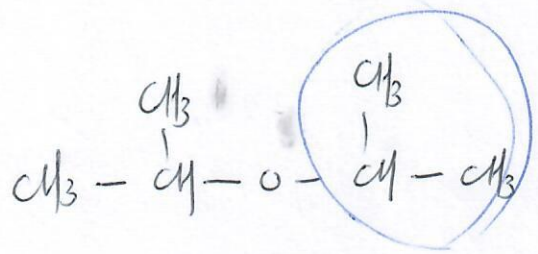
Problem 18-1-1.

(a)



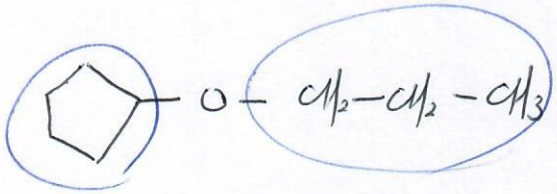
Isopropyl

R – O – R

ether.

Diisopropyl ether.

(b)

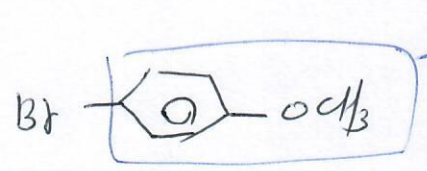


cyclopentyl

propyl

Cyclopentyl – propyl ether.

(c)



→ anisole

Bromo

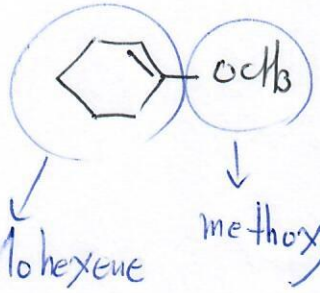
methoxy

p – Bromomethoxy benzene

or

p – Bromo anisole.

(d)



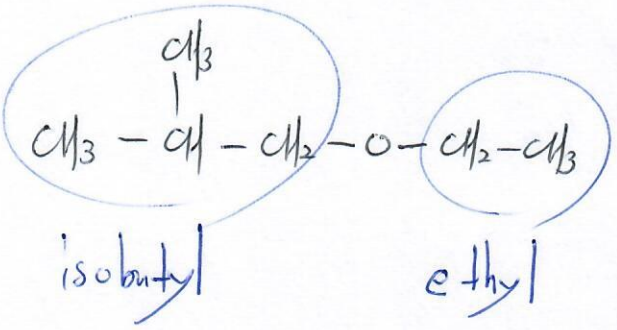
Cyclohexene

methoxy

1 – methoxy cyclohexene.

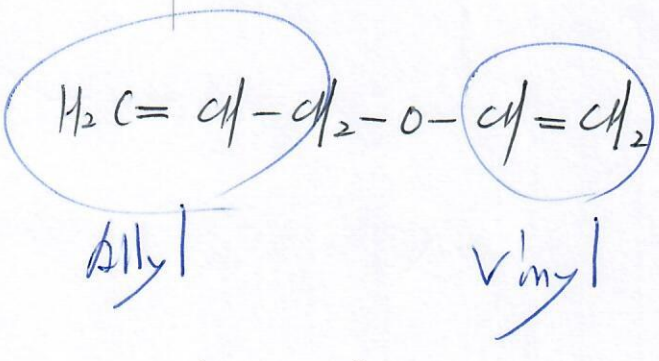
Problem 18-1-2

(e)



Ethyl isobutyl ether.

