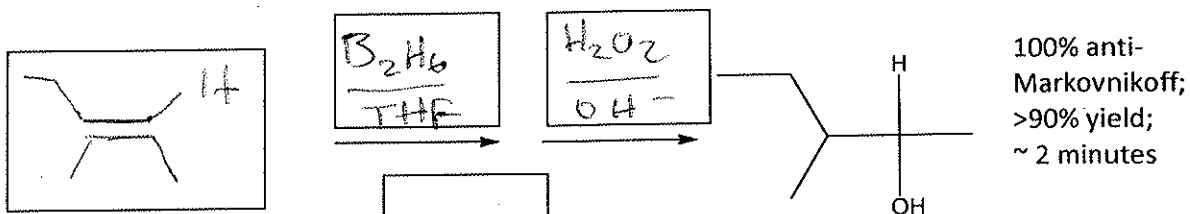


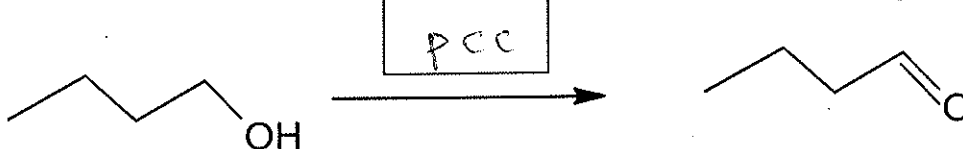
Your name: Answers 1 pt

Fill in the boxes below. One (1) point for every correct answer

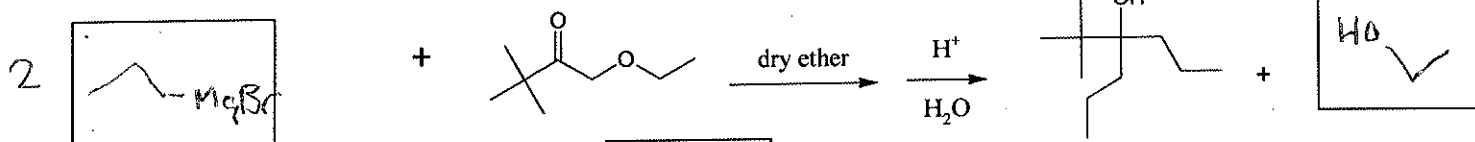
1)



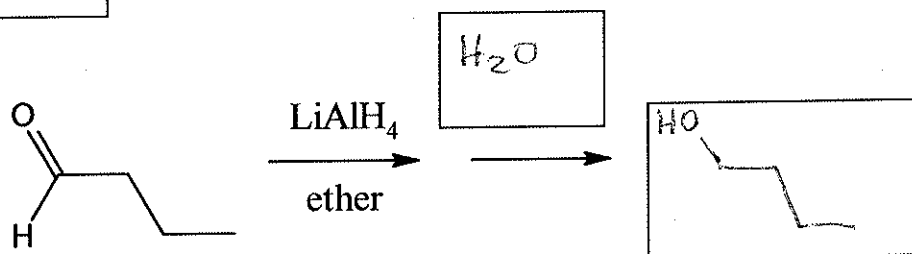
2)



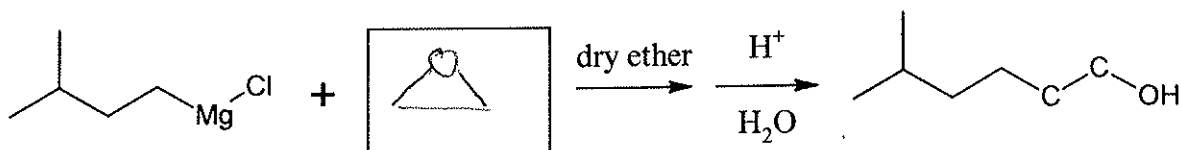
3)



