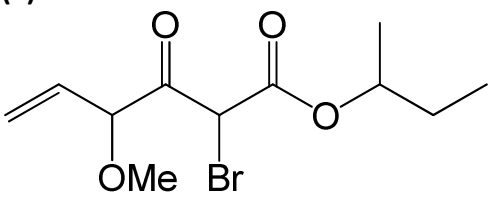
Homework 2 **NAME_____Keys_____**

Spring 2018 **(Due on May 2, 2018 at the beginning of the class, no late return, no exam under my office's door will be accepted)**

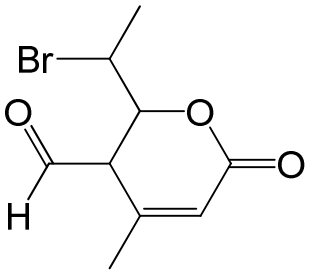
1. Name the following compounds (6 x 2 = 12 pts)

(a)



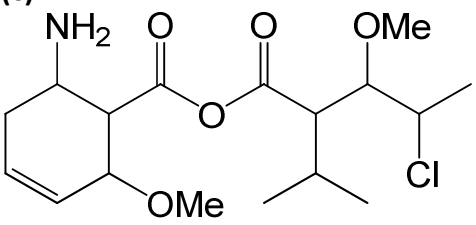
sec-butyl 2-bromo-4-methoxy-3-oxohex-5-enoate

(b)



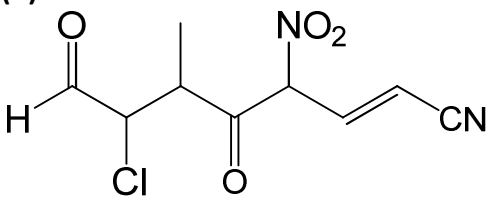
6-bromo-4-formyl-5-hydroxy-3-methylhept-2-enoic acid lactone

(c)



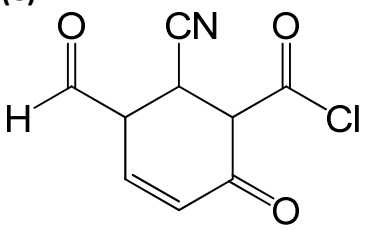
6-amino-2-methoxycyclohex-3-enecarboxylic 4-chloro-2-isopropyl-3-methoxypentanoic anhydride

(d)



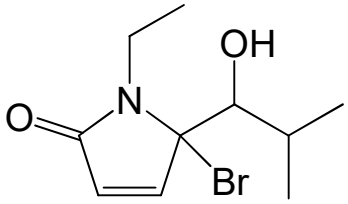
7-chloro-6-methyl-4-nitro-5,8-dioxooct-2-enenitrile

(e)



6-cyano-5-formyl-2-oxocyclohex-3-enecarbonyl chloride

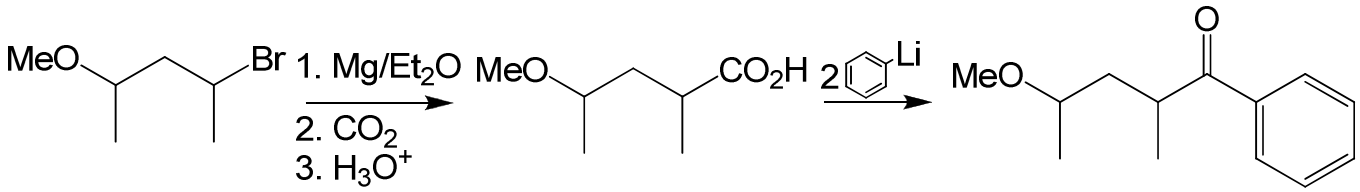
(f)



