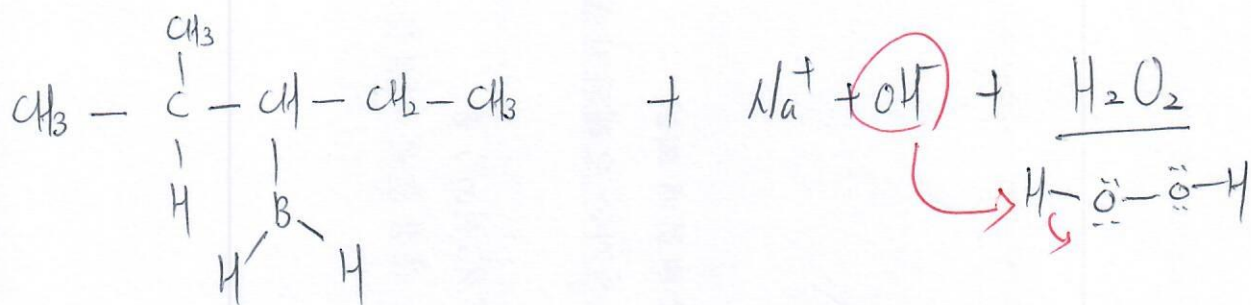
C3 is secondary carbon. (C3 has one substituents)

So, C2 is more steric crowding than C3.



