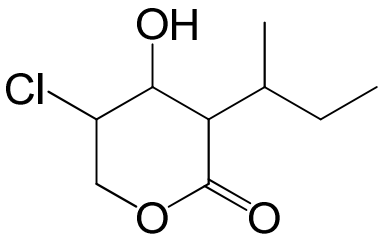
WORKSHEET VIII _keys

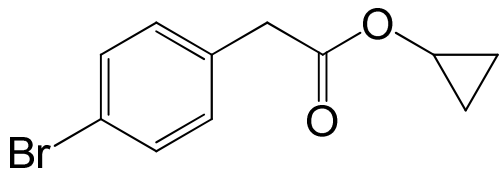
1. Name the following compounds

A



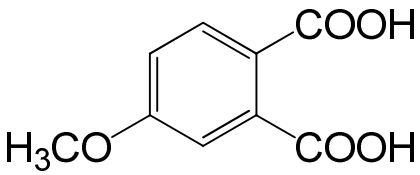
2-*sec*-butyl-4-chloro-3,5-dihydroxypentanoic acid lactone

B



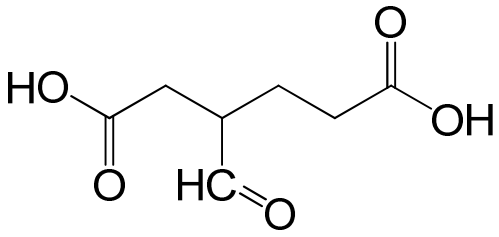
cyclopropyl 2-(4-bromophenyl)ethanoate

C



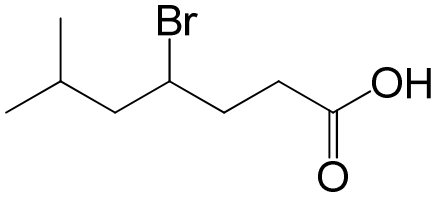
4-methoxybenzene-1,2-dicarboxylic acid

D



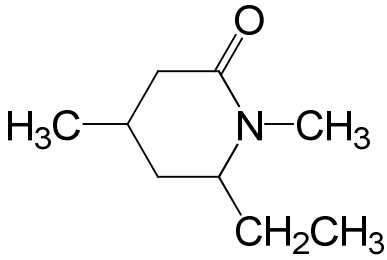
3-formylhexanedioic acid

E



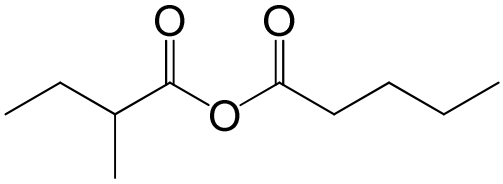
4-bromo-6-methylheptanoic acid

F



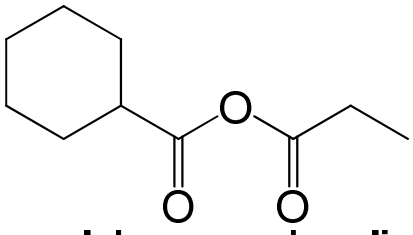
5-amino-3,N-dimethylheptanoic acid lactam

G



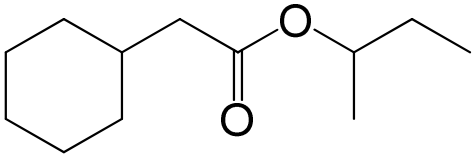
2-methylbutanoic pentanoic anhydride

H



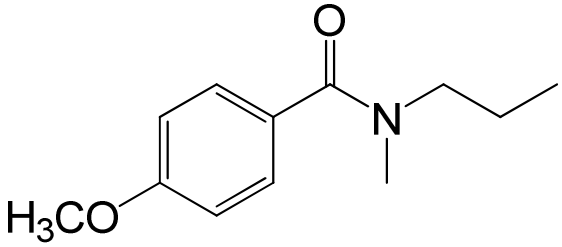
cyclohexanecarboxylic propanoic anhydride