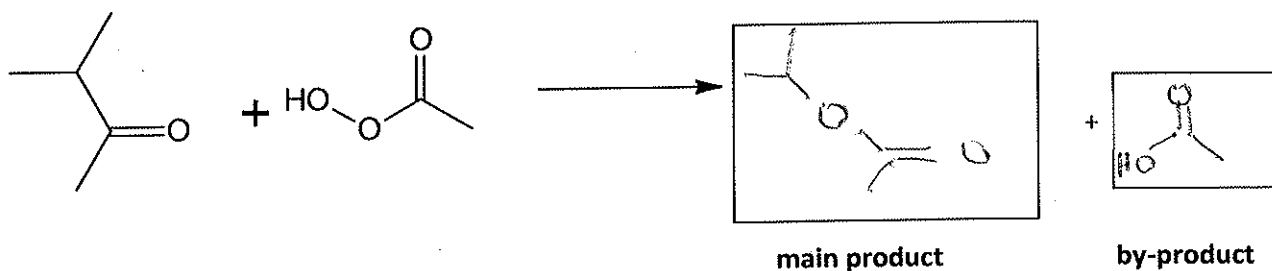
4)



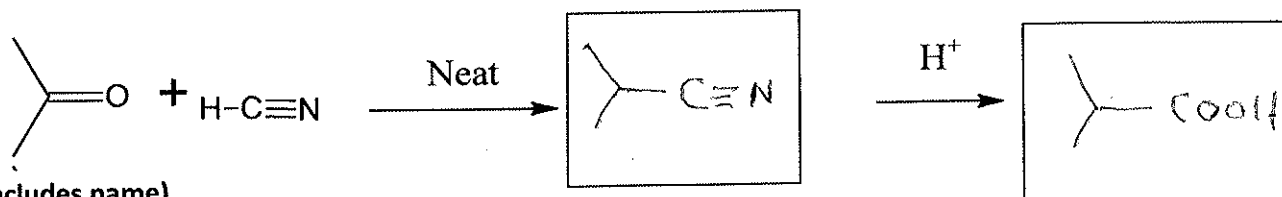
5)



6)

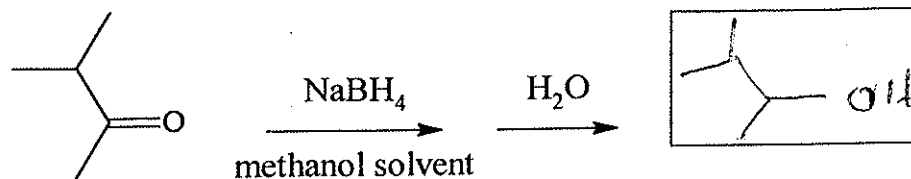


7)

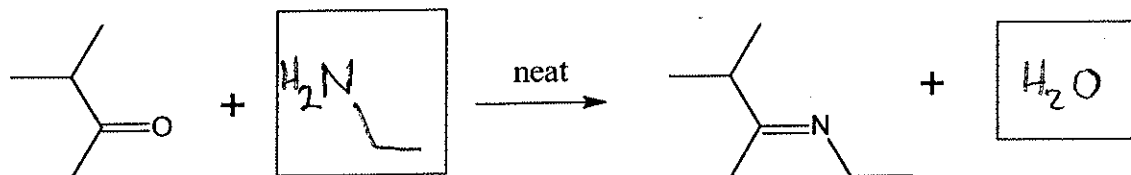


___/14 (includes name)

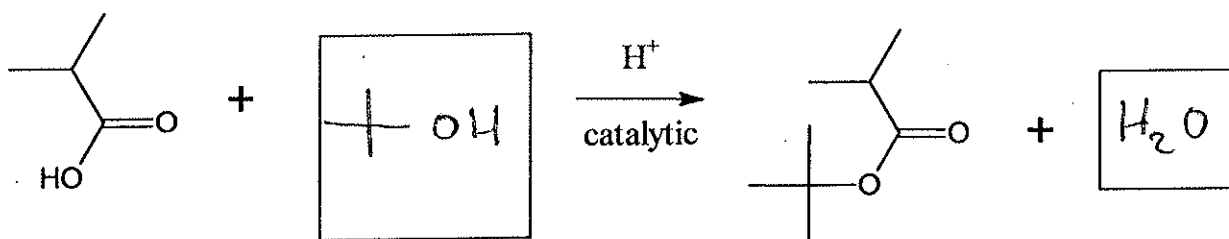
8)



9)