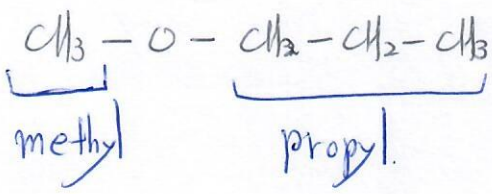
(f)



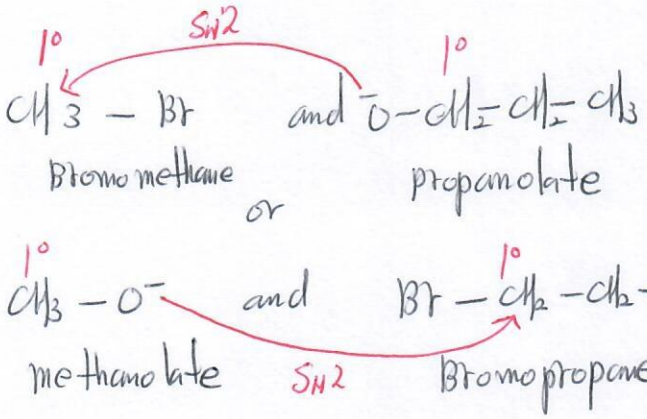
Allyl vinyl ether.

Problem 18-3-1.

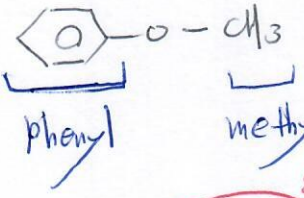
(a) Methyl propyl ether.

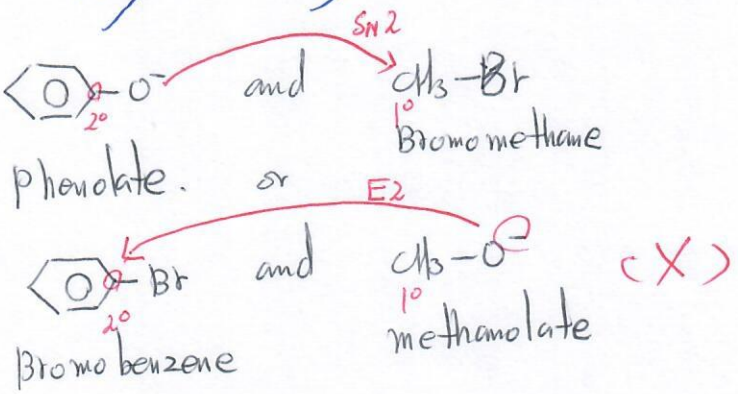


→ R–O⁻ and R–X



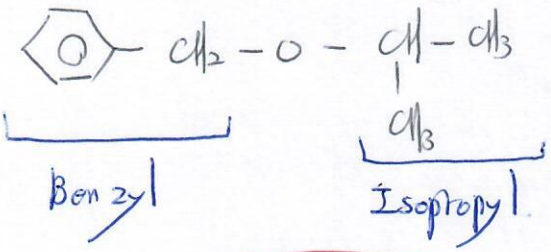
(b) Anisol (methyl phenyl ether)



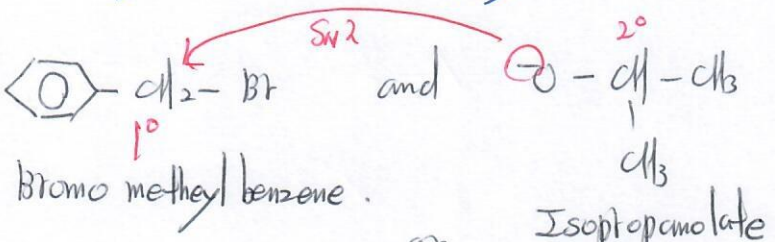


Problem 18-3-2

(c) Benzyl Isopropyl ether.

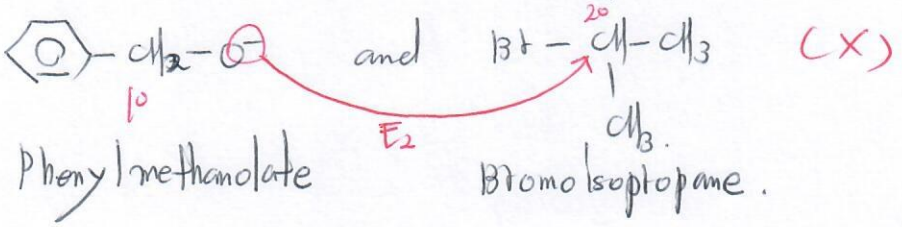


Benzyl Isopropyl



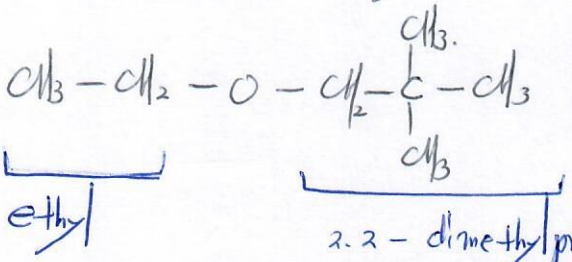
Bromo methyl benzene. and Isopropanolate