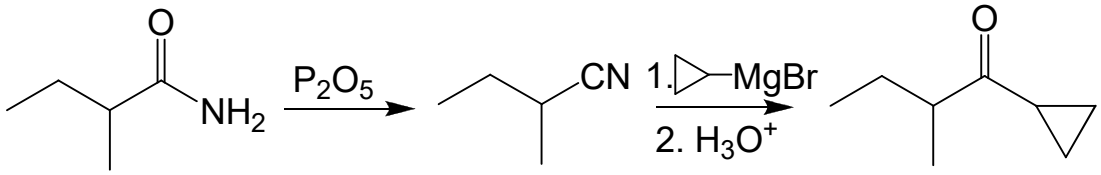
4-amino-4-bromo-N-ethyl-5-hydroxy-6-methylhept-2-enoic acid lactam

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

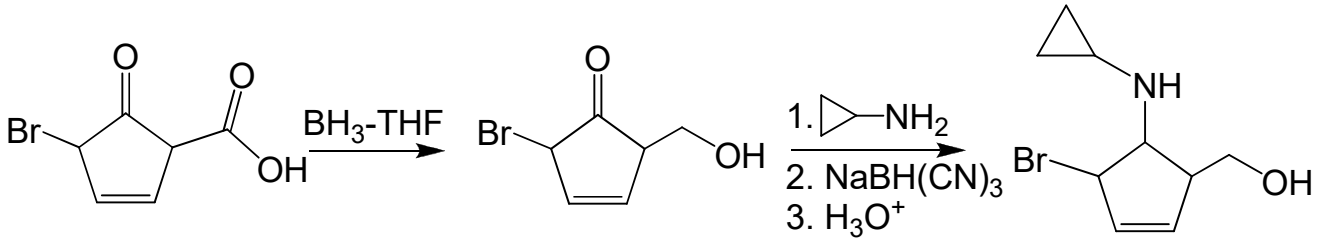
(a)



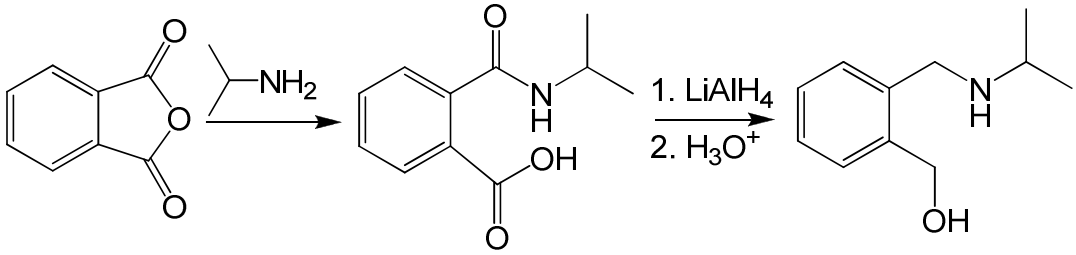
(b)



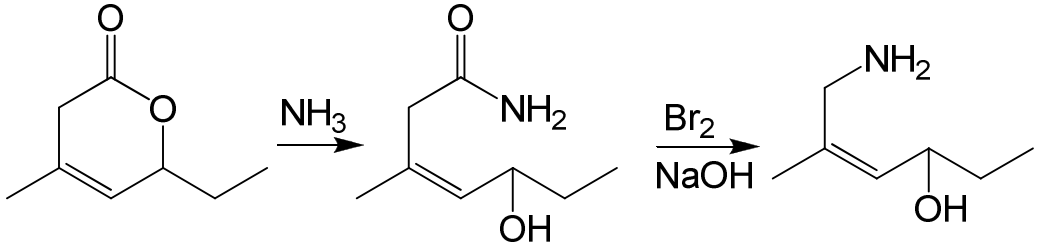
(c)