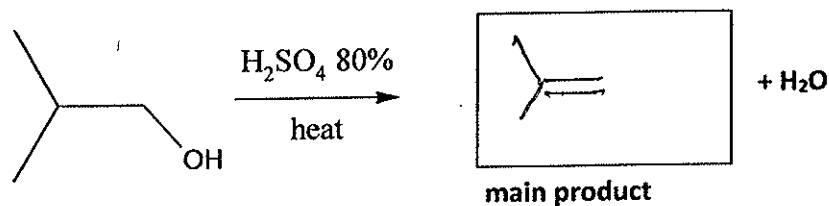
10)



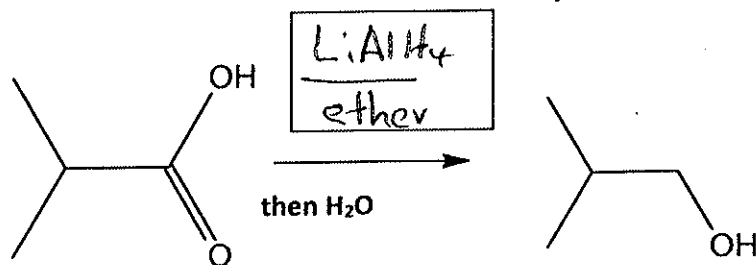
11)



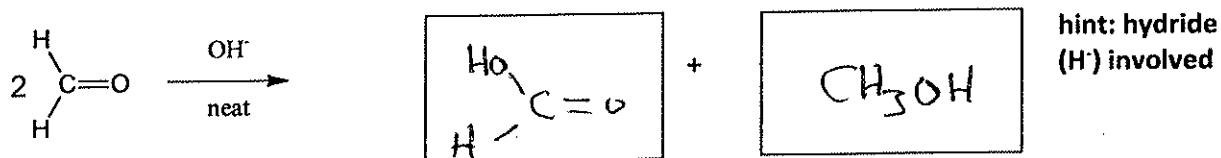
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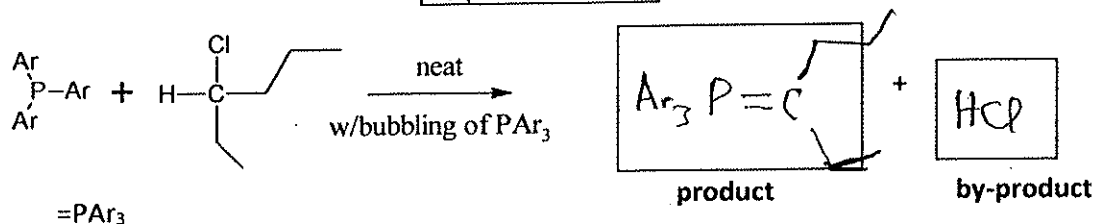
13)



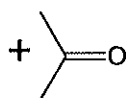
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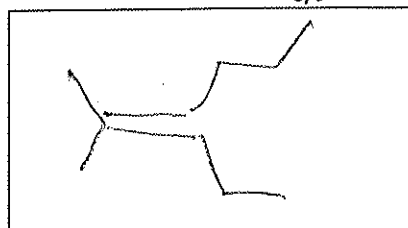
15)



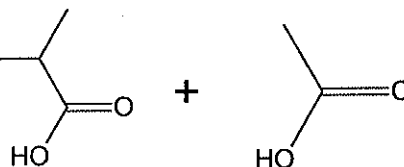
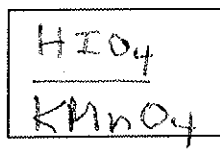
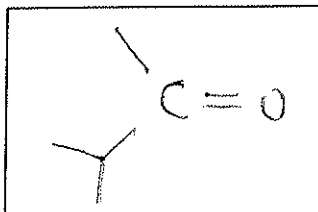
16) Product of problem 15



DMSO
solvent

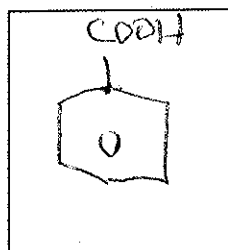
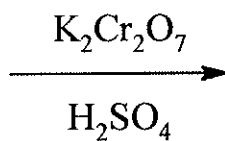
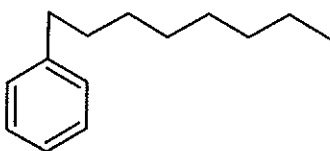


17)

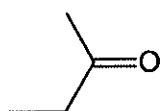


hint: analogous to ozonolysis

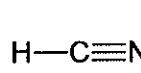
18)



