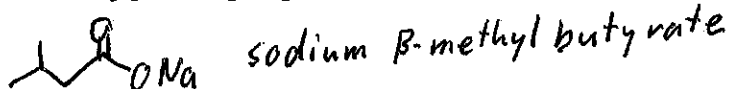


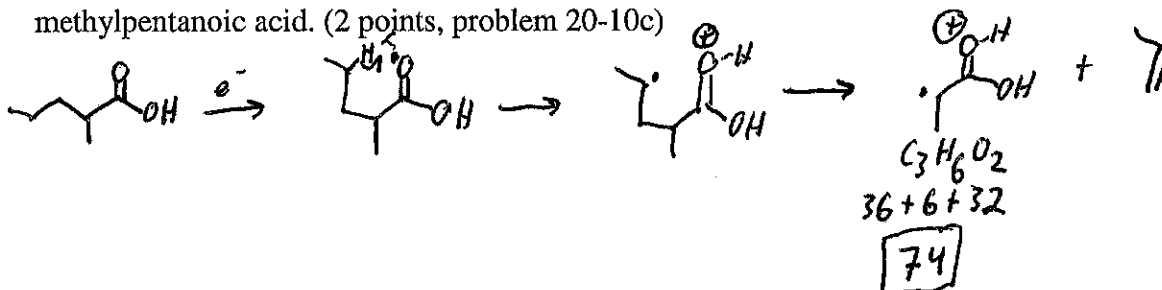
Name: Key

Organic II Lecture
Fall 2011
Quiz #7
(10 points)

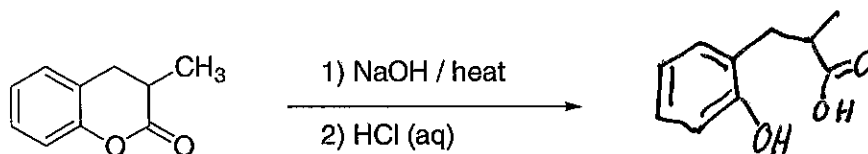
1. Provide a common name for $(\text{CH}_3)_2\text{CHCH}_2\text{CO}_2\text{Na}$. (2 points, problem 20-10c)



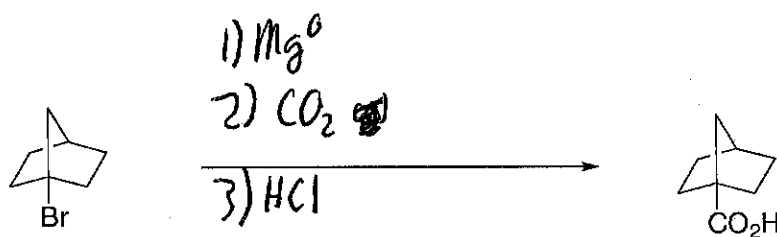
2. Predict the m/z value of the fragment resulting from the McLafferty rearrangement of 2-methylpentanoic acid. (2 points, problem 20-10c)



3. Complete the reaction below by filling in the correct product. (3 points)



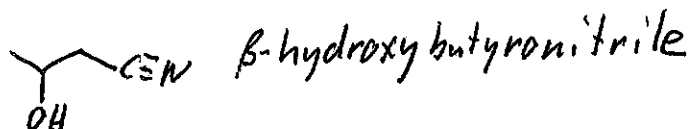
4. Complete the following reaction by filling in the missing reagents. (3 points)



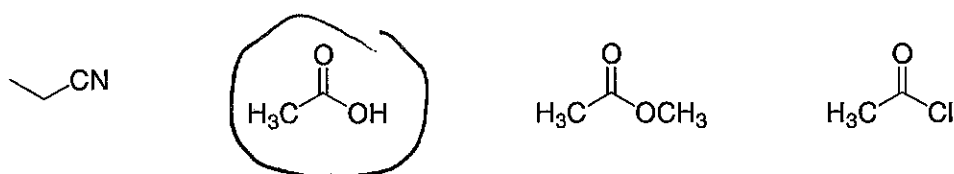
Name: Key

Organic II Lecture
Fall 2011
Quiz #8
(10 points)

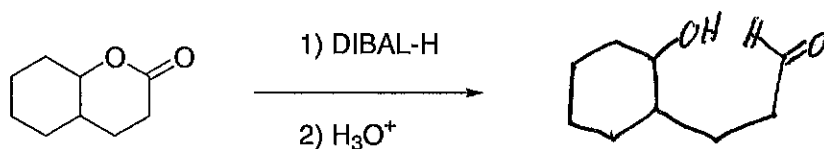
1. Provide a common name for $\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{CN}$. (2 points, problem 21-1f)