or

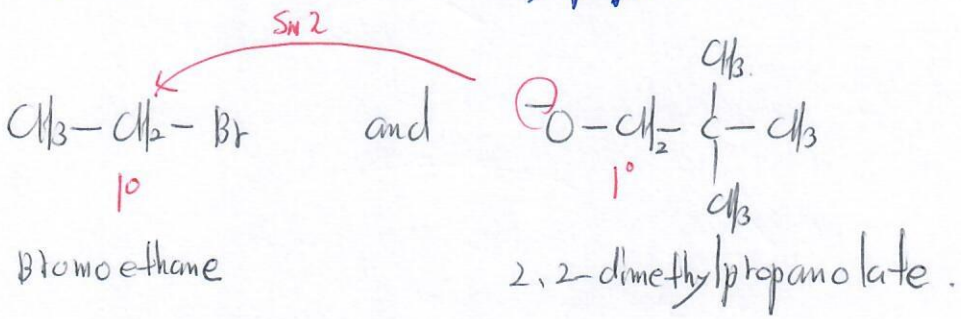


Phenyl methanolate and Bromo isopropane. (X)

(d) Ethyl 2,2-dimethyl propyl ether.

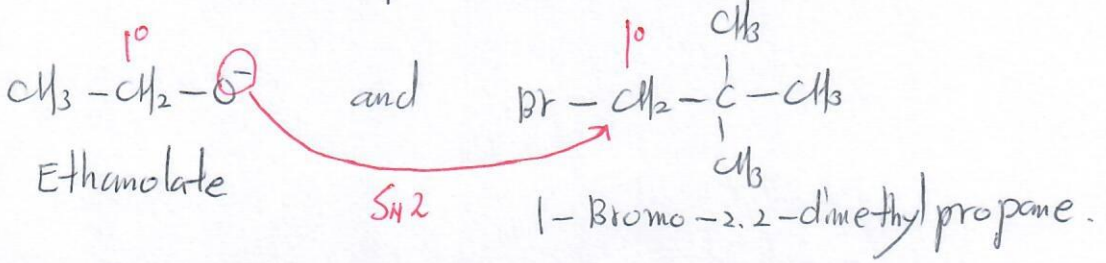


ethyl 2,2-dimethyl propyl.



Bromo ethane and 2,2-dimethyl propanolate.

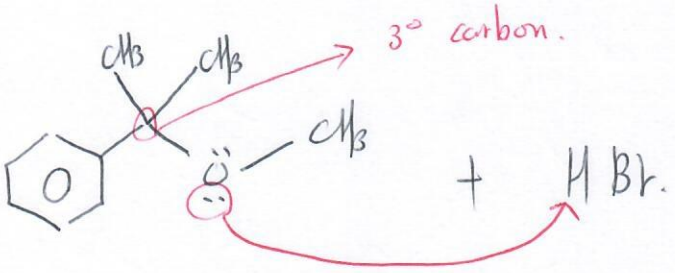
or



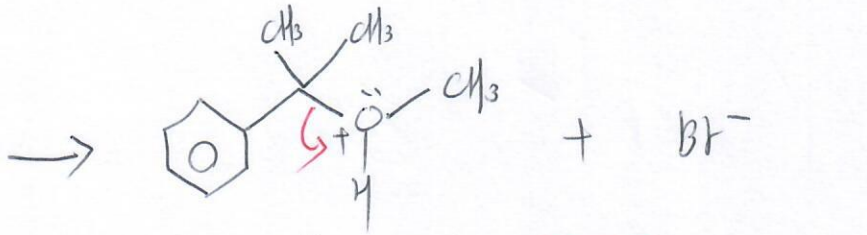
Ethanolate and 1-Bromo-2,2-dimethyl propane.