19)

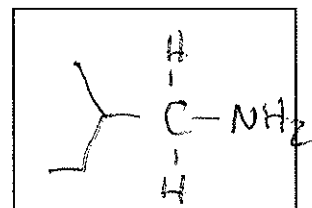


+

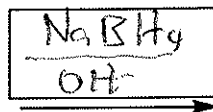
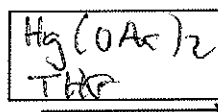
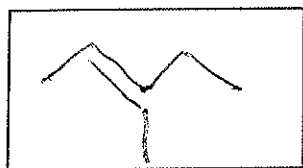


intermediate
product

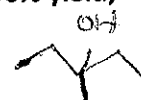
$\xrightarrow[\text{then H}_2\text{O}]{\text{LiAlH}_4/\text{ether}}$



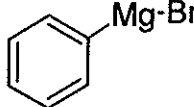
20)



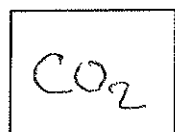
3-methyl-3-pentanol; mark. only
90% yield; < 2 minutes



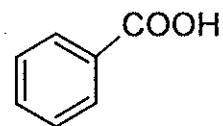
21)



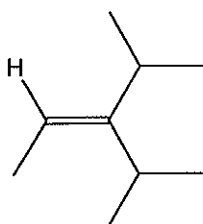
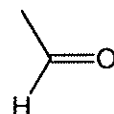
+



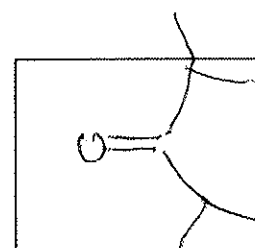
dry ether

 $\xrightarrow{\text{H}^+/\text{H}_2\text{O}}$


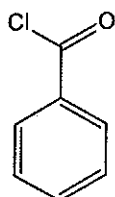
22)


 $\xrightarrow{\text{Zn/H}^+}$


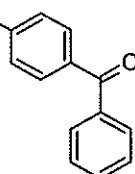
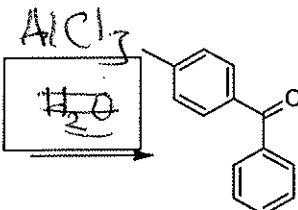
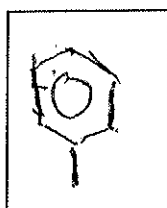
+



23)

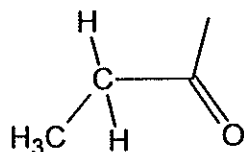


+



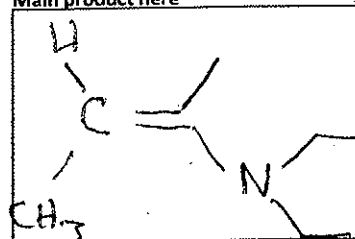
+ HCl

24)

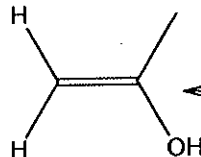
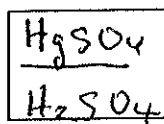
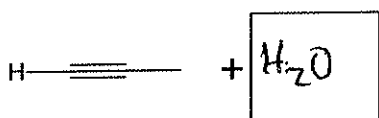


neat

Main product here

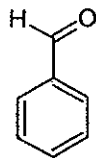
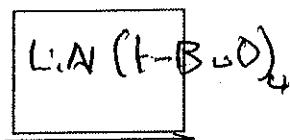
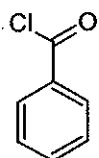


25)

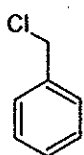


(keto-enol tautomers)

26)



27)



+

 Li^+

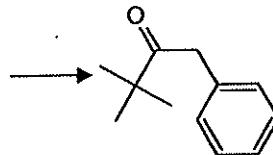
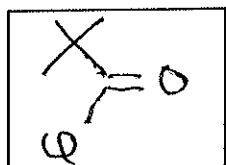
ether