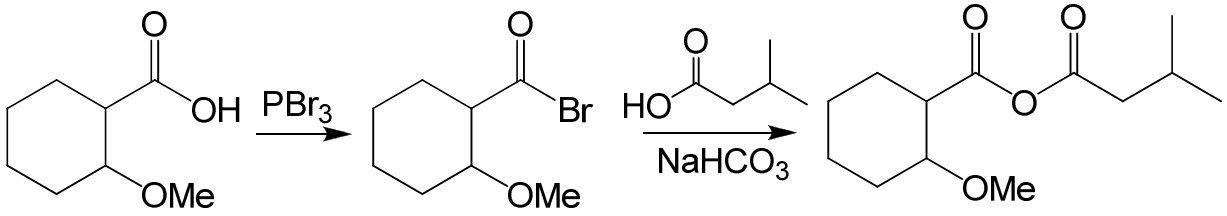
(d)



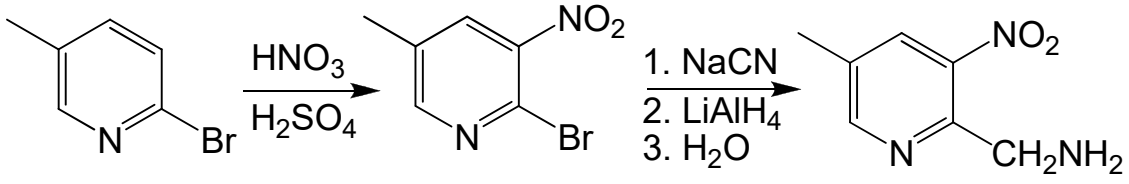
(e)



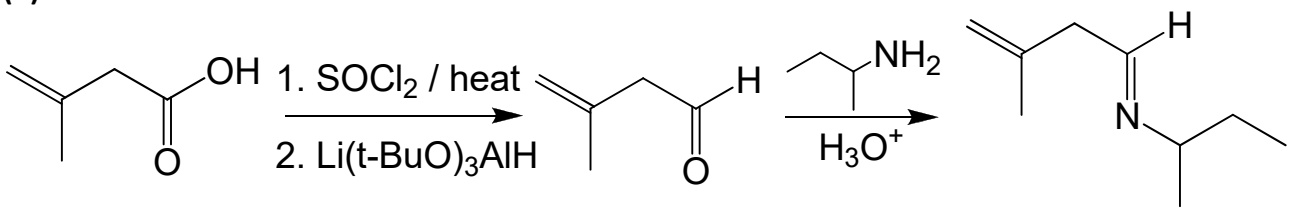
(f)



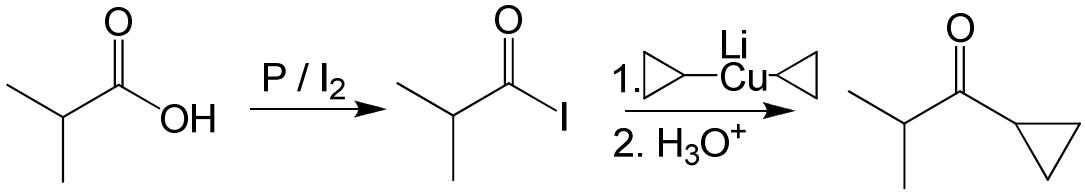
(g)



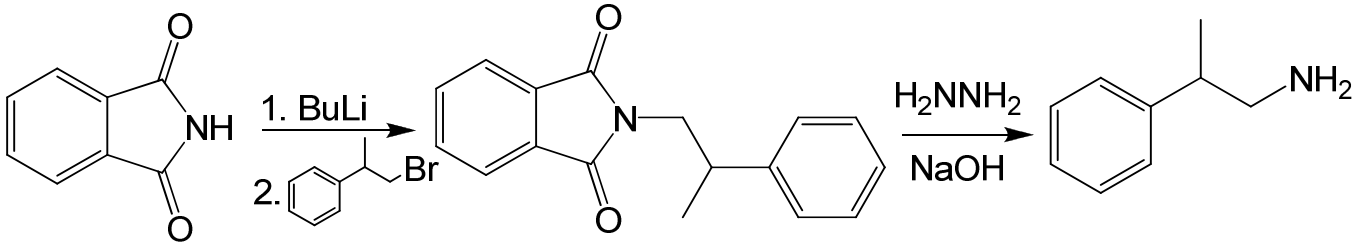
(h)