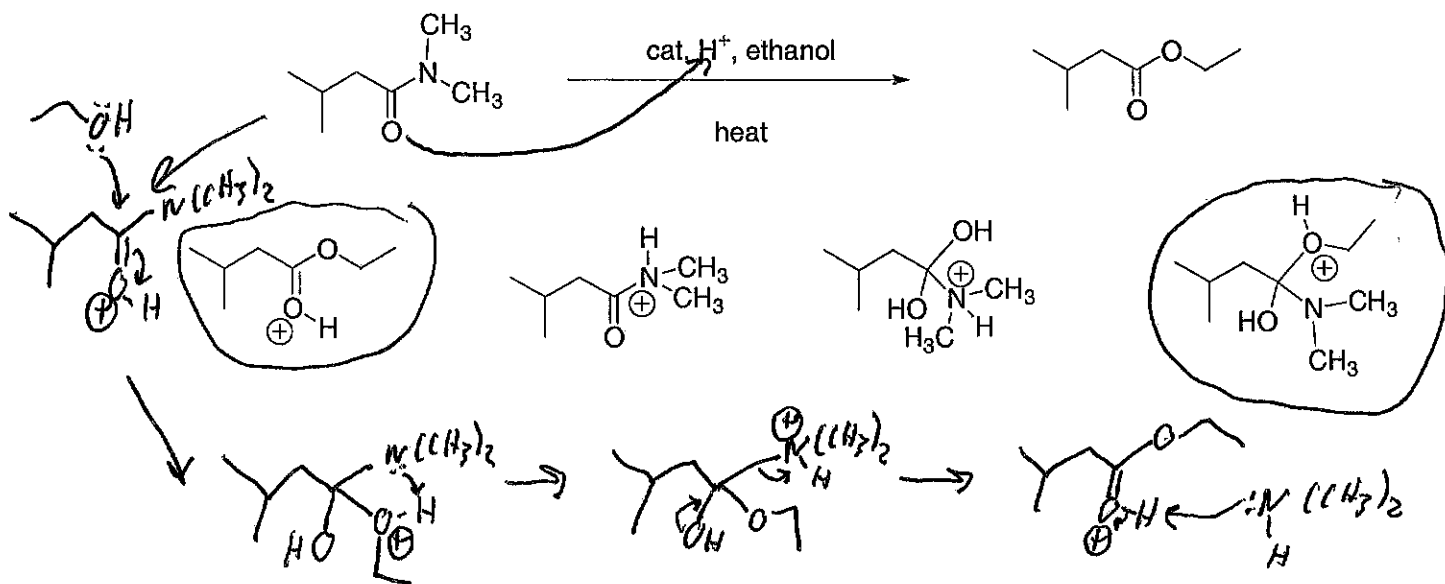
2. Circle the compound having the highest boiling point. (1 point)



3. Complete the reaction below by filling in the correct product. (3 points)



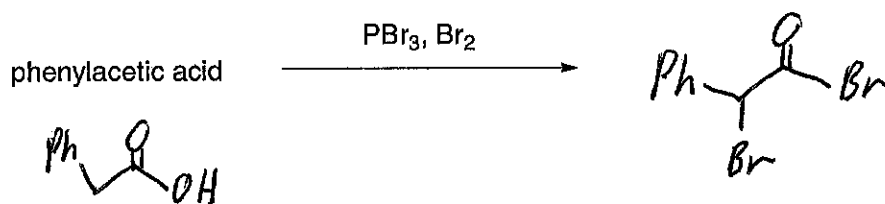
4. Circle all structures that are intermediates of the mechanism of the following reaction. (4 points)



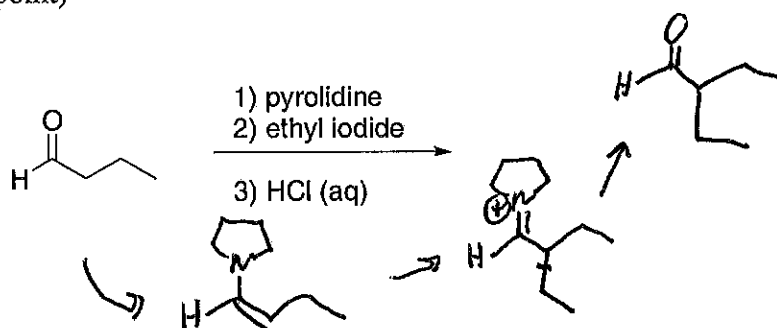
Name: Key

Organic II Lecture
Fall 2011
Quiz #9
(10 points)

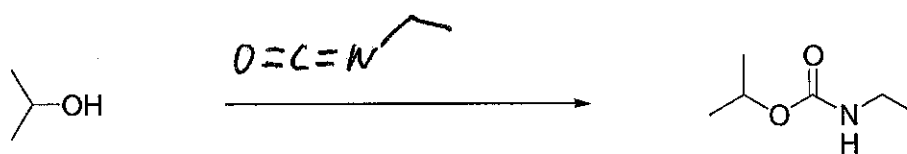
1. Draw a structure for the product of the following reaction. (3 points, problem 22-17b)



2. Show how the following reaction can be completed by filling in the expected product. (3 point)



3. Complete the reaction below by filling in the missing reagents and then provide a correct name for the product. (4 points)



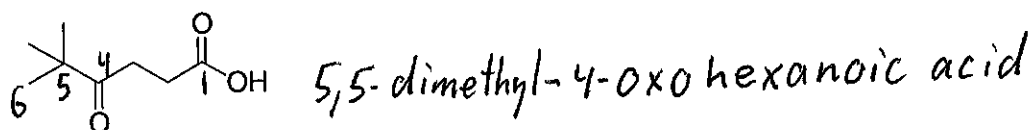
IUPAC name:

isopropyl N-ethylcarbamate

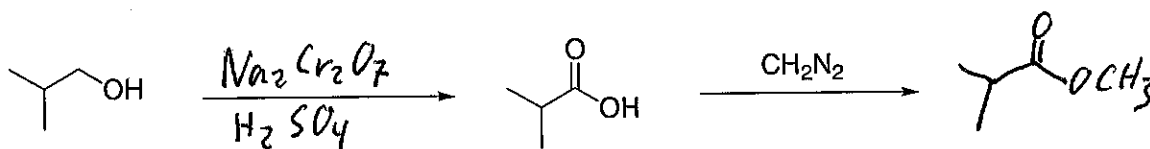
Name: Key

Organic II Lecture
Fall 2012
Quiz #7
(10 points)

