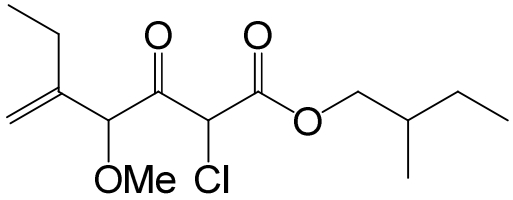
Spring 2017 - Homework 2 (Due on December 1, 2017 at the beginning of the class, no late return, no exam under my office door allowed)

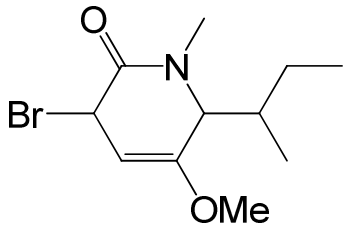
NAME_____

1. Name the following compounds (6 x 2 = 12 pts)

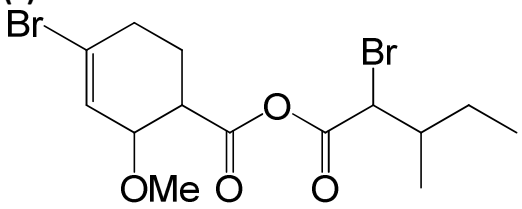
(a)



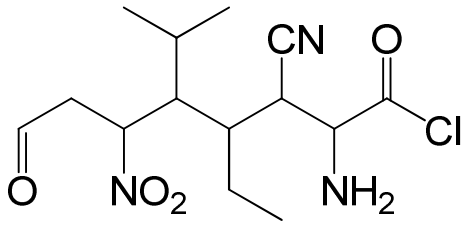
(b)



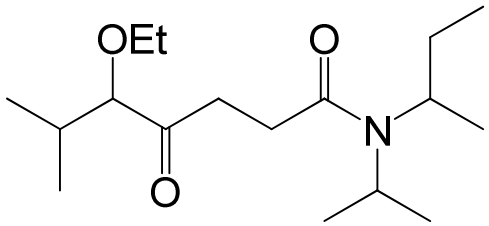
(c)



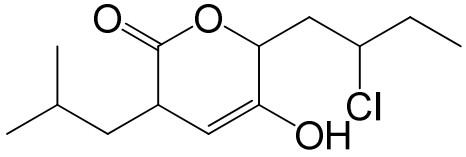
(d)



(e)

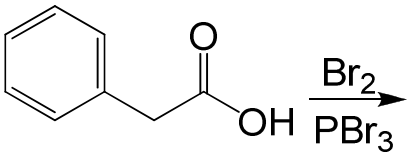


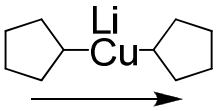
(f)



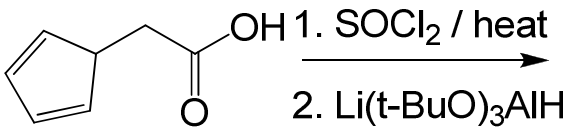
2. Predict the product(s) obtained from the following reactions (2 x 12 = 24 pts)

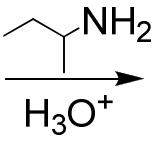
(a)



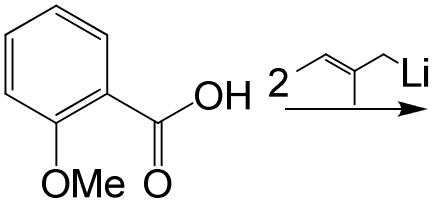


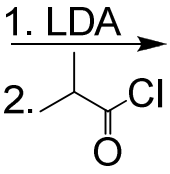
(b)



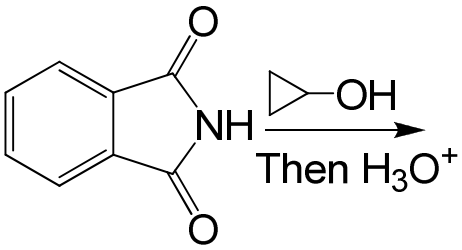


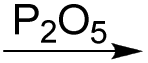
(c)



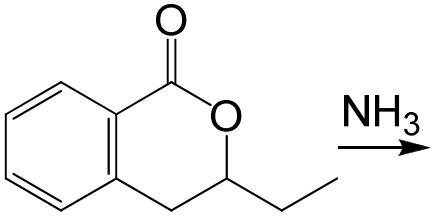


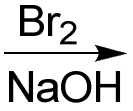
(d)



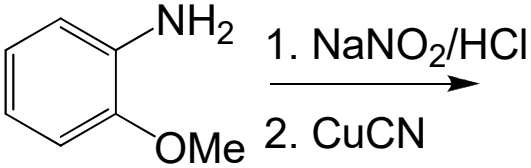


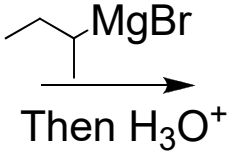
(e)



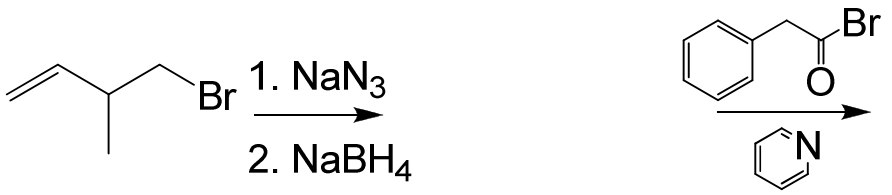


(f)

