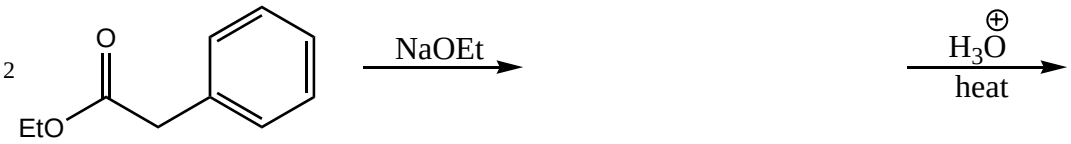
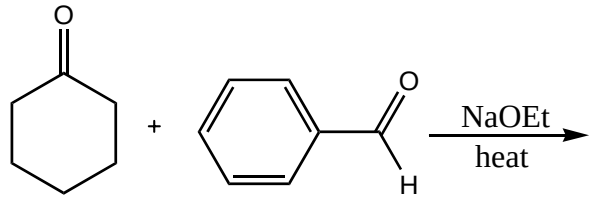
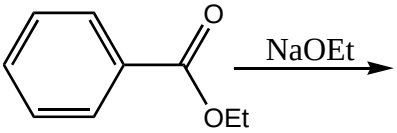
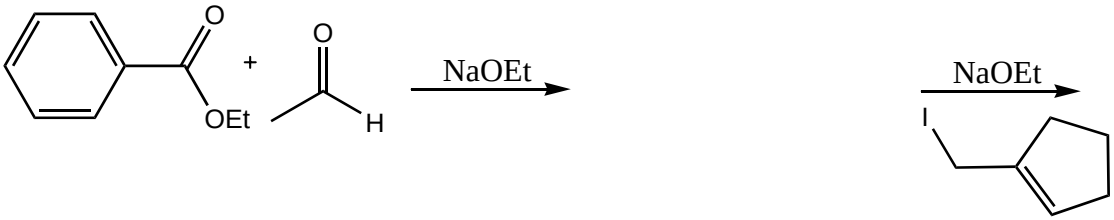
Give each intermediate structure:

