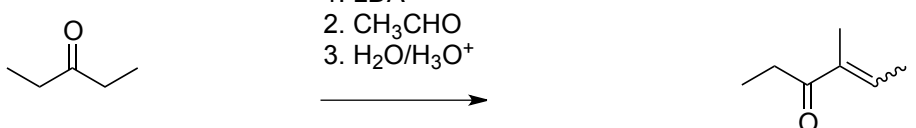
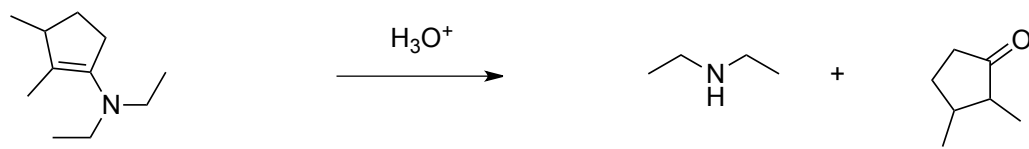
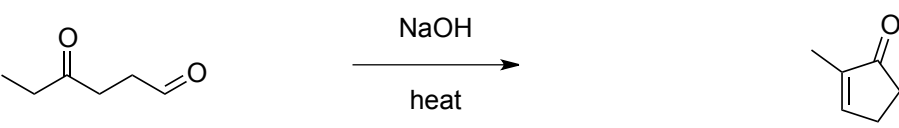
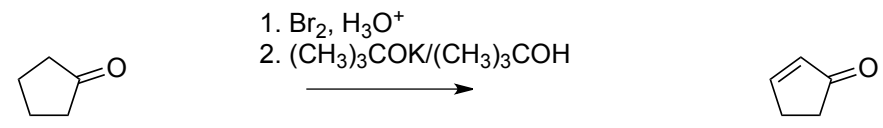
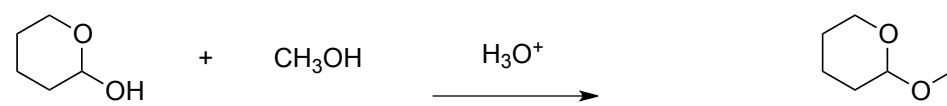
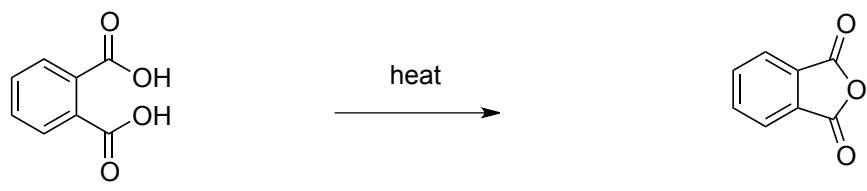
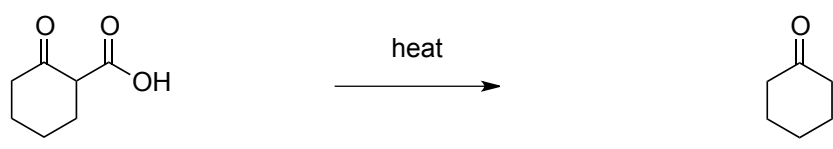
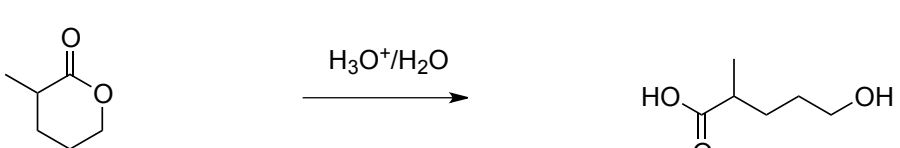
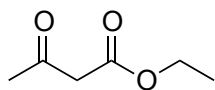
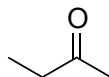


1.  1. LDA
2. CH_3CHO
3. $\text{H}_2\text{O}/\text{H}_3\text{O}^+$
2.  H_3O^+
3.  NaOH
heat
4.  1. $\text{Br}_2, \text{H}_3\text{O}^+$
2. $(\text{CH}_3)_3\text{COK}/(\text{CH}_3)_3\text{COH}$
5.  CH_3OH
 H_3O^+
6.  heat
7.  heat
8.  $\text{H}_3\text{O}^+/\text{H}_2\text{O}$

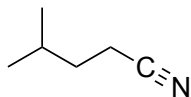
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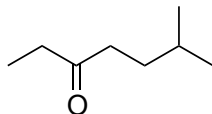
1. NaOEt/EtOH
2. CH₃Br
3. H₃O⁺
4. heat



10.



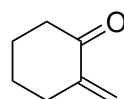
1. EtMgBr
2. H₂O/H₃O⁺



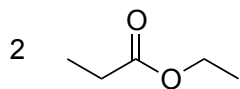
11.



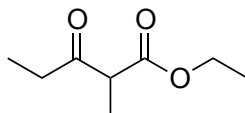
NaOEt
heat



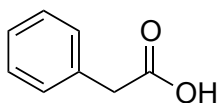
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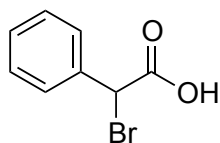
NaOEt
EtOH



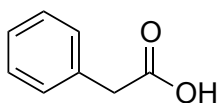
13.



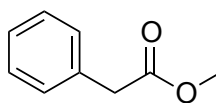
1. Br₂, PBr₃
2. H₂O



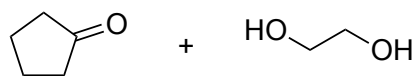
14.



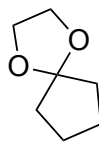
CH₃OH
H₃O⁺



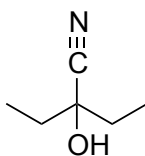
15.



H₃O⁺



16.



H₂O/H₃O⁺
heat