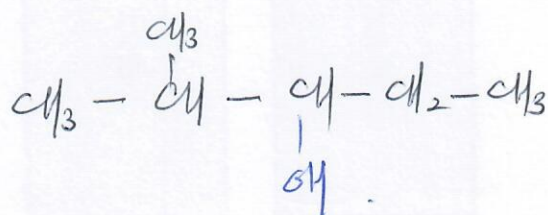
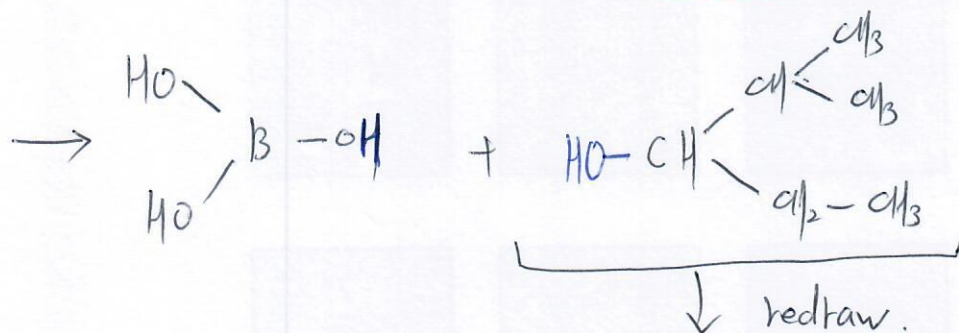
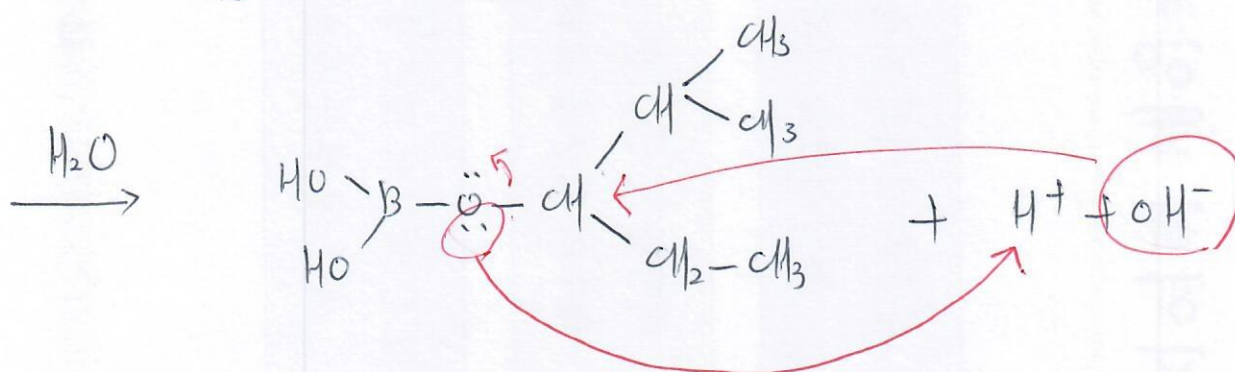
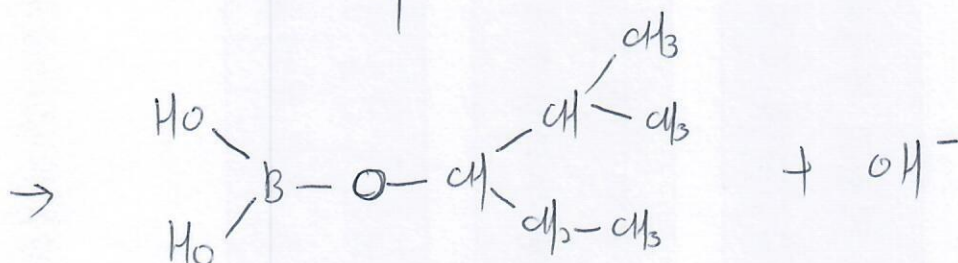
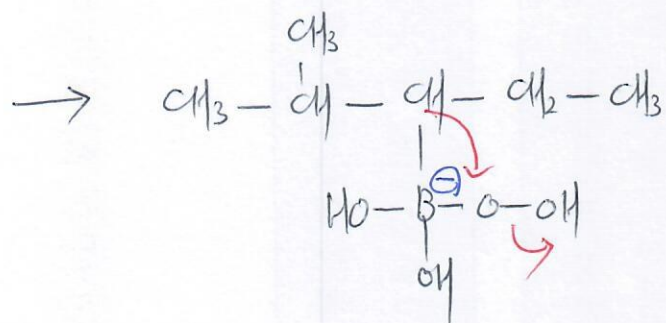
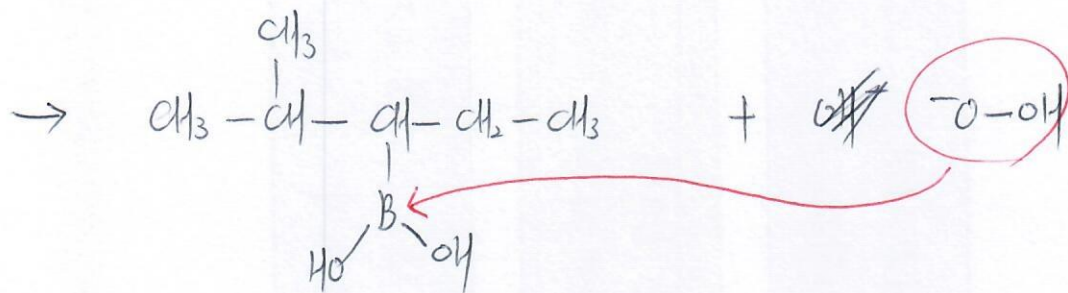
→ next page.

Problem 8-9-2.