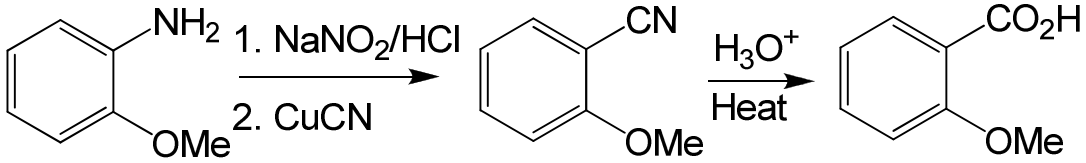
(i)



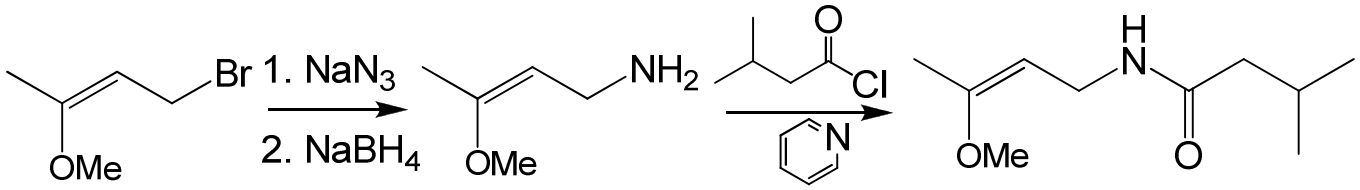
(j)



(k)

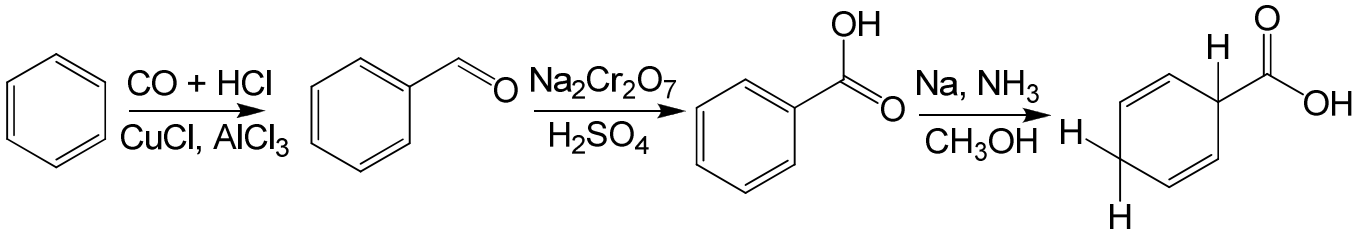


(l)