I



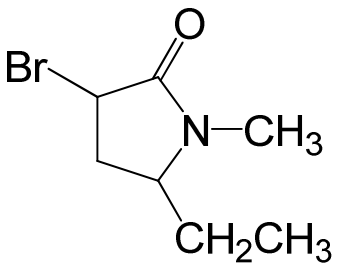
***sec*-butyl 2-cyclohexylethanoate**

J



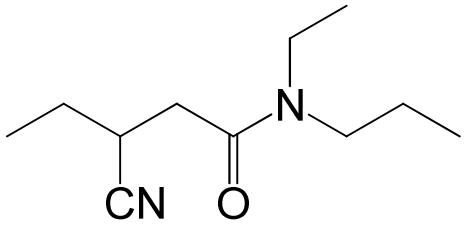
4-methoxy-*N*-methyl-*N*-propylbenzamide

K



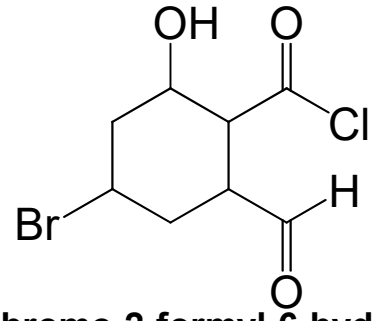
4-amino-2-bromo-N-methyl hexanoic acid lactam

L



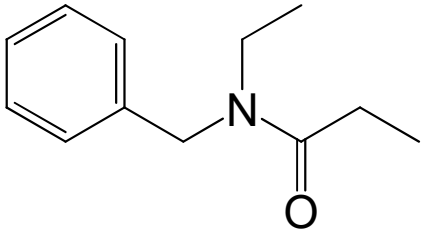
3-cyano-*N*-ethyl-*N*-propylpentanamide

M



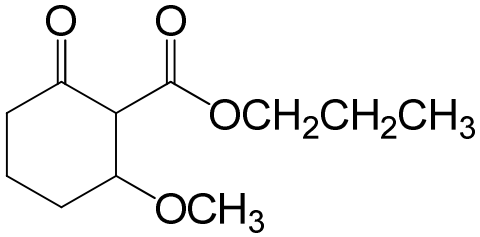
4-bromo-2-formyl-6-hydroxy cyclohexanecarbonyl chloride

N



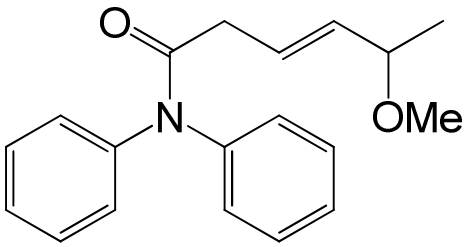
***N*-benzyl-*N*-ethylpropanamide**

O



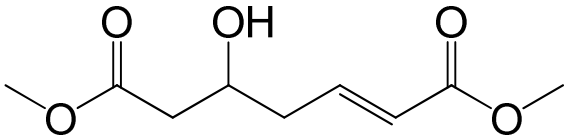
propyl 2-methoxy-6-oxocyclohexanecarboxylate