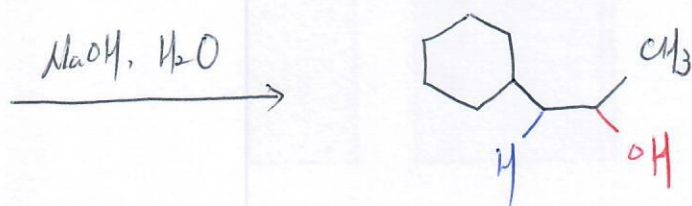
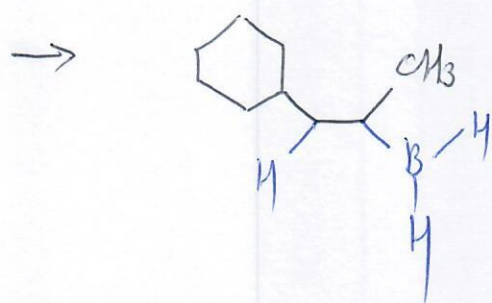
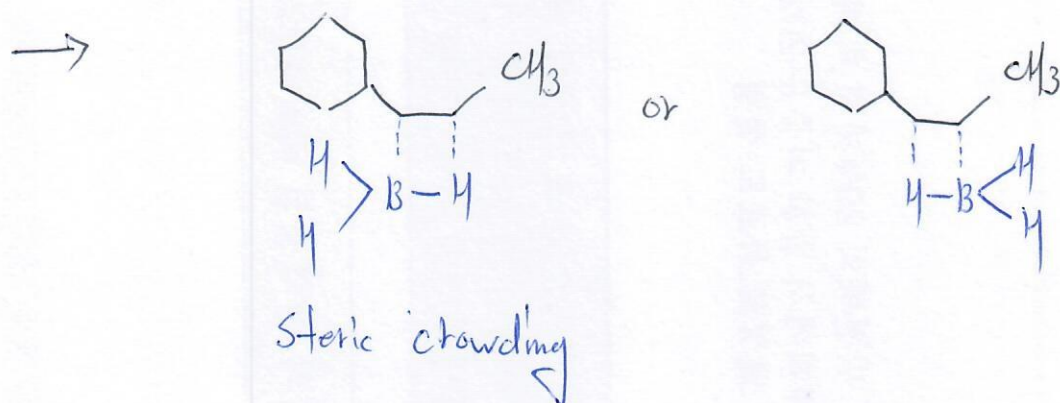
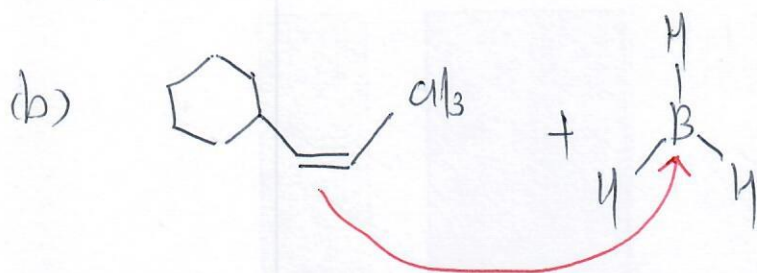


→ next page.

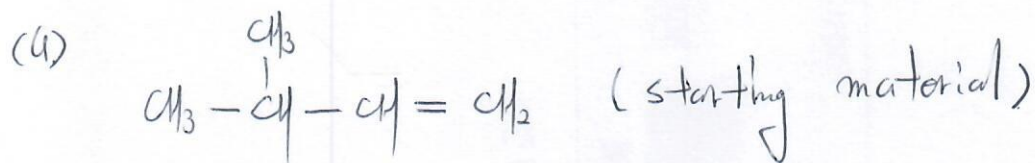
Problem 8-9-3



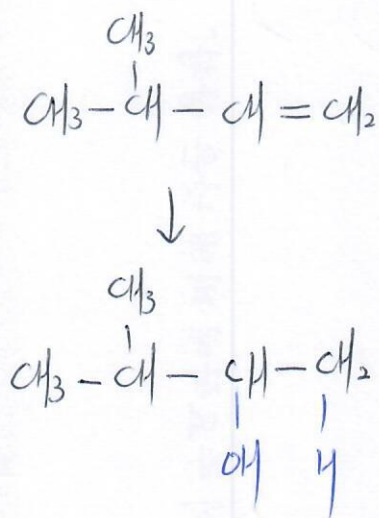
problem 8-9-4.