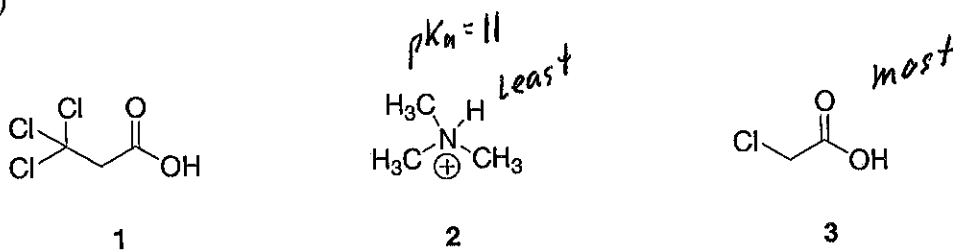
1. Provide an IUPAC name for the following compound. (2 points, problem 20-27f)



2. Complete the following sequence of reactions by filling in the missing reagent and product. (5 points)



3. Which sequence correctly ranks the following compounds in order of increasing acidity? (3 points)

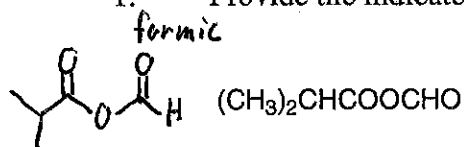


- a) 1<2<3 b) 2<3<1 c) 3<1<2 d) 3<2<1 e) 2<1<3 f) 1<3<2

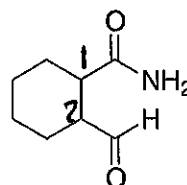
Name: Key

Organic II Lecture
Fall 2012
Quiz #8
(10 points)

1. Provide the indicated name for each compound below. (4 points, problem 21-1i)

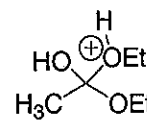
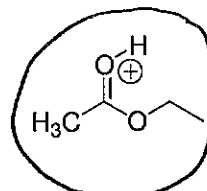
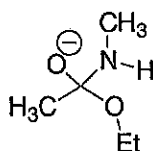
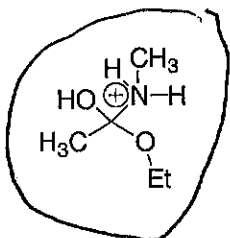
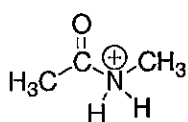
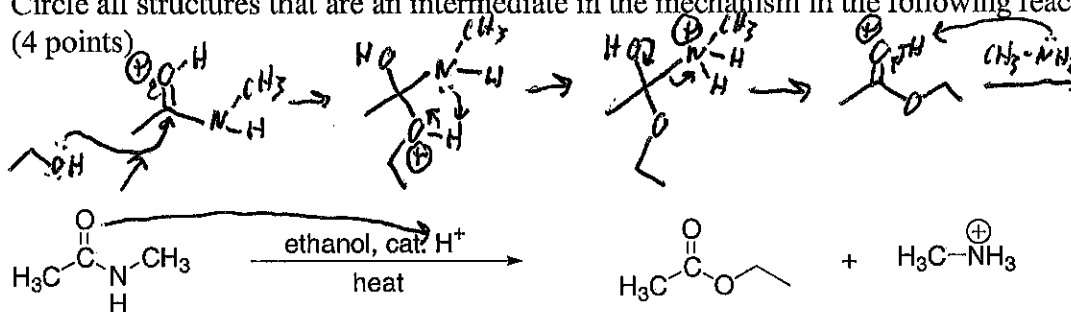


common name
formic isobutyric anhydride
OR
formic 2-methylpropionic anhydride

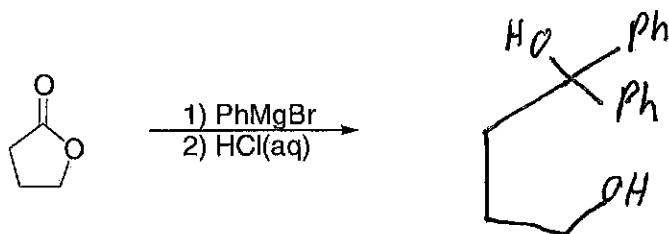


IUPAC name
*2-formylcyclohexane
carboxamide*

2. Circle all structures that are an intermediate in the mechanism in the following reaction. (4 points)



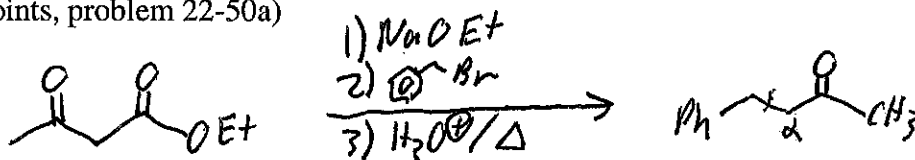
3. Complete the following reaction by providing a structure for the expected product. (2 points)