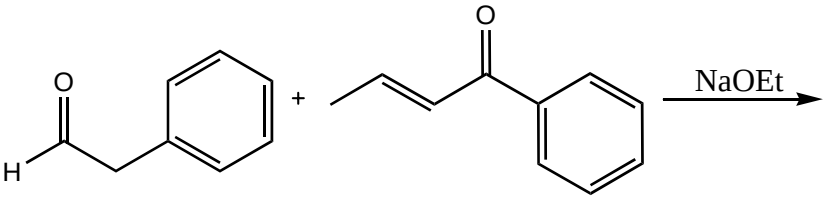
2

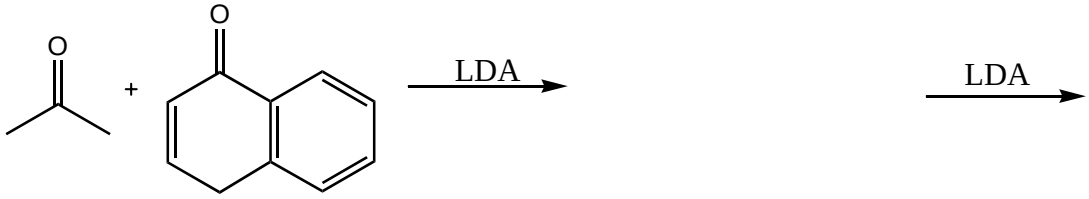


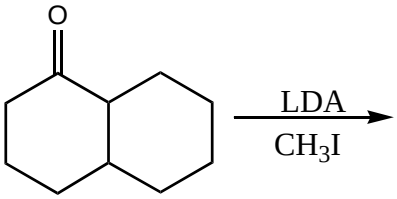


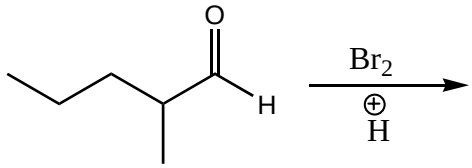


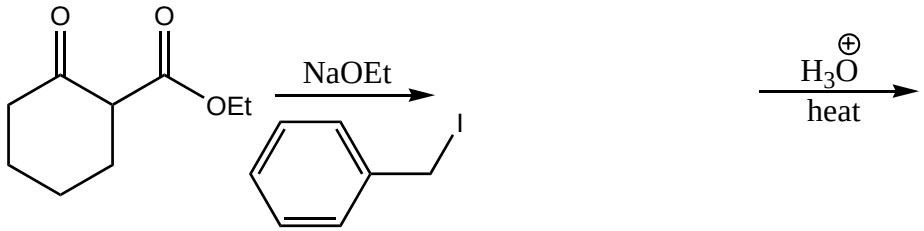


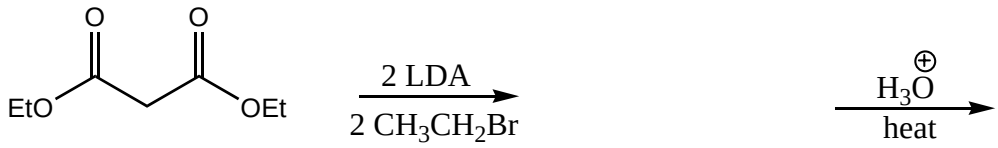


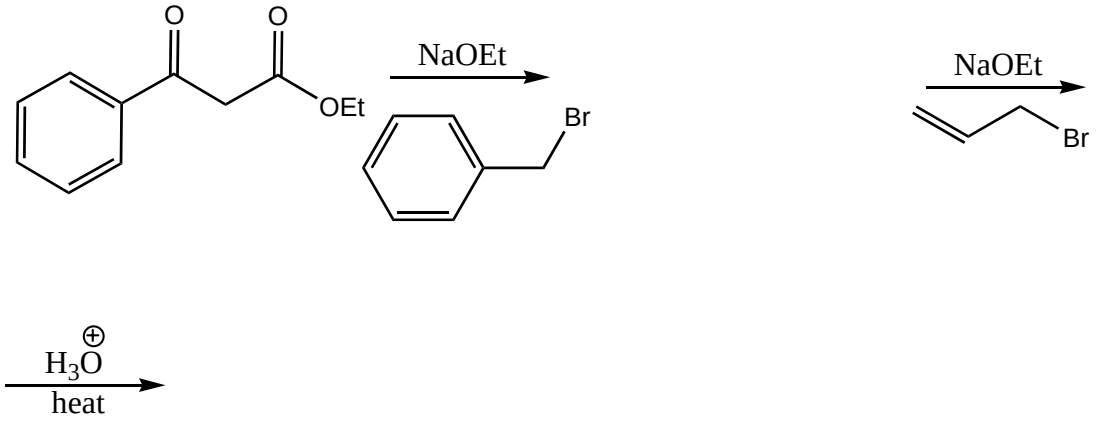


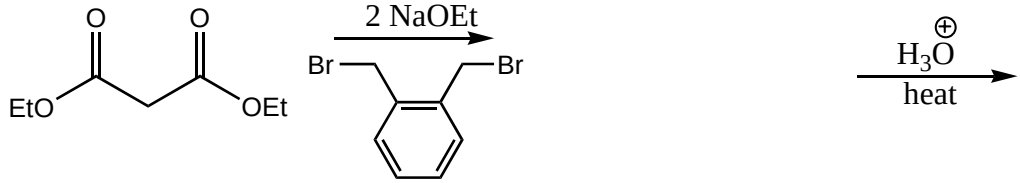


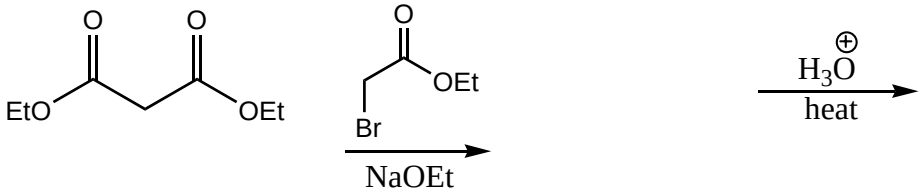

O
H
Br2
H

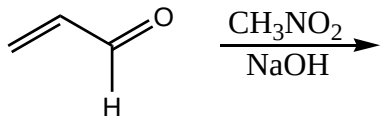

O
O
OEt