 CuI

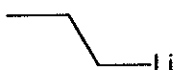
intermediate product A

intermediate product A

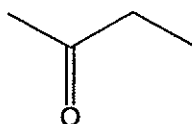
+



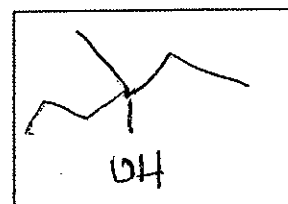
28)



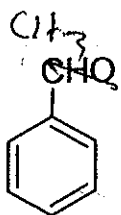
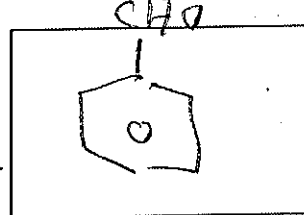
+



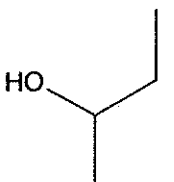
dry ether

 $\text{H}^+/\text{H}_2\text{O}$ 

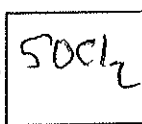
29)

 Cl_2 H_2O 

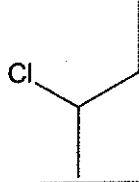
30)



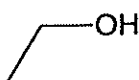
+



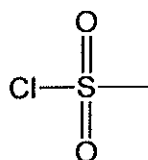
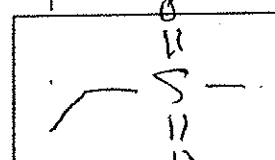
pyridine solvent



31)



+

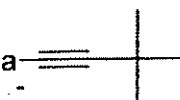
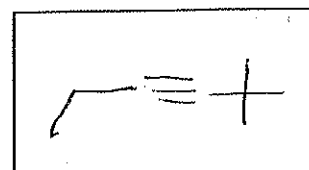
 $\rightarrow$ alkyl sulfonate
intermediate A

/10

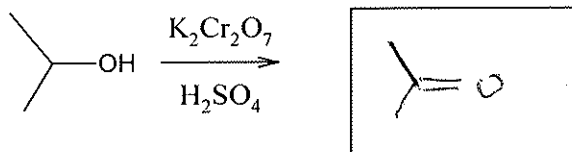
A

+

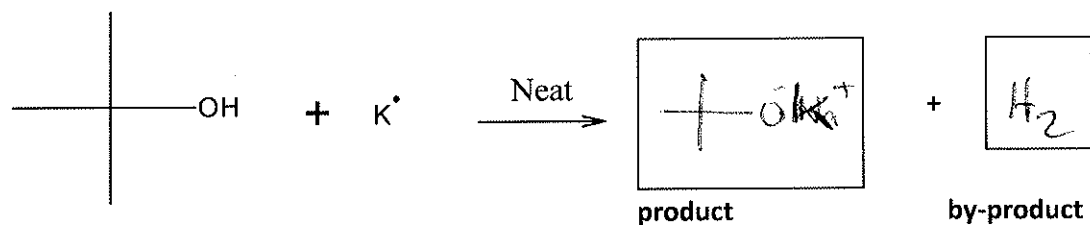
Na

 $\rightarrow$ 

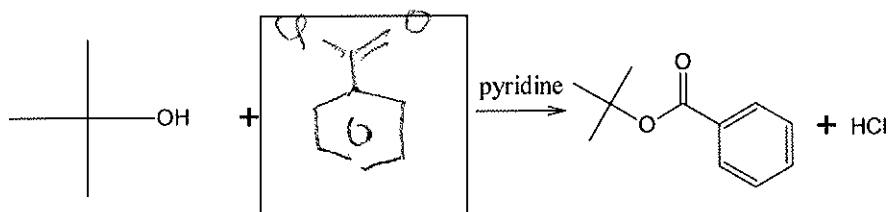
32)



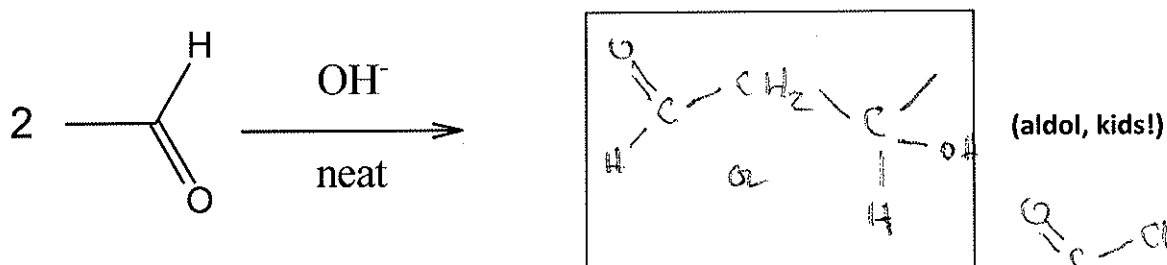
33)