P



(*E*)-5-methoxy-*N*,*N*-diphenylhex-3-enamide

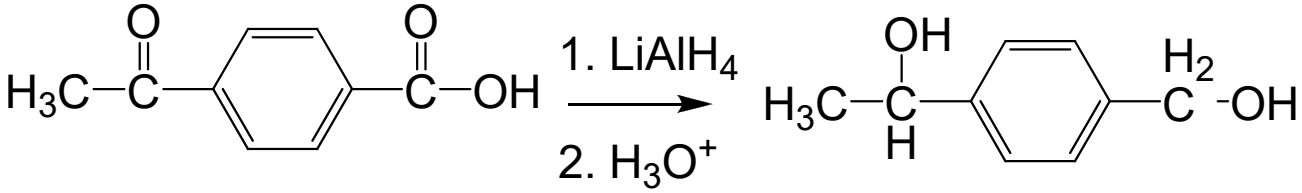
Q



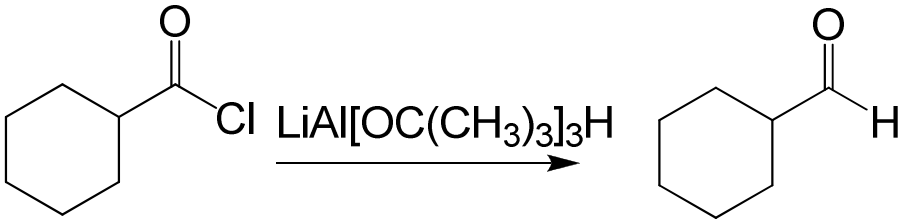
(*E*)-dimethyl 5-hydroxyhept-2-enedioate