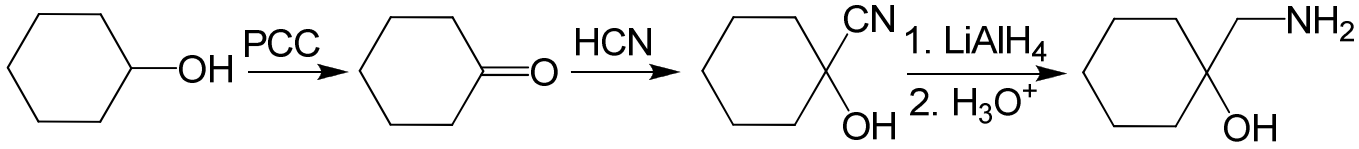


3. Show how you would synthesize each of the following compounds from the given starting materials (4 x 2 = 8 pts)

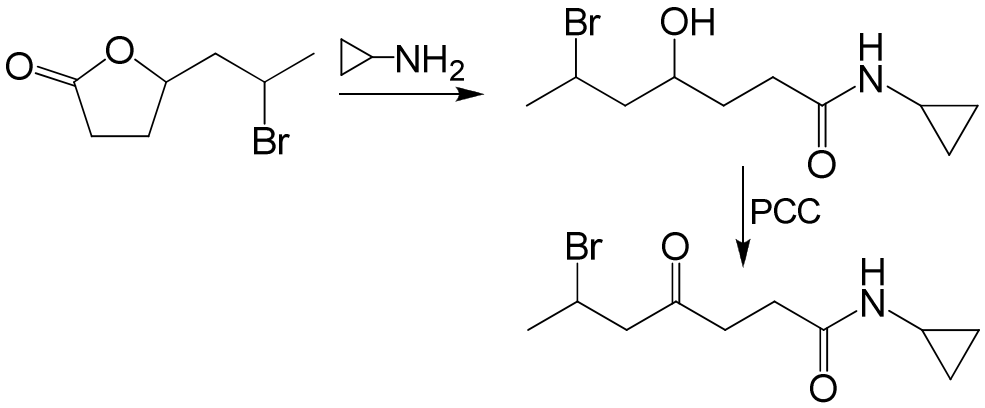
(a)



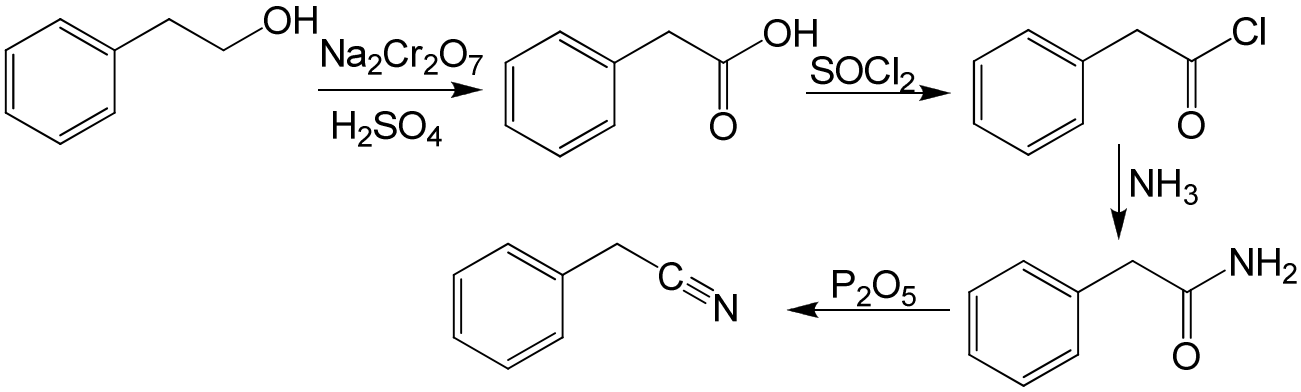
(b)



(c)