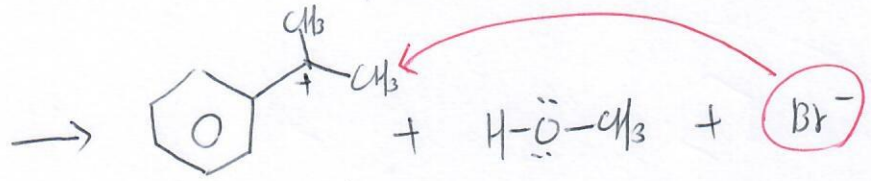
Problem 18-7

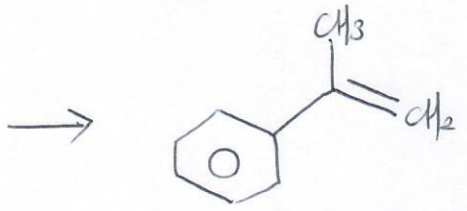
(a)



2-methoxy-2propanyl-benzene or (2-methoxypropan-2-yl) benzene







(prop-1-en-2-yl) benzene.

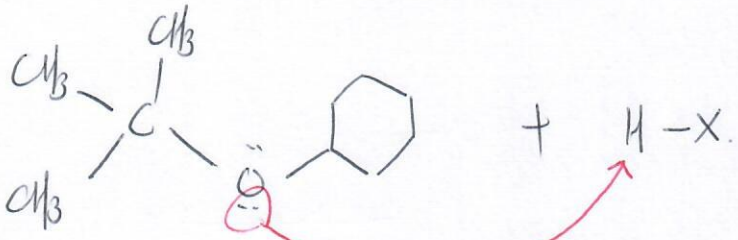
(b) $CH_3-CH_2-\underset{CH_3}{CH}-\ddot{O}-CH_2-CH_2-CH_3 + HBr.$

→ $CH_3-CH_2-\underset{CH_3}{CH}-\overset{H}{\overset{|}{\ddot{O}}}-CH_2-CH_2-CH_3 + Br^-$

2° carbon 1° carbon.

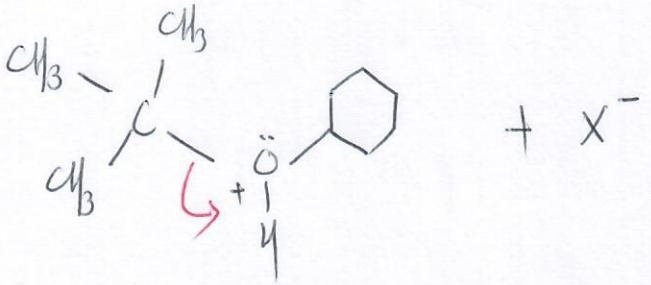
→ $CH_3-CH_2-\underset{CH_3}{CH}-OH + Br-CH_2-CH_2-CH_3.$

Problem 18-8.

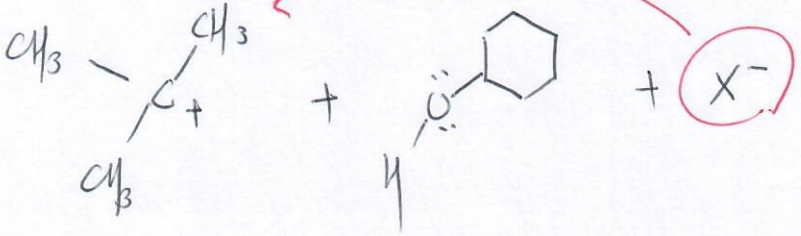


tert-butyl cyclohexyl ether.