2. Give the major product(s) of each of the following reaction

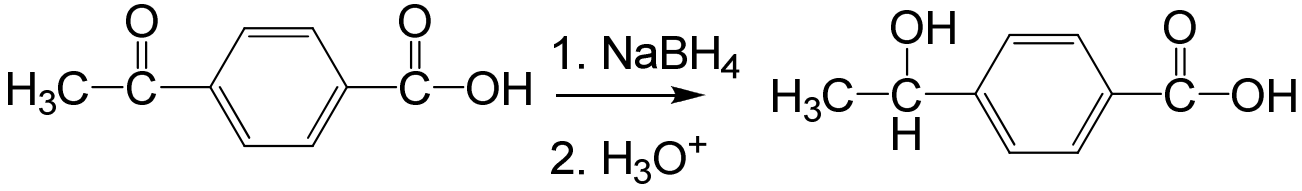
A



B

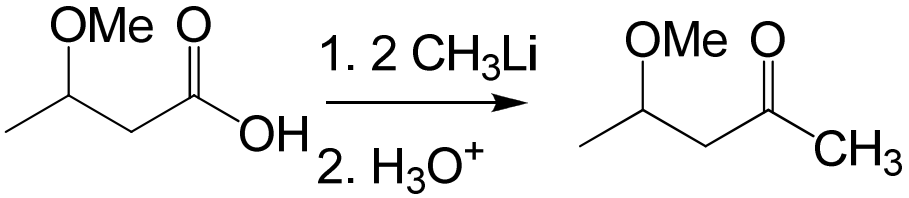


C

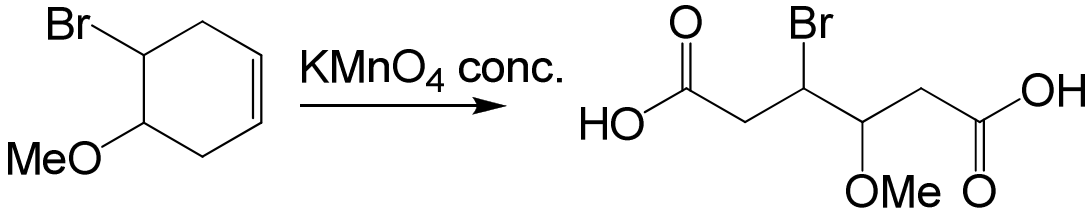


2 equivalent of $NaBH_4$ required

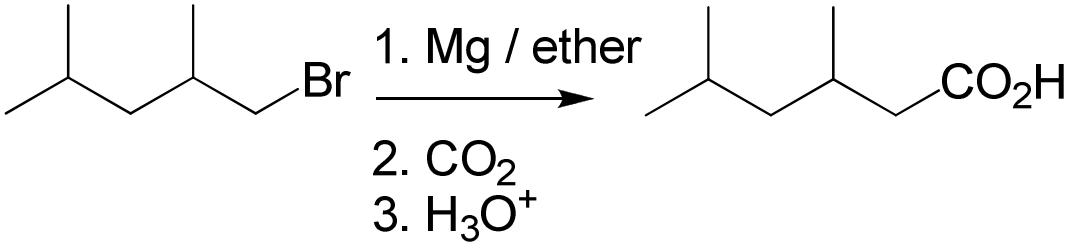
D



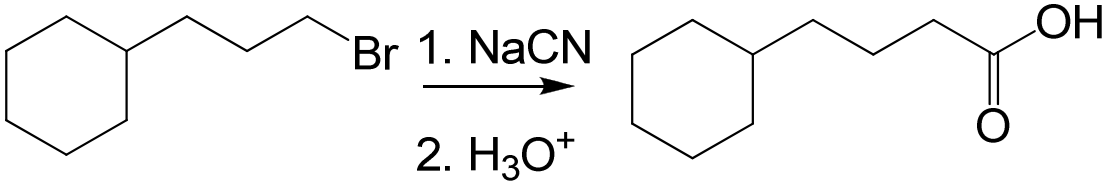
E



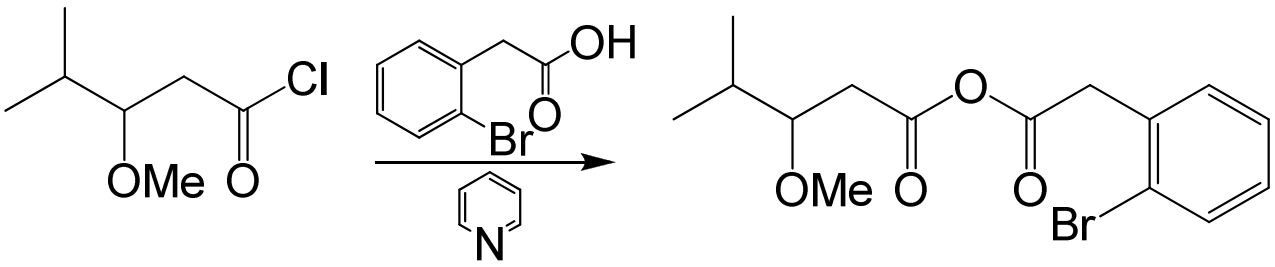