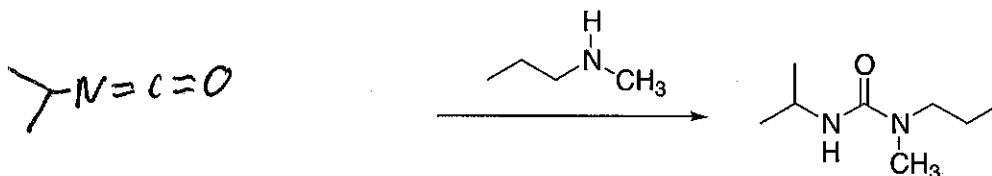
Name: Key

Organic II Lecture
Fall 2012
Quiz #9
(10 points)

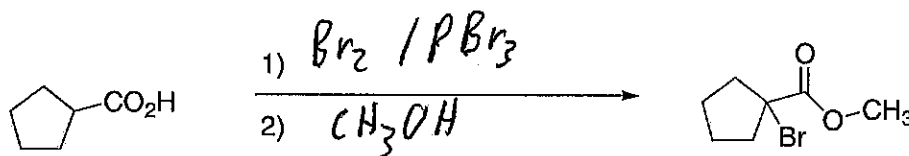
1. Use the acetoacetic ester method of alkylation to synthesize $\text{PhCH}_2\text{CH}_2\text{C}(\text{O})\text{CH}_3$. (4 points, problem 22-50a)



2. Provide the necessary starting material to complete the reaction below. (3 points)



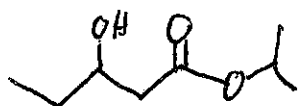
3. Complete the following reaction by filling in the necessary reagents. (3 points)



Name: Key

Organic II Lecture
Spring 2008
Quiz #7
(10 points)

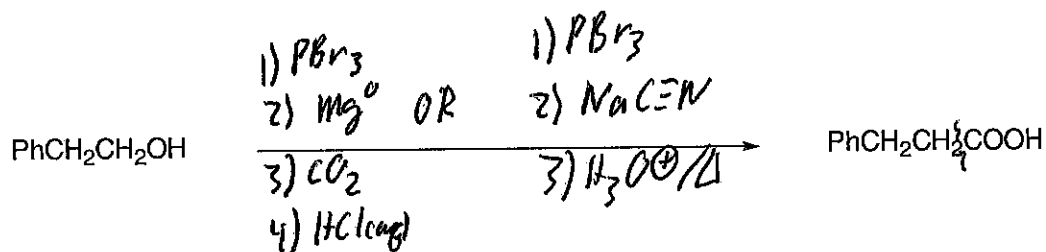
1. Provide a structure for isopropyl β -hydroxyvalerate. (2 points)



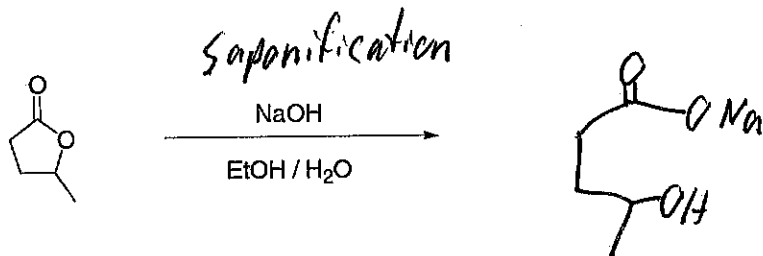
2. Predict the pK_a value of propanoic acid within (+/-) 1 pK_a units. (2 points)

$$\text{pK}_a = 5$$

3. Complete the reaction below by filling in the necessary reagents. (3 points, problem 20-39a)



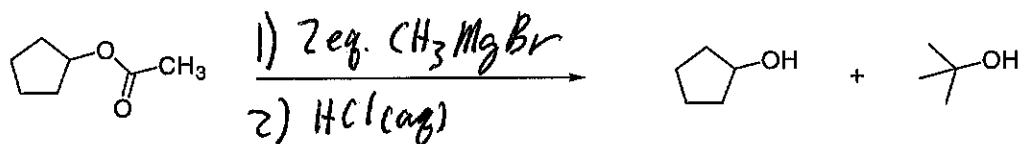
4. Draw a structure for the expected product of the reaction below. (3 points)



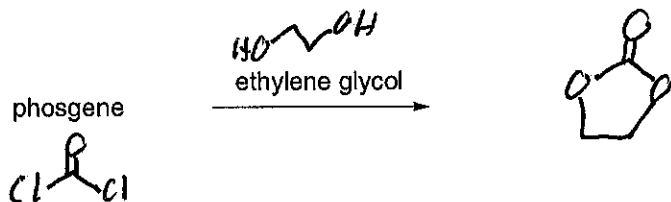
Name: Key

Organic II Lecture
Spring 2008
Quiz #8
(10 points)