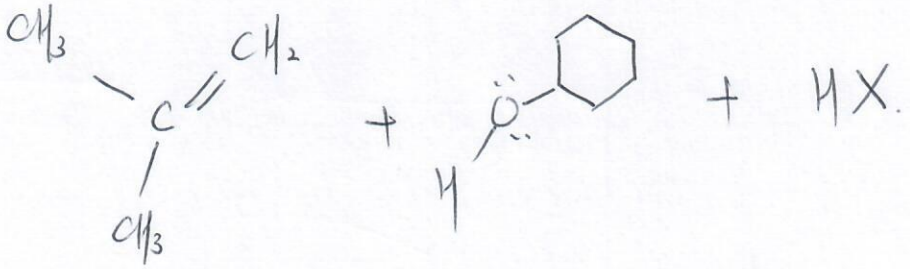
→



→



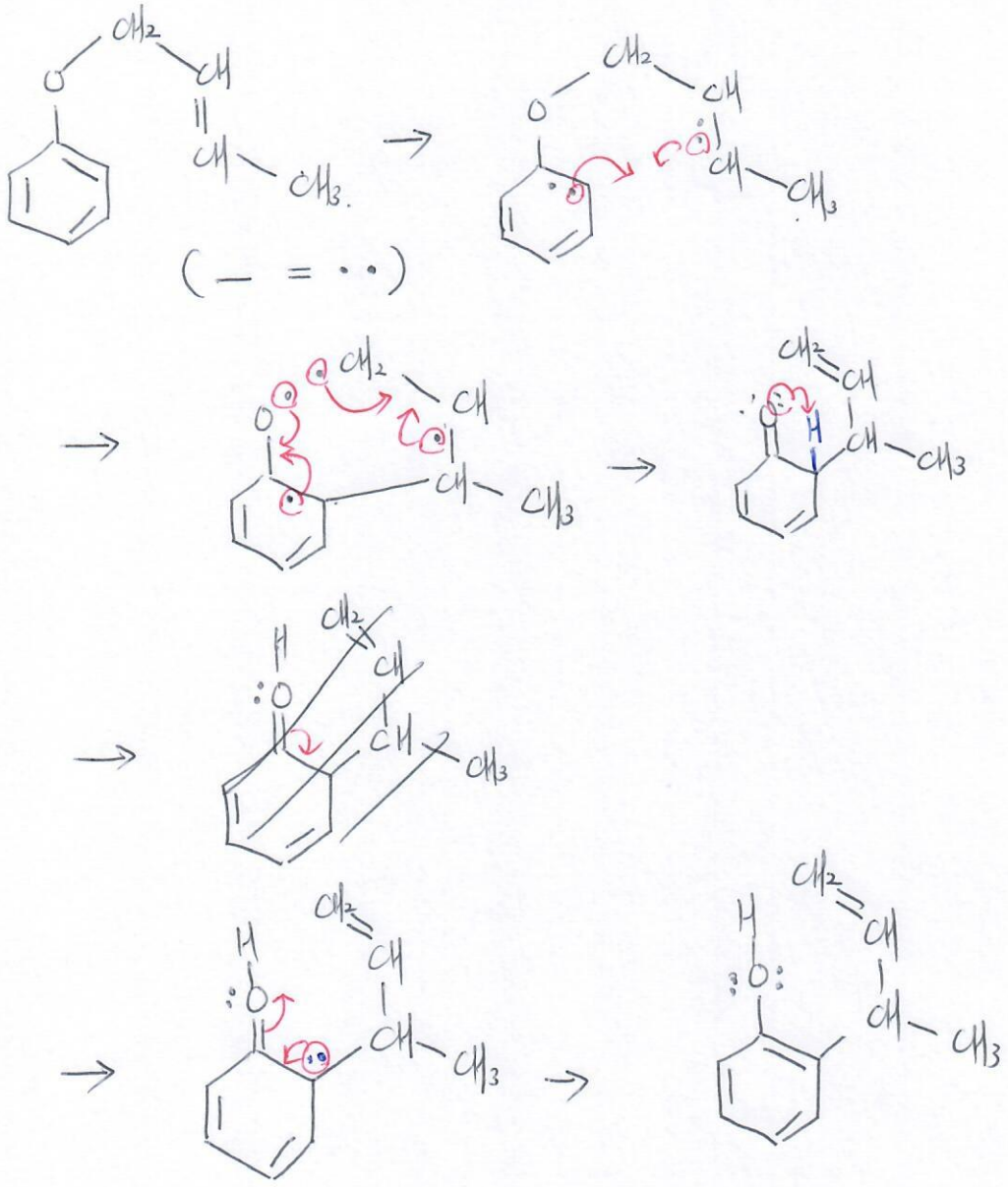
→



2-methylpropene. cyclohexanol

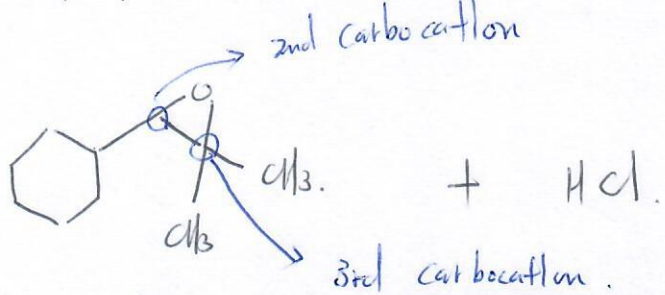