problem 8-10. -1

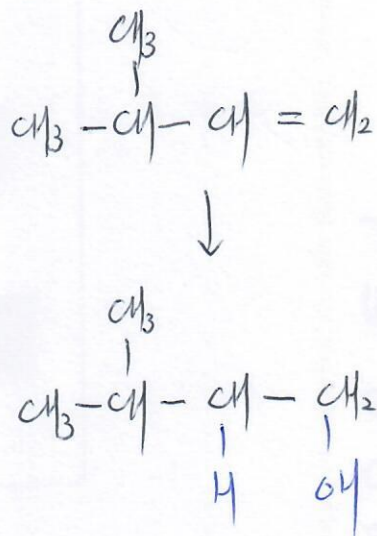


Oxymercuration - demercuration

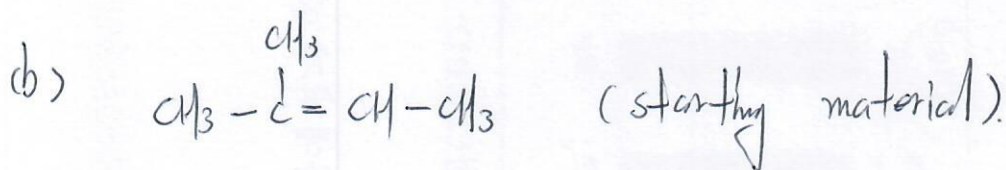


Markovnikov Product

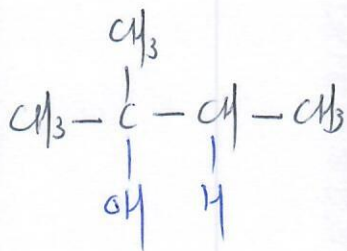
Hydroboration - oxidation



Non-Markovnikov Product.

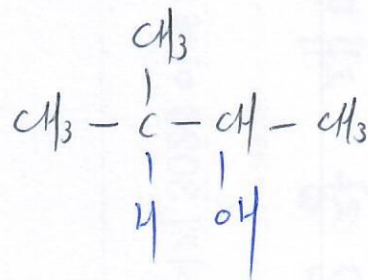


Oxymercuration - demercuration.



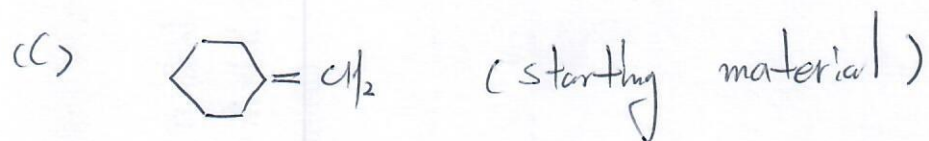
Markovnikov Product

Hydroboration - oxidation



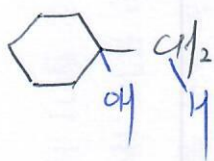
Non-Markovnikov Product.

problem 8-10-2

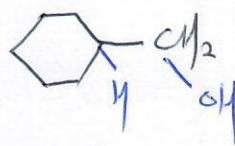


Oxymercuration - demercuration

Hydroboration - oxidation,



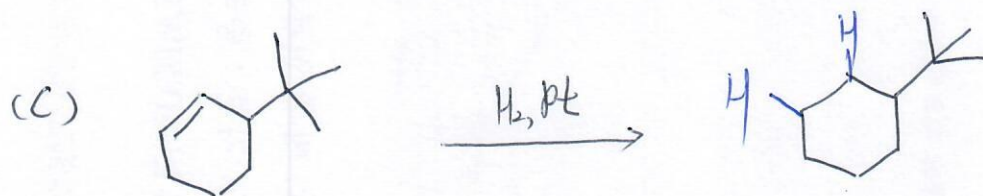
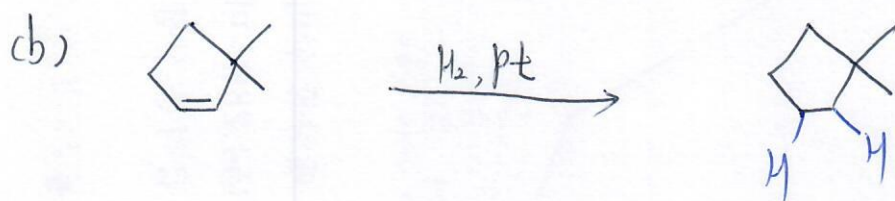
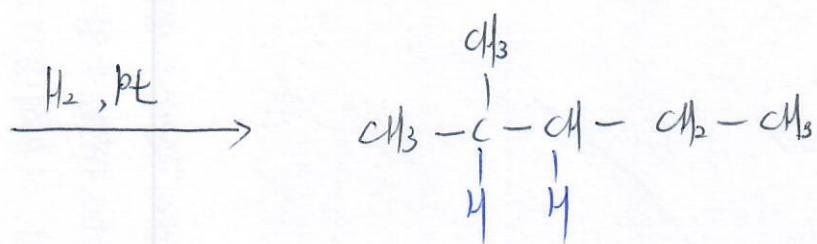
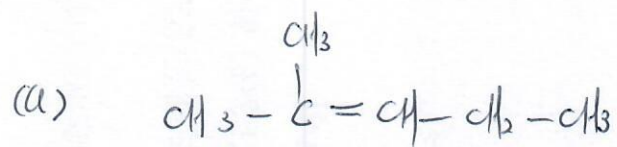
Markovnikov Product