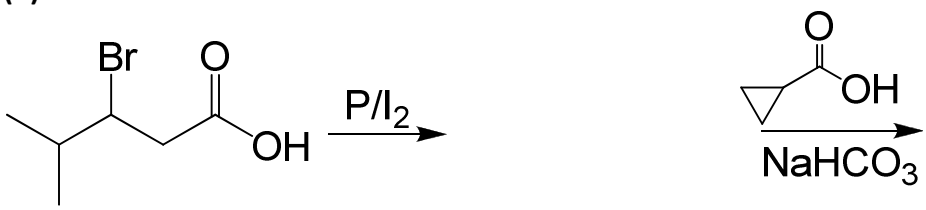




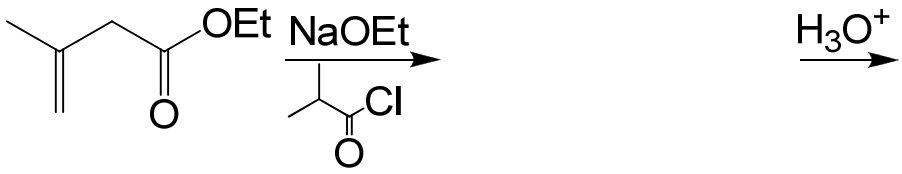
(g)


Br
1. NaN3
2. NaBH4
Br
O
N

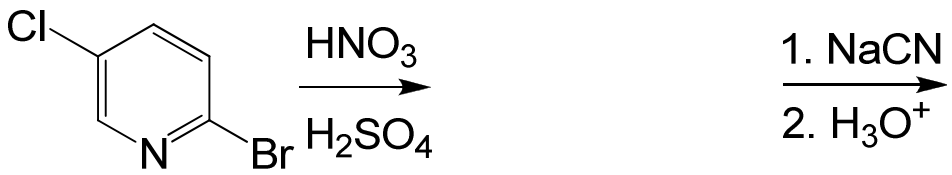
(h)


Br
O
OH
P/I2
O
OH
NaHCO3

(i)


OEt
O
NaOEt
Cl
O
H3O+

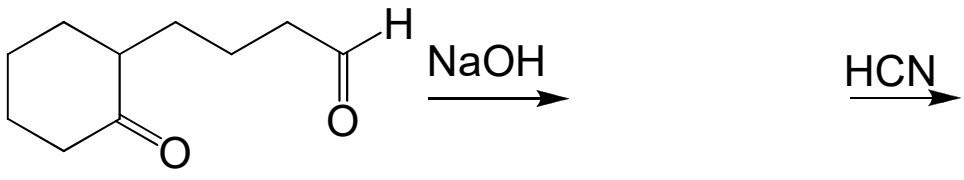
(j)


Cl
N
Br
HNO3
H2SO4
1. NaCN
2. H3O+

(k)

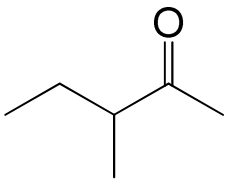

O
1.
NH
2.PhCH2Br
3. H2O
1.H2N-OH
2. LiAlH4
3. H3O+

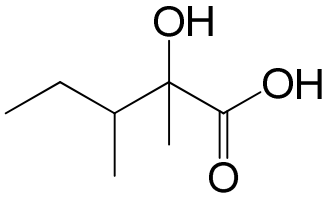
(j)


H
O
O
NaOH
HCN

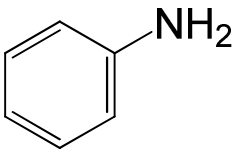
3 Show how you would synthesize each of the following compounds from the given starting materials (you must show all the intermediates to receive full credit) (4 x 2 = 8 pts)

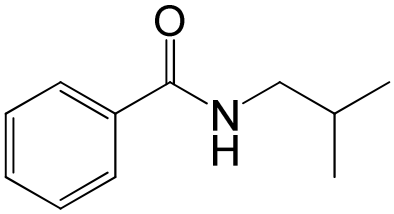
(a)



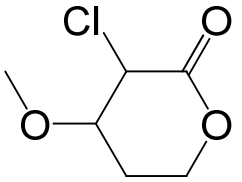


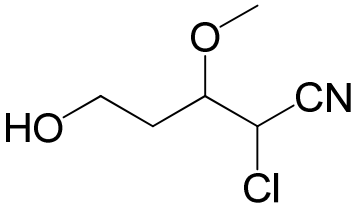
(b)



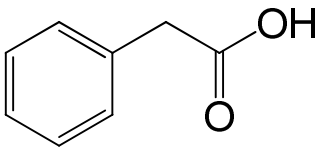


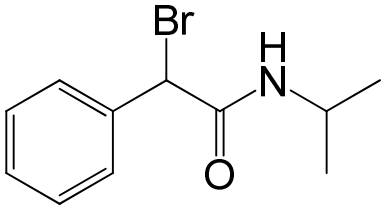
(c)





(d)





4. Propose a mechanism consistent with the following reactions (you must show all the intermediates and arrows indicating the electron flow to receive full credit) (3 x 2 = 6 pts)

(a)

(b)

(c)