Cyclohexanol.

problem 18-10



problem 18-12.-1

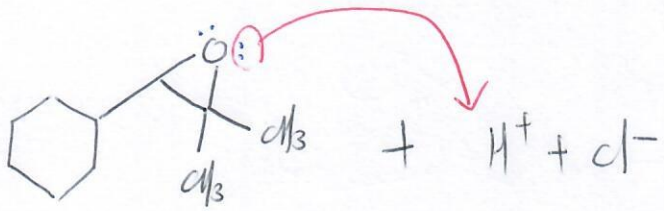
(a)

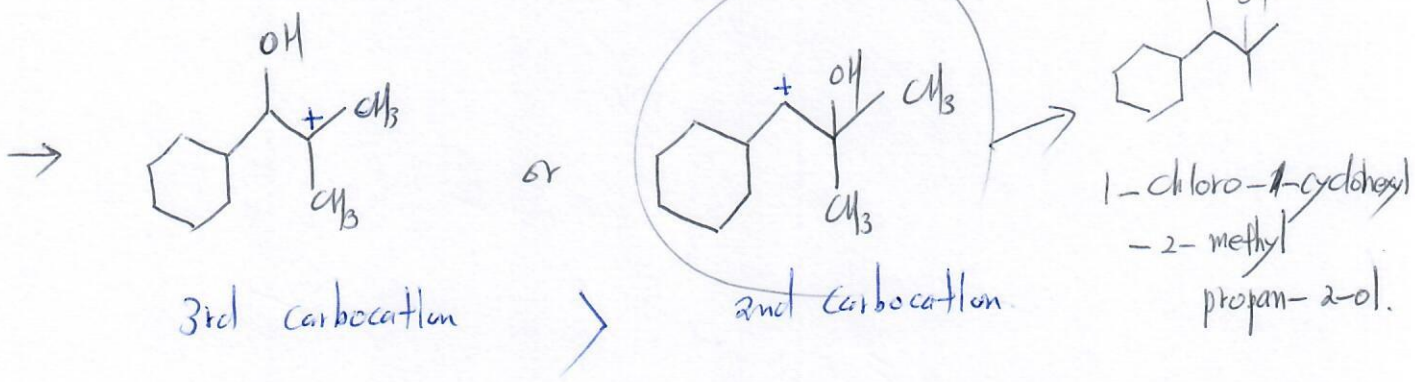


+ HCl.