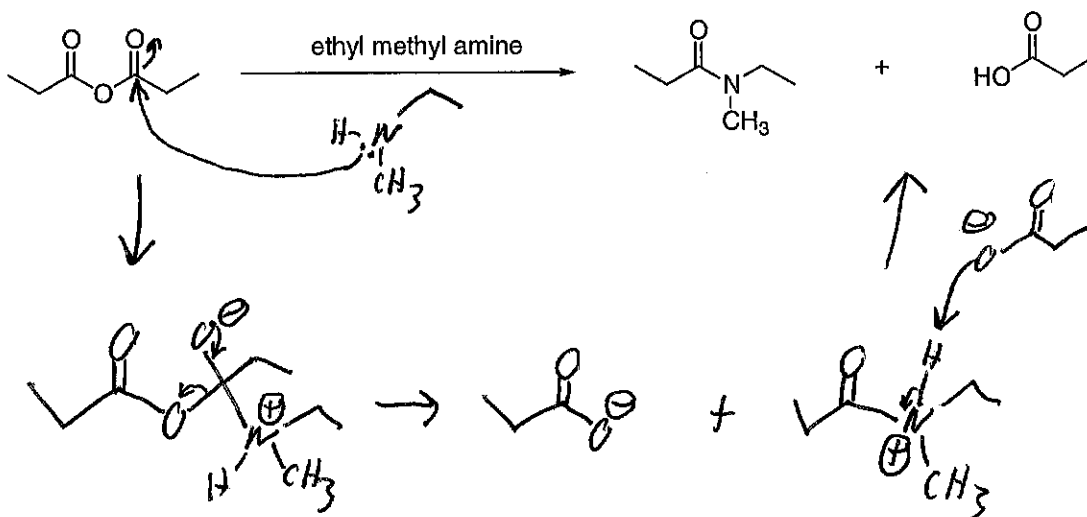
1. Show what reagents are needed for the following transformation. (2 points)



2. Draw a structure for the product of the reaction below. (3 points, problem 21-58d)



3. Propose an electron arrow pushing mechanism for the following reaction. Include all intermediates and formal charges. (5 points)



Name: Key

Organic II Lecture
Spring 2009
Quiz #7
(10 points)

1. Circle the structure below that is most basic. (1 point, problem 20-29c)

sodium acetate

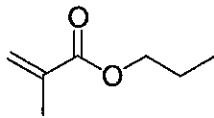


or

sodium phenoxide

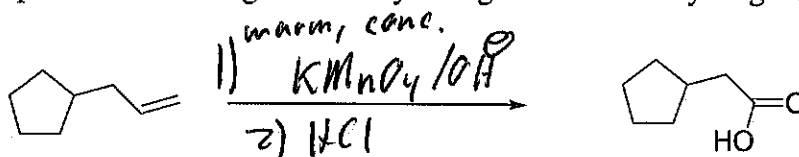


2. Provide an IUPAC name for the following structure. (3 points)

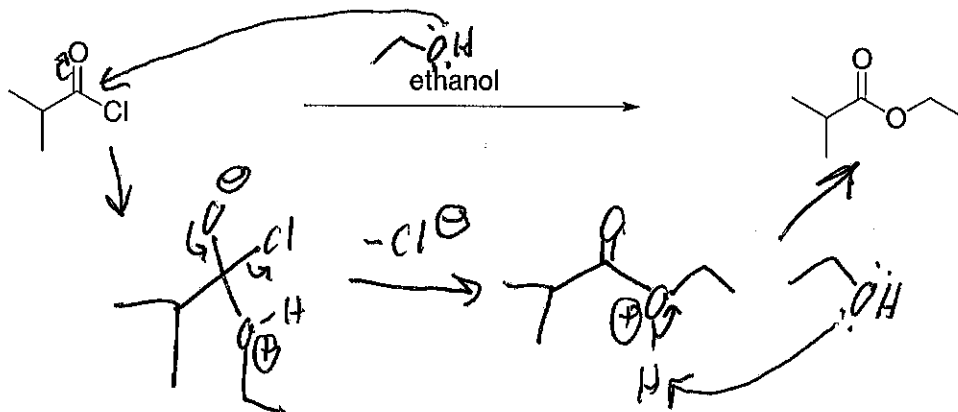


propyl 2-methylprop-2-enoate

3. Complete the following reaction by filling in the necessary reagent(s). (2 points)



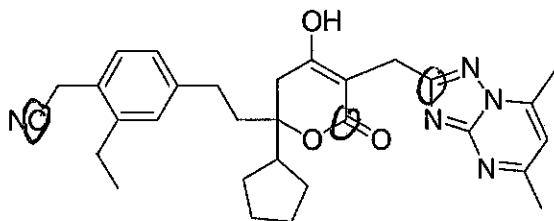
4. Provide a mechanism for the following reaction. Include all correct arrow pushing of electrons, intermediates and formal charges. (4 points)



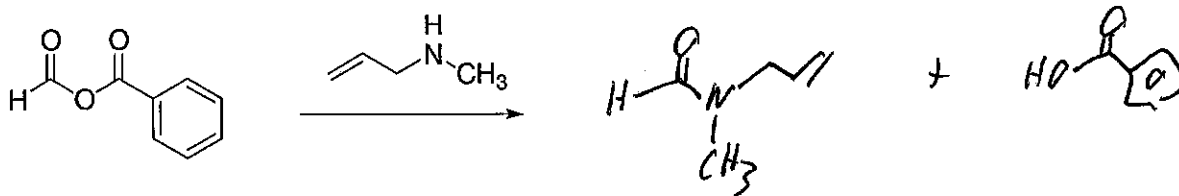
Name: Key

Organic II Lecture
Spring 2009
Quiz #8
(10 points)