F



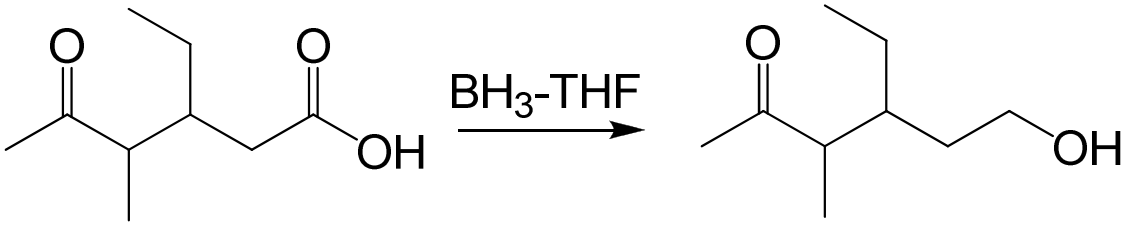
G



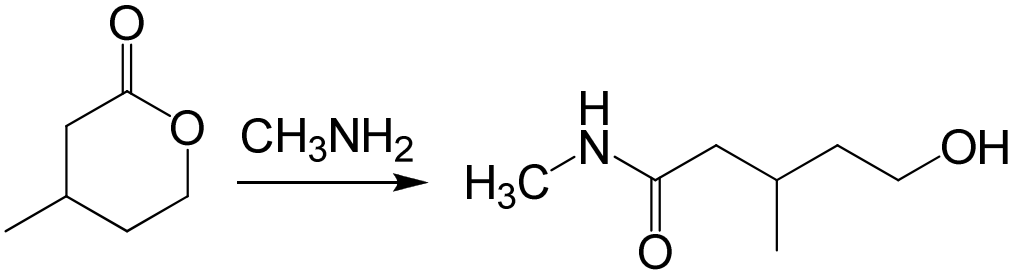
H


Cl
OMe
O
OH
Br
O
N
O
OMe
O
O
Br

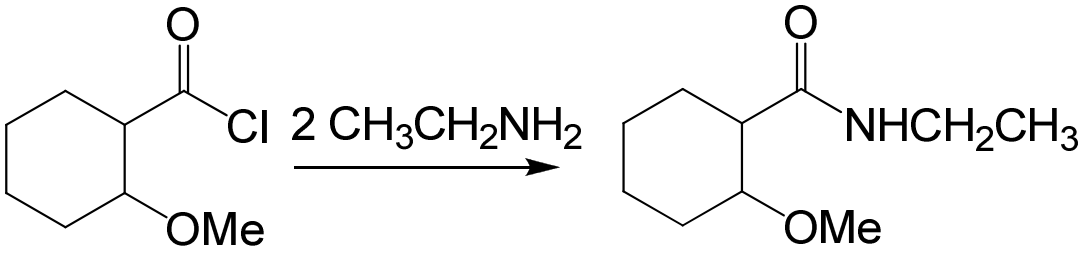
I


O
O
OH
BH3-THF
O
OH

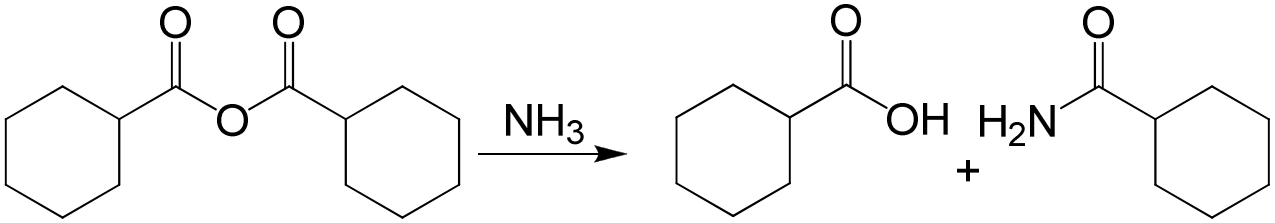
J


O
O
CH3NH2
H
N
H3C
O
OH

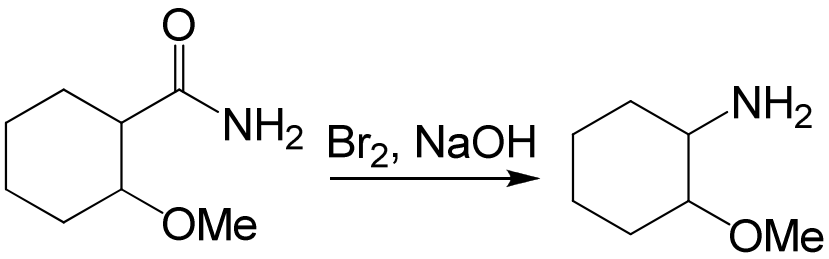
K


O
Cl
2 CH3CH2NH2
OMe
O
NHCH2CH3
OMe