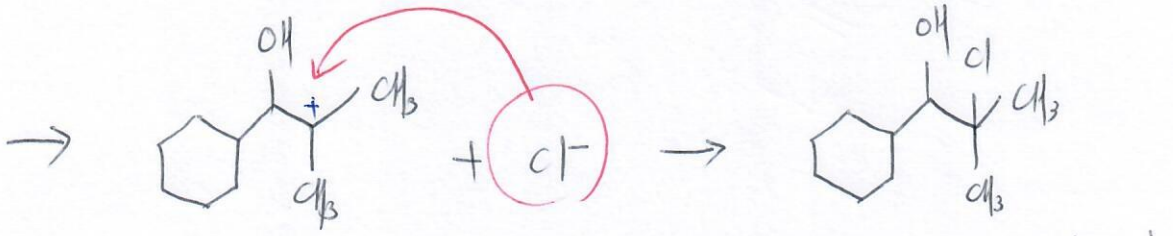
3-cyclohexyl-2.2-dimethyloxirane

SN1.





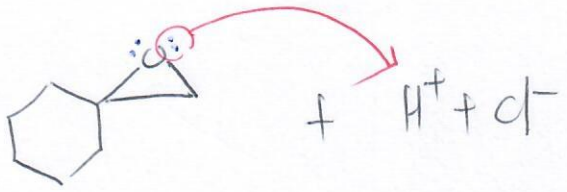
major

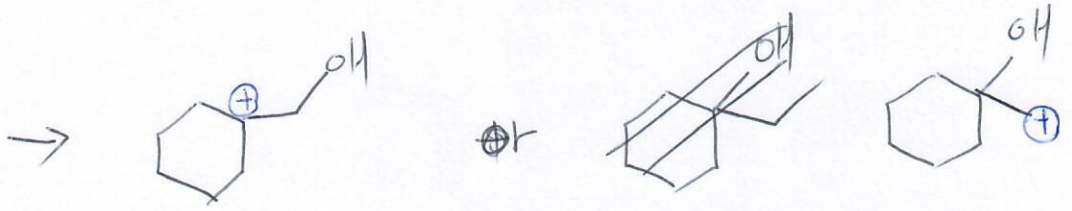


2-chloro-1-cyclohexyl
-2-methylpropanol.

Problem 18-12-2

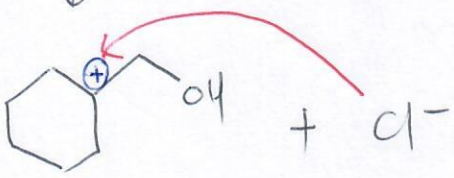
(b)

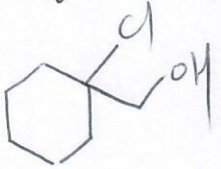




3° carbocation

1° carbocation.
(unstable)



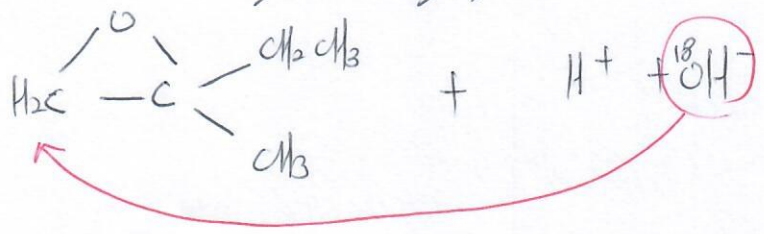


(1-chlorocyclohexyl) methanol

Problem 18-14-1

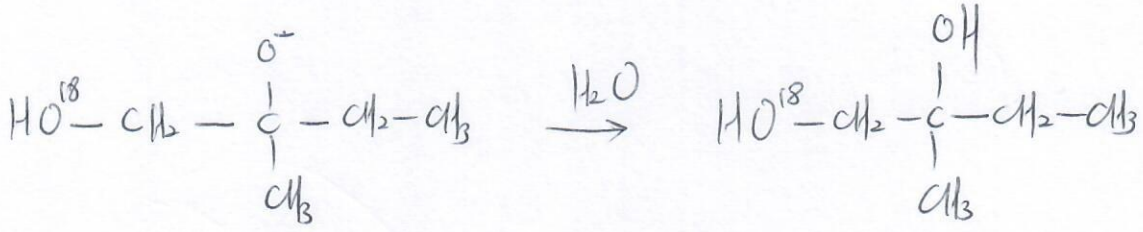
2-ethyl-2-methyloxirane

(a)



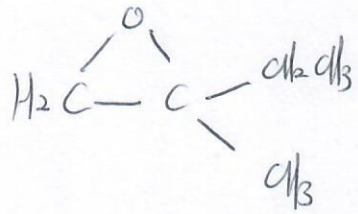
under the basic condition.

ring-opening is SN2 rxn.