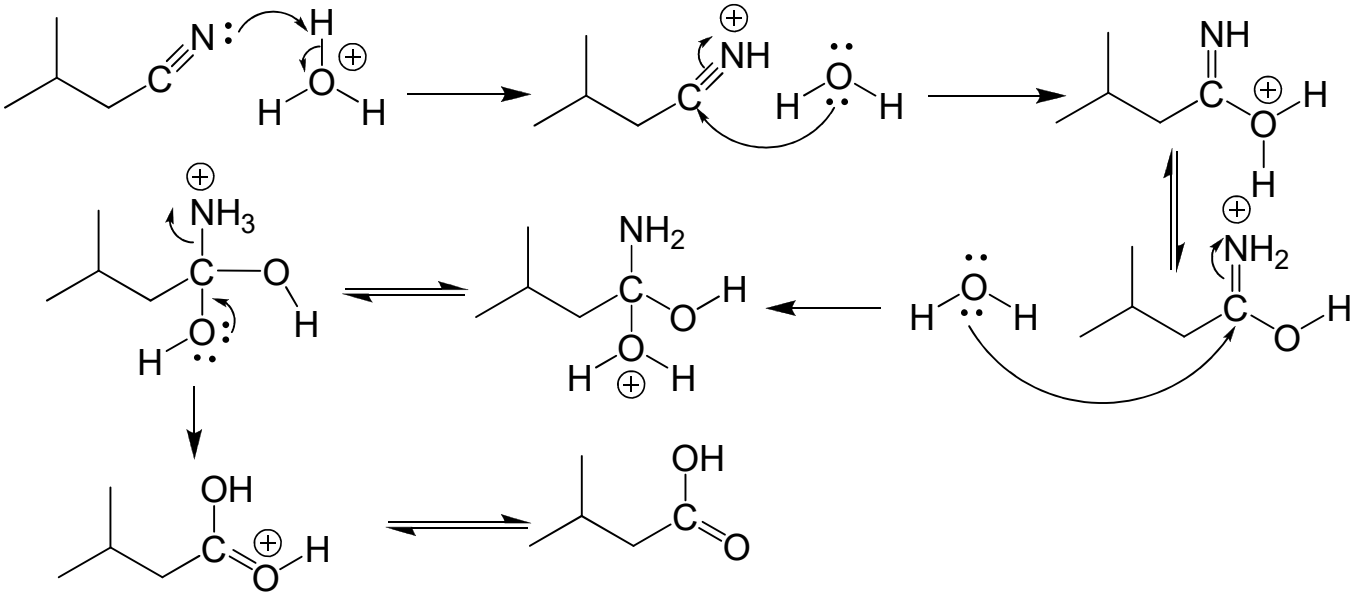


(d)

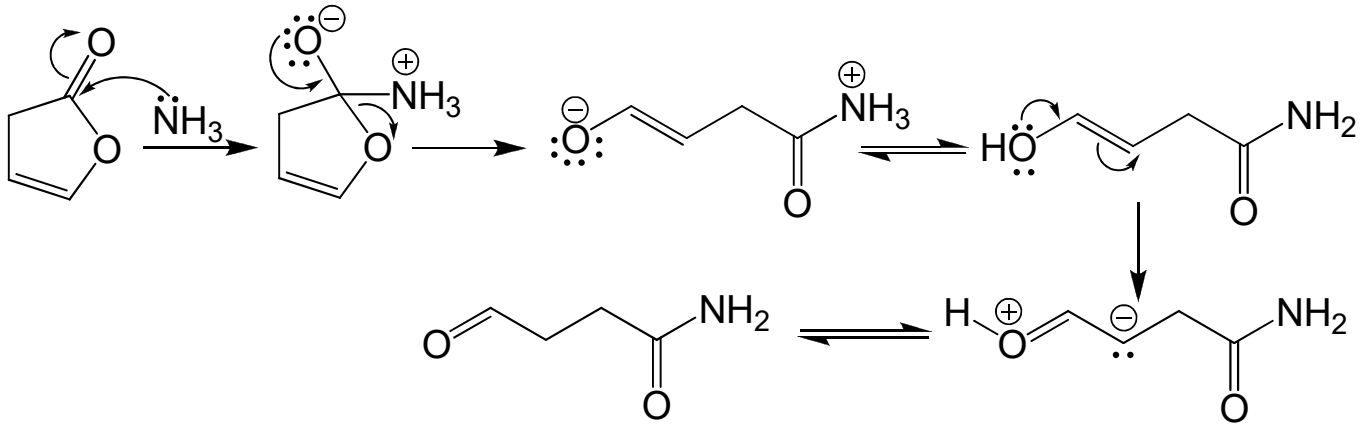


4. Propose a mechanism consistent with the following reactions (you must show all the intermediates and electrons flow to receive full credit) (3 x 2 = 6 pts)

(a)



(b)



(c)