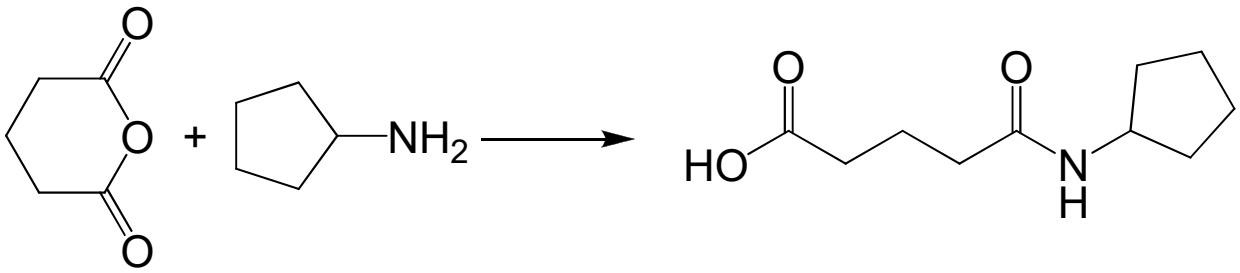
L


O
O
O
NH3
O
OH
H2N
O
+

M

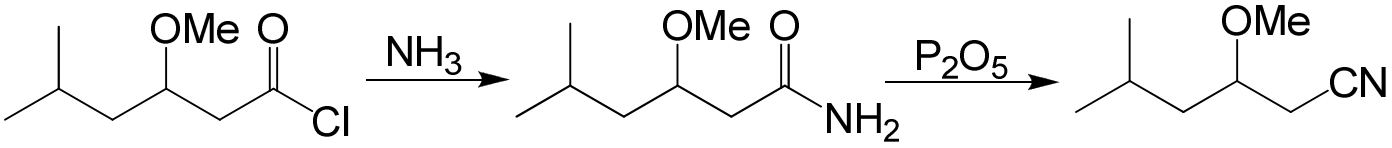


N

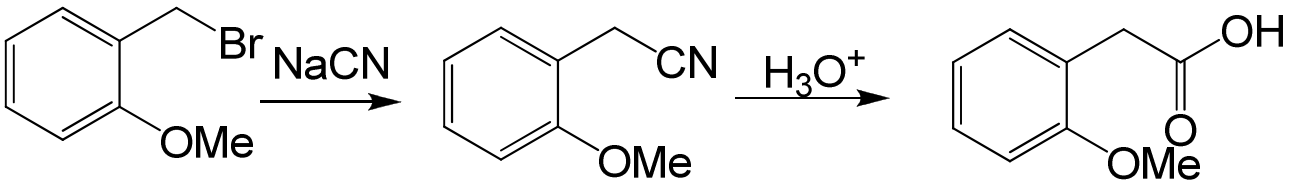


3. Suggest a good synthetic method for preparing each of the following compounds from the given starting material(s)

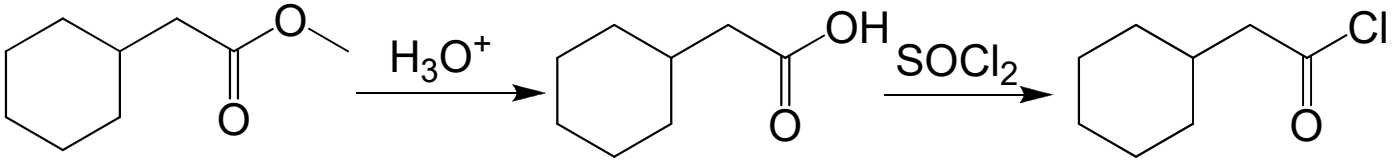
A



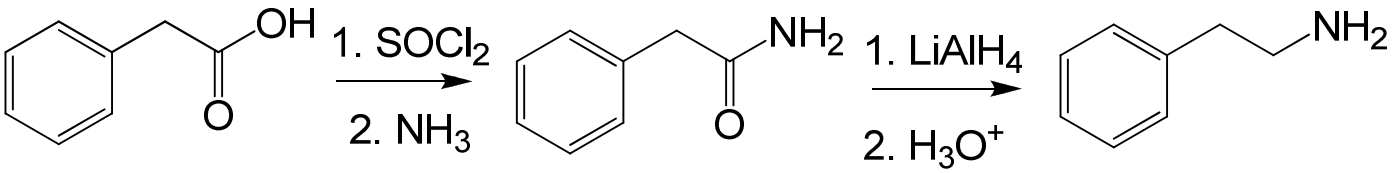
B