2-methylbutane-1,2-diol.

(b)

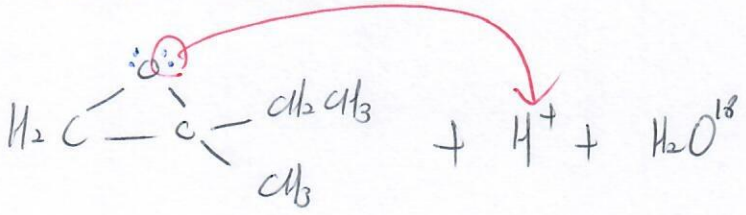


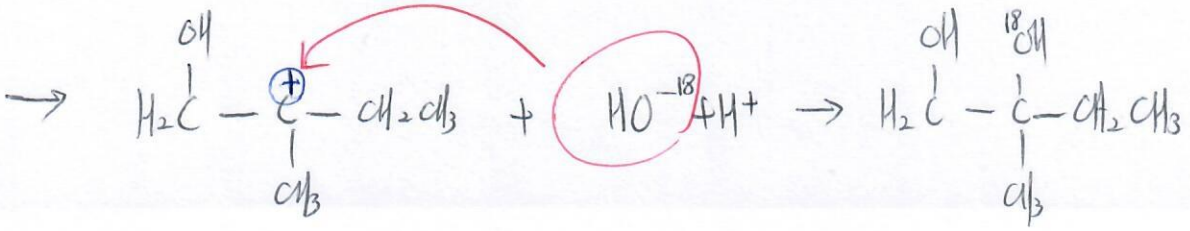
under the acid condition.

ring-opening is SN2 rxn or SN1 rxn.

Check the carbocation.

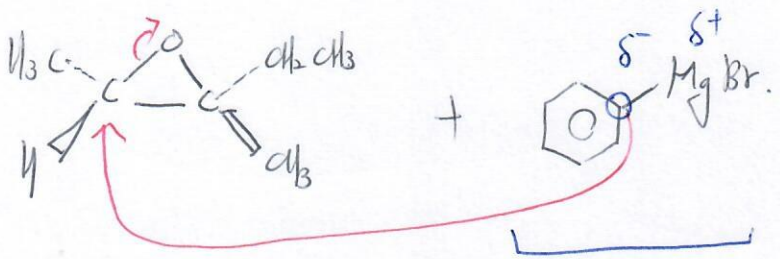
3° carbocation





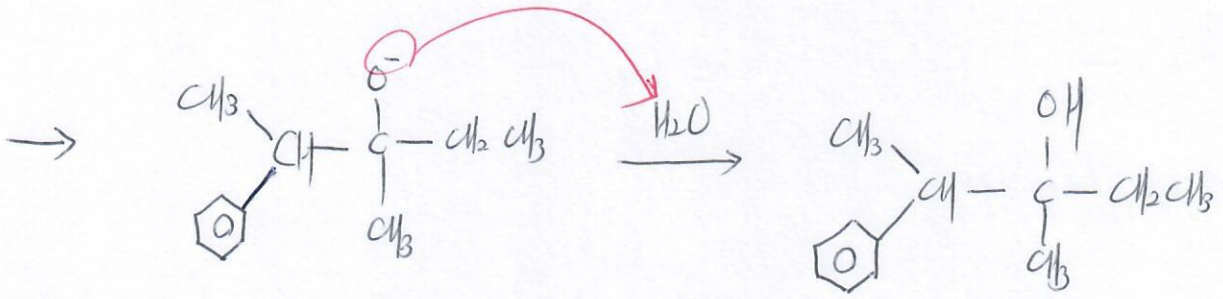
Problem 18-14-2.

(c)



nucleophile.

So. S_N2 rxn.



(3,3-dimethylpentan-2-yl) benzene.