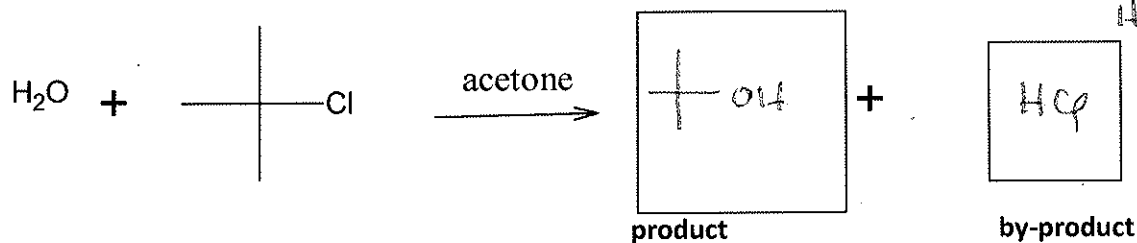
34)



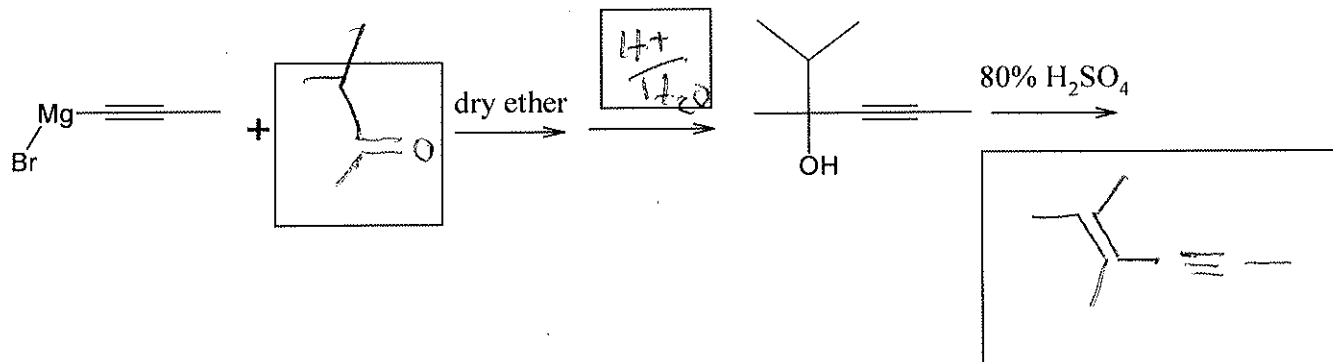
35)



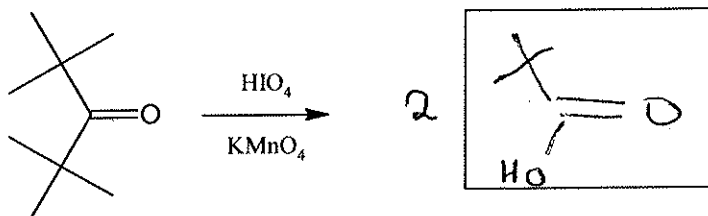
36)



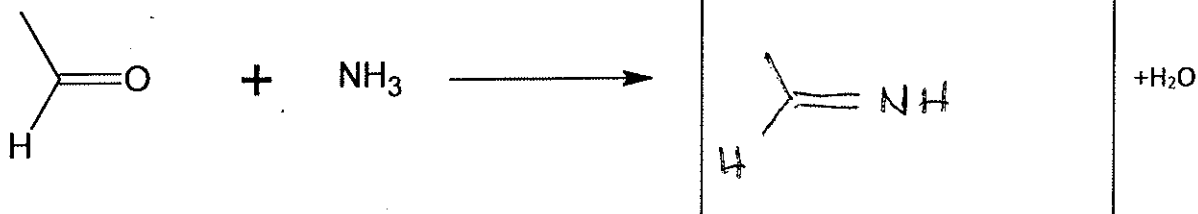
37)