NaOEt
I
H3O
heat

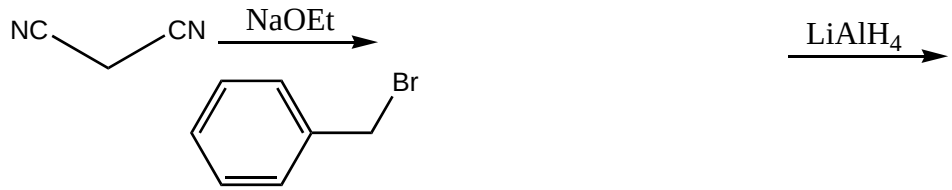

O
O
EtO
OEt
2 LDA
2 CH3CH2Br
H3O
heat

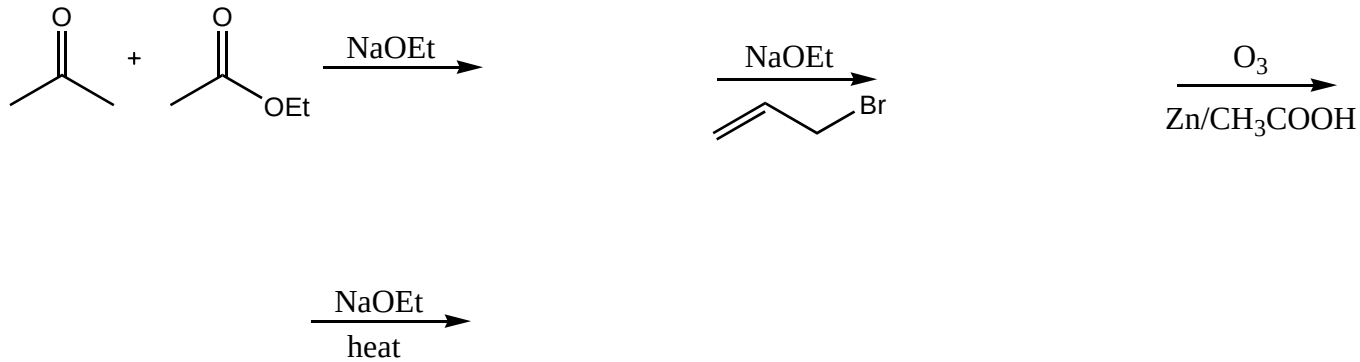

O
O
OEt
NaOEt
Br
NaOEt
Br
H3O
heat

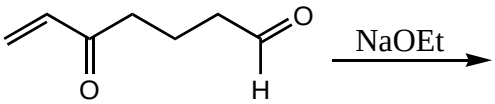

O
O
EtO
OEt
2 NaOEt
Br
Br
H3O
heat

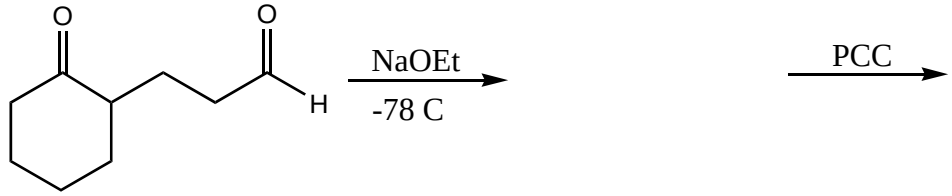

O
O
EtO
OEt
O
OEt
Br
NaOEt
H3O
heat

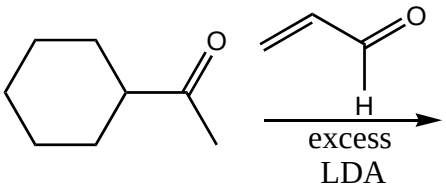

O
H
CH_3NO_2
NaOH

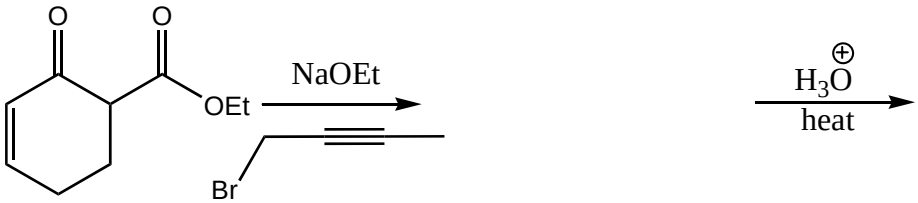

NC
CN
NaOEt