1. The following compound is being examined in the treatment of hepatitis C virus (J. Med. Chem. 2009, 2366). Circle all carbon centers at the same oxidation state as a carboxylic acid. (2 point)



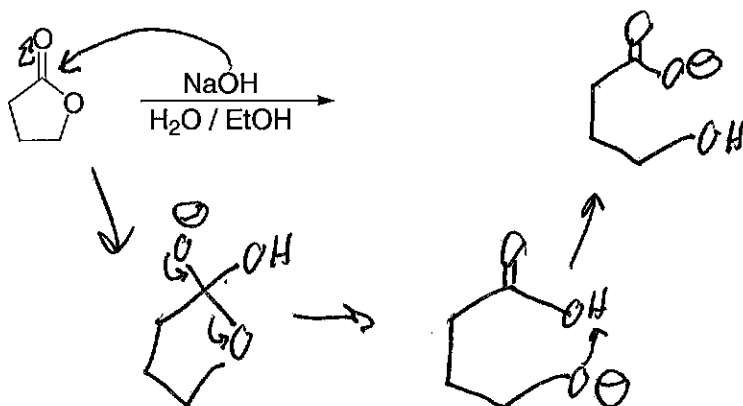
2. Predict the structure of the expected products of the following reaction. (3 points)



3. What is another name for a polycarbamate? (1 point)

polyurethane

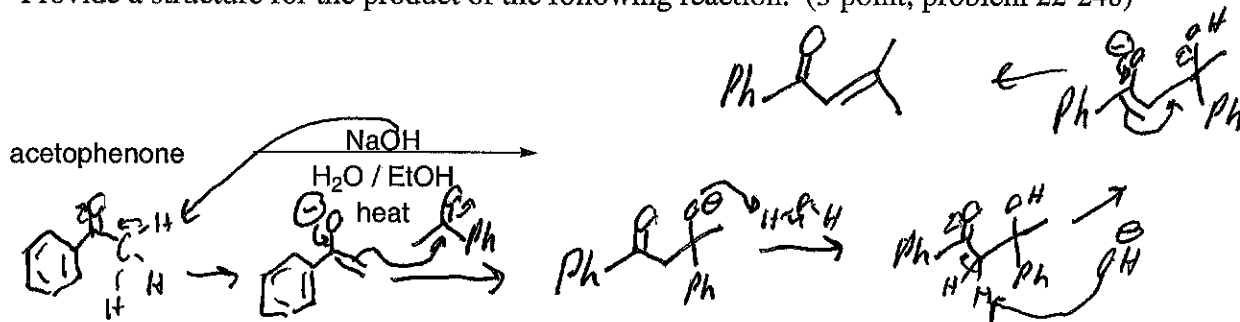
4. Provide a mechanism for the base hydrolysis of γ -butyrolactone. Include all correct arrow pushing of electrons, intermediates and formal charges. (4 points, problem 21-18)



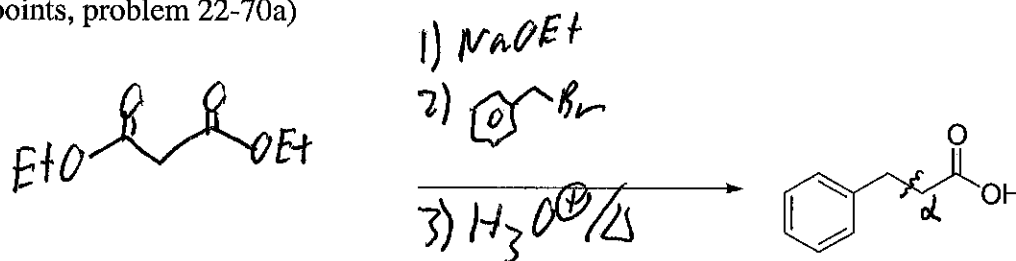
Name: Key

Organic II Lecture
Spring 2009
Quiz #9
(10 points)

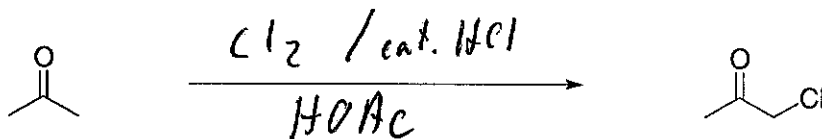
1. Provide a structure for the product of the following reaction. (3 point, problem 22-24b)



2. Beginning with a malonate ester, provide a synthesis for the following structure. (5 points, problem 22-70a)



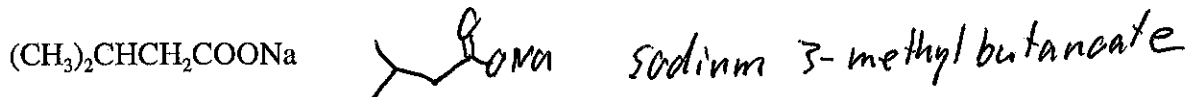
3. Complete the following reaction by filling in the necessary reagent(s). (2 points,)



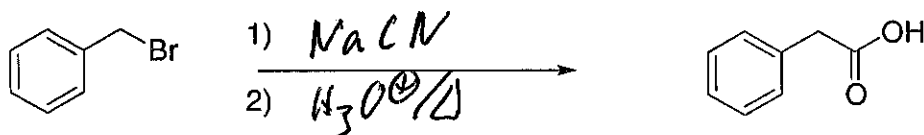
Name: Key

Organic II Lecture
Spring 2011
Quiz #7
(10 points)