Non-Markovnikov Product.

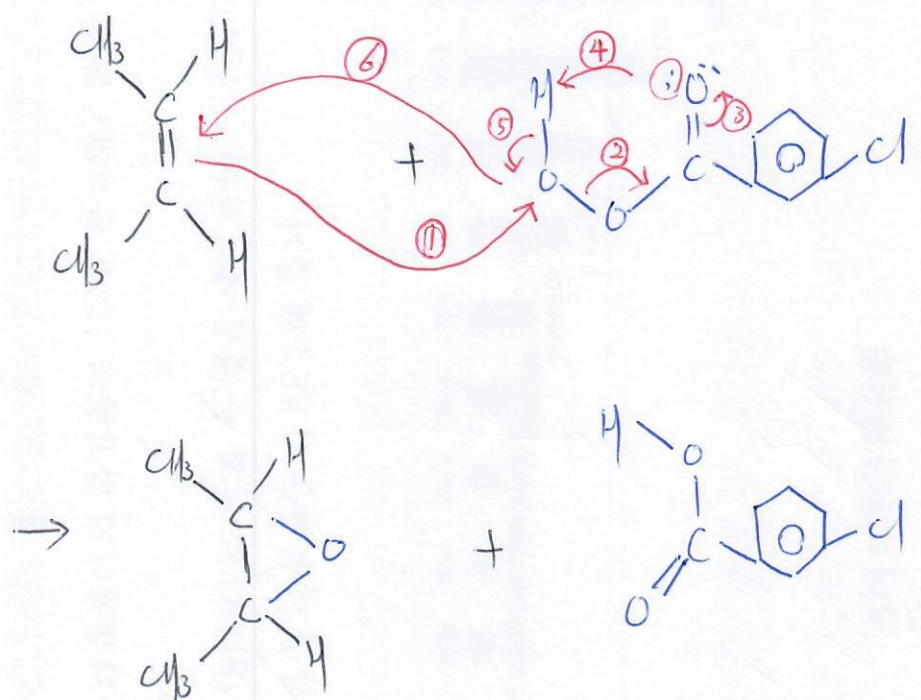
problem 8-12.

Q: what is the product from catalytic hydrogenation.



Problem 8-13.

Q: What is product from reaction of cis-2-butene and meta-chloroperoxybenzoic acid.