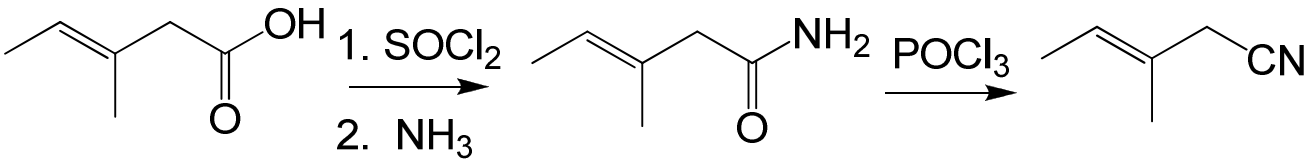
C



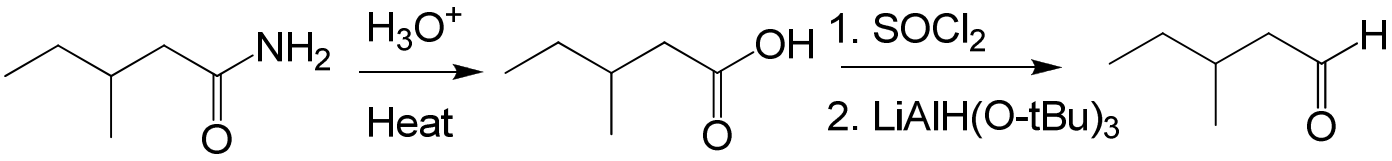
D



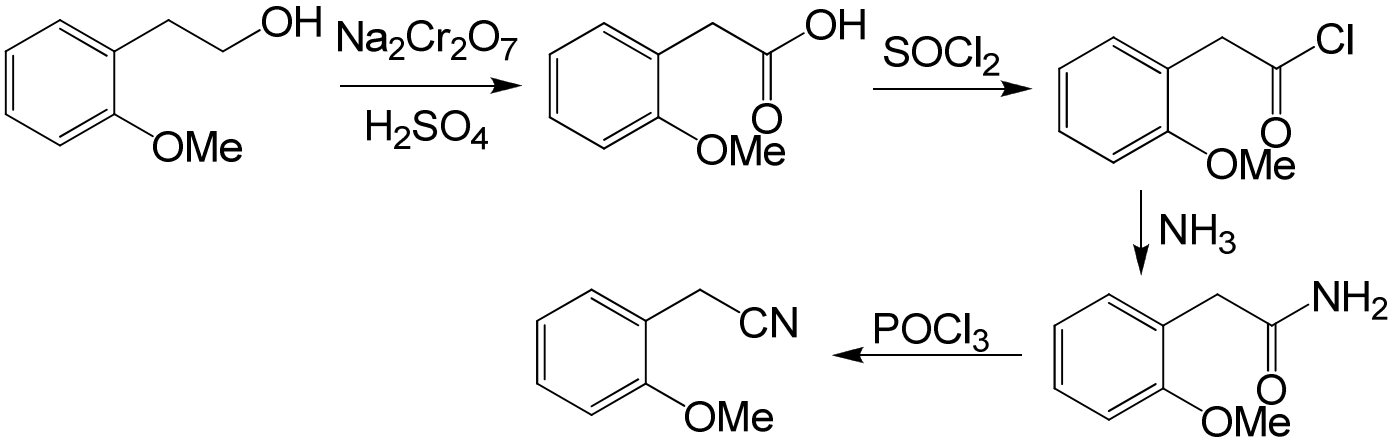
E


OH
O
1. SOCl2
2. NH3
NH2
O
POCl3
CN

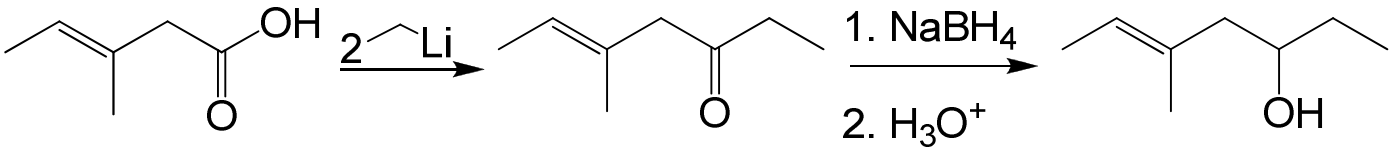
F


NH2
O
H3O+
Heat
OH
O
1. SOCl2
2. LiAlH(O-tBu)3
H
O

G


OH
OMe
Na2Cr2O7
H2SO4
OH
O
OMe
SOCl2
Cl
O
OMe
NH3
NH2
O
OMe
POCl3
CN
OMe

H


OH
O
2
Li
O
1. NaBH4
2. H3O+
OH