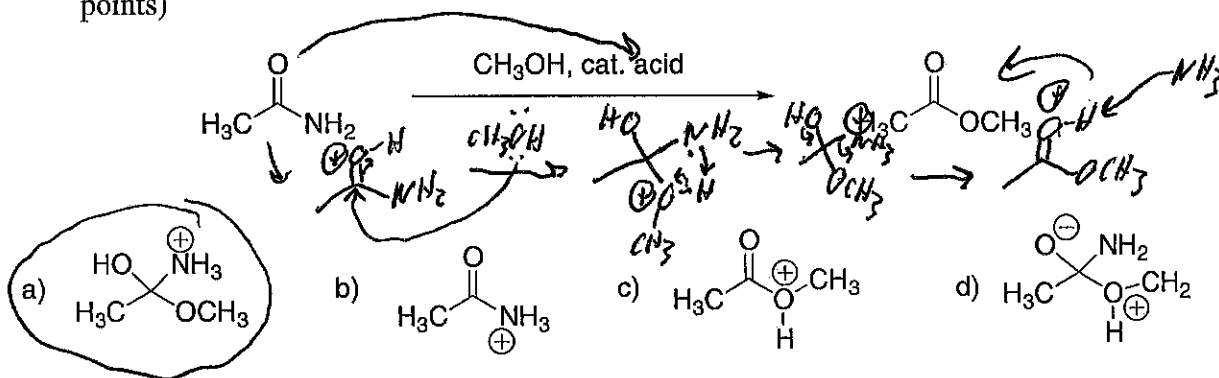
1. Provide an IUPAC name for the following structure. (2 points, problem 20-26e)



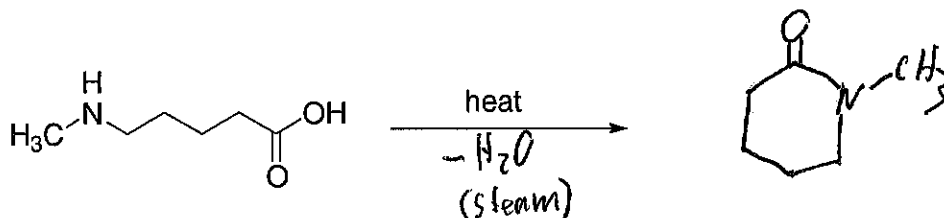
2. Complete the following reaction by filling in the necessary reagents. (3 points)



3. Circle all of the following structures that are intermediates in the following reaction. (3 points)



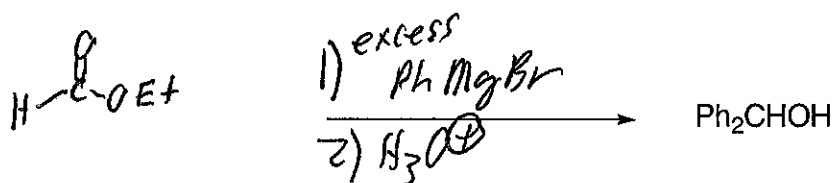
4. Predict a structure for the product of the following reaction. (2 points)



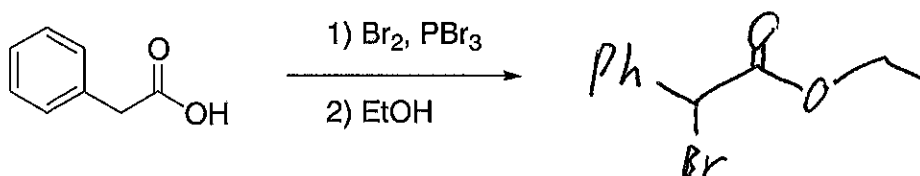
Name: Key

Organic II Lecture
Spring 2011
Quiz #8
(10 points)

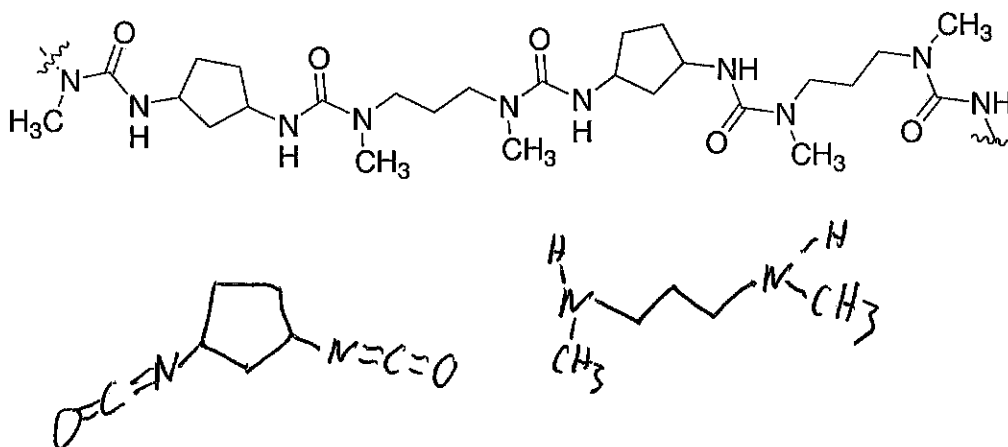
1. Synthesize the following compound from an ester having no more than 8 carbons. Any other reagents may be used. (4 points, problem 21-35d)