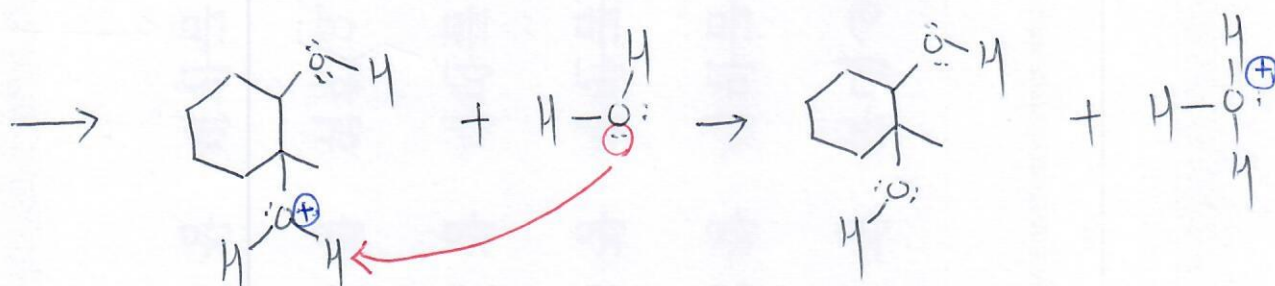
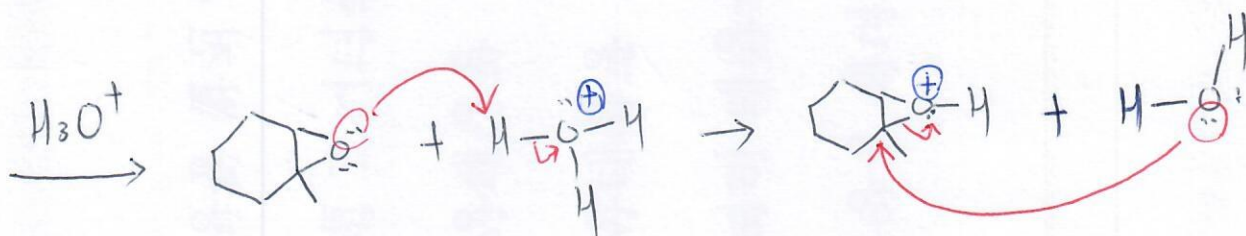
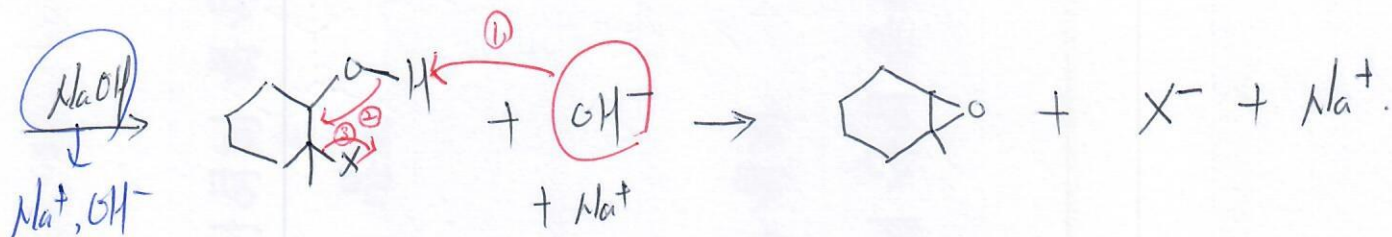
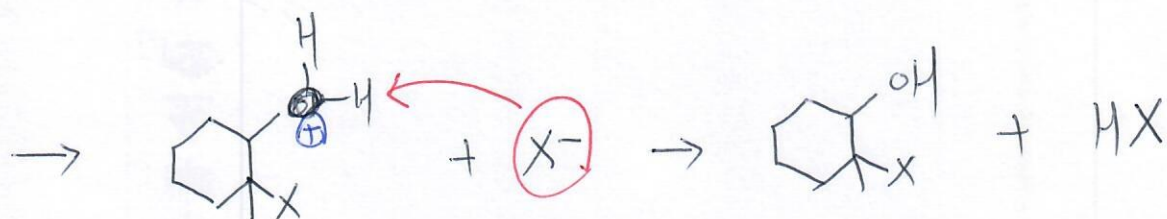
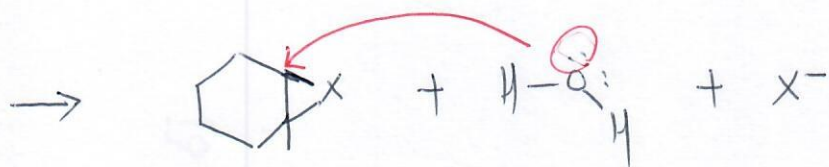
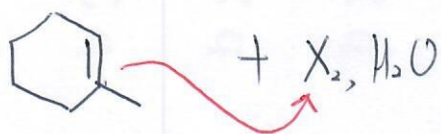


Cis-2,3-Epoxybutane.

↳ comes from starting material.

Problem 8-14-1

(a)



problem 8-14-2