38)

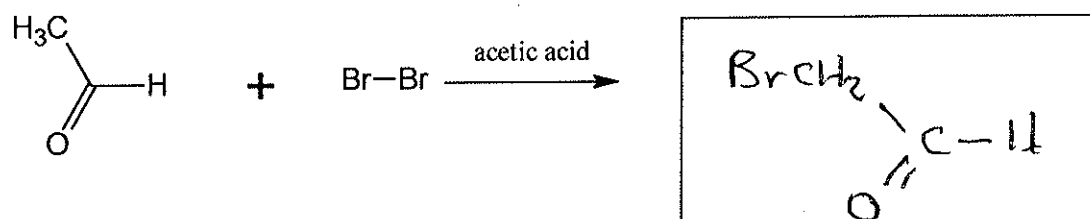


39)

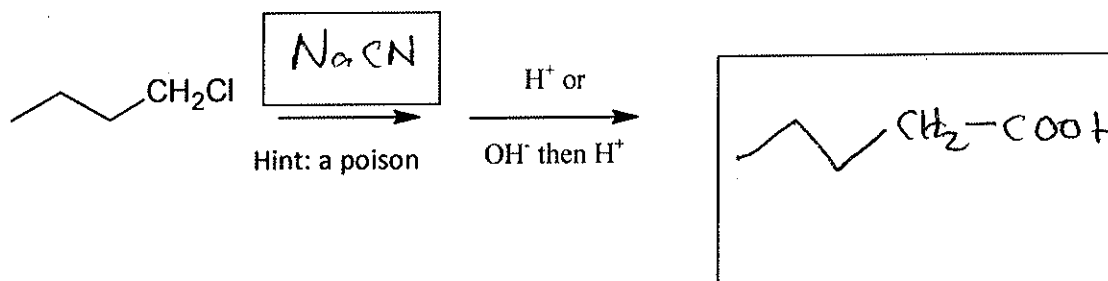


Hint: an imine

40)

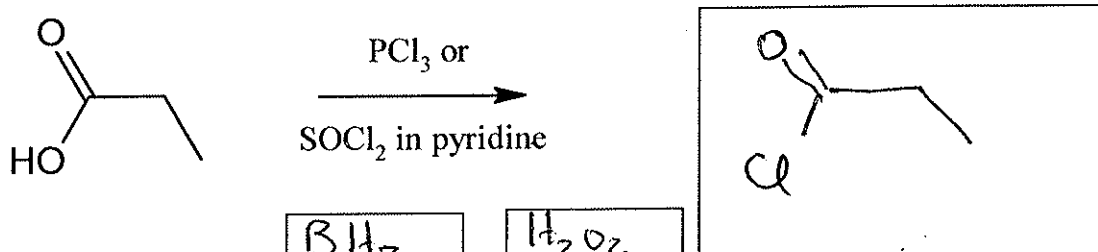
Hint: α -H reaction

41)

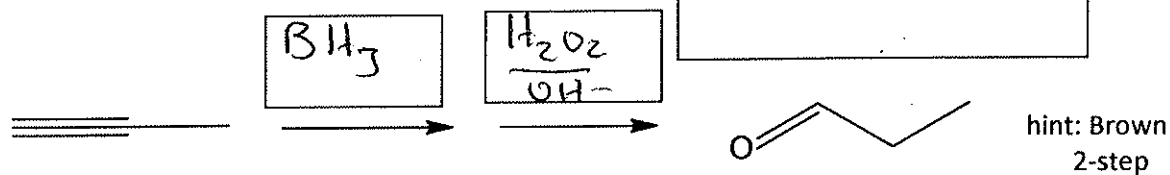


Hint: a poison

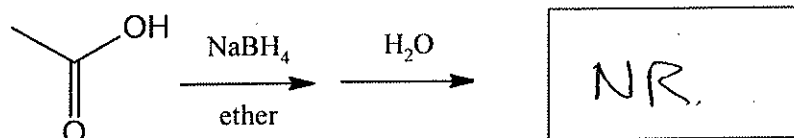
42)



43)

hint: Brown
2-step

44)



45) Cats rule, dogs _____

45) Any day doing organic chemistry is _____