Br
$LiAlH_4$

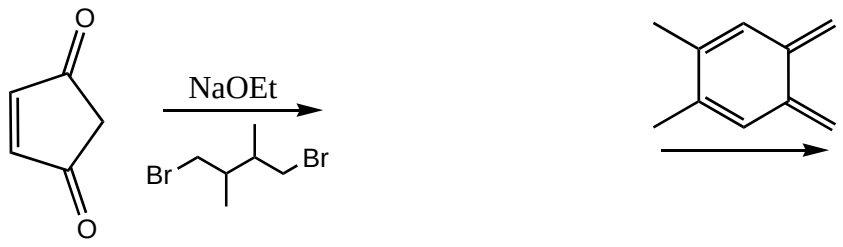

O
+
O
OEt
NaOEt
NaOEt
Br
O_3
Zn/CH_3COOH
NaOEt
heat

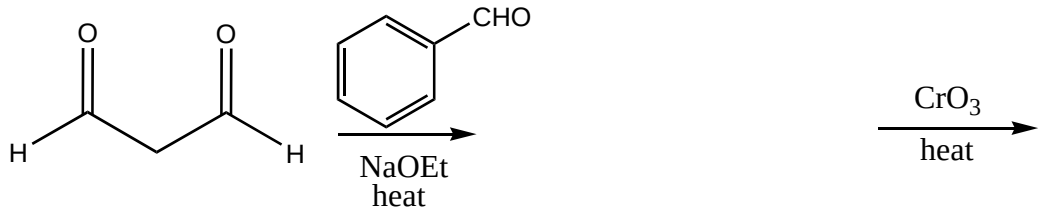

O
O
H
NaOEt

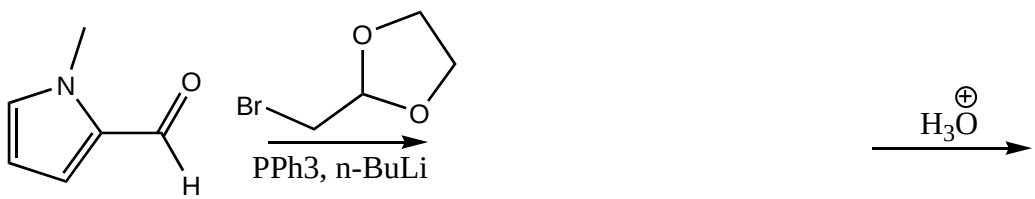

O
O
H
NaOEt
-78 C
PCC

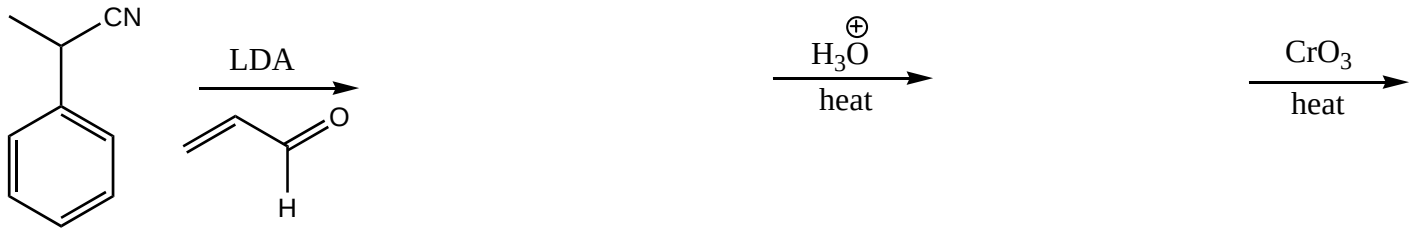

O
O
H
excess
LDA


O
O
OEt
NaOEt
Br
$H_3O^{\oplus}$
heat


O
O
NaOEt
Br
Br


O
O
H
H
CHO
NaOEt
heat
CrO3
heat


N
O
H
O
Br
O
PPh3, n-BuLi
H3O⊕


CN
LDA
O
H
H3O⊕
heat
CrO3
heat