2. Predict the structure of the product of the following reaction. (2 points)



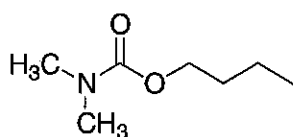
3. Draw a structure for the monomer units, one of which is an isocyanate, needed to construct the polymer below. (4 points)



Name: Key

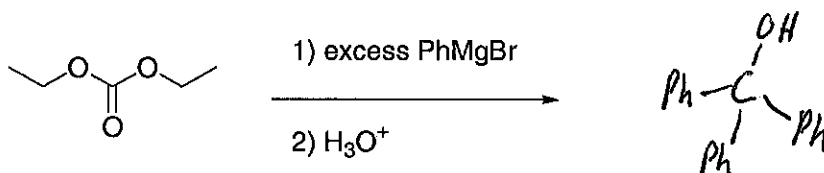
Organic II Lecture
Spring 2012
Quiz #8
(10 points)

1. Provide a correct common name for the following structure. (2 points)

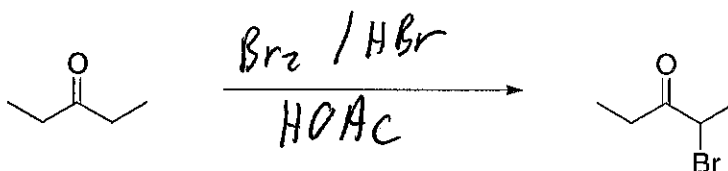


butyl N,N-dimethylurethane

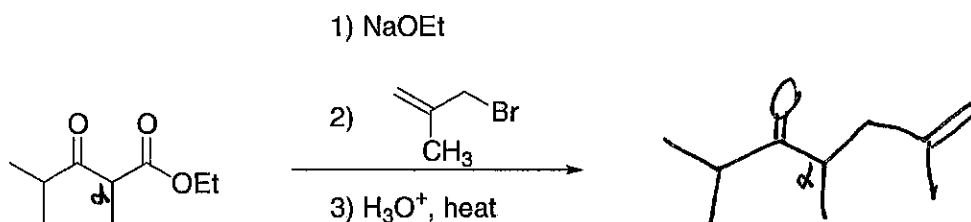
2. Carbonate esters react with Grignard reagents in a similar manner as carboxylate esters. Predict the major product of the following reaction. (3 points, problem 21-55a)



3. Complete the following reaction by filling in the necessary reagents. (2 points)



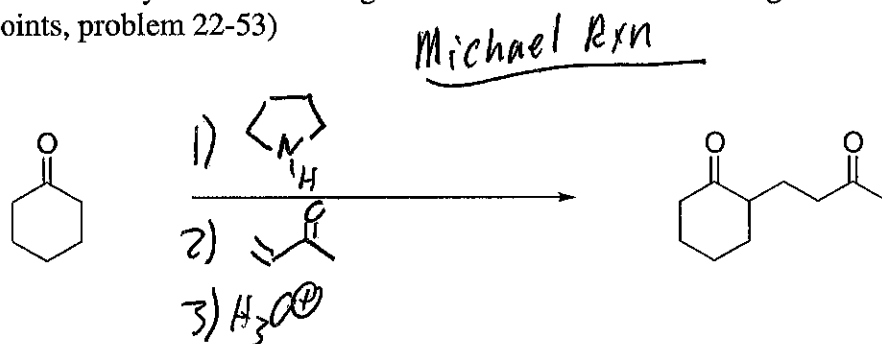
4. Complete the following reaction by providing a correct structure for the expected product. (3 points)



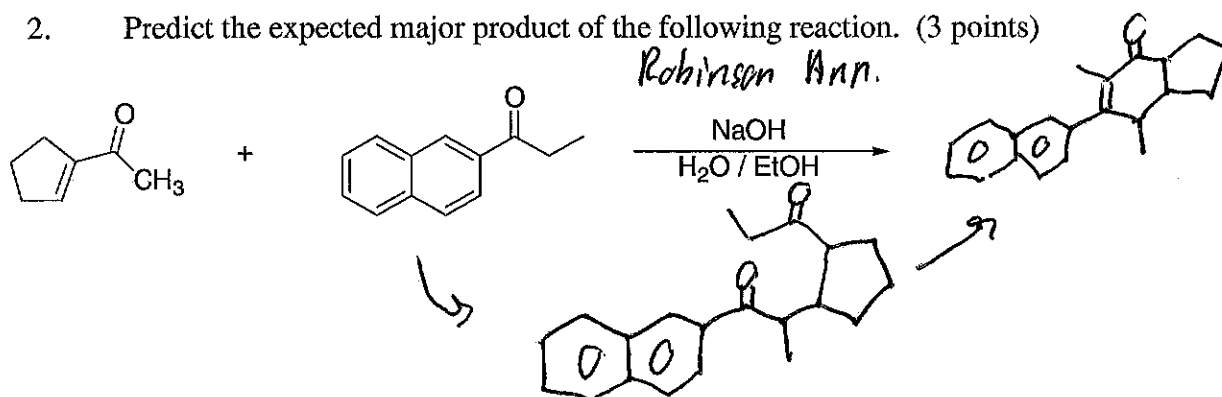
Name: Key

Organic II Lecture
Spring 2012
Quiz #9
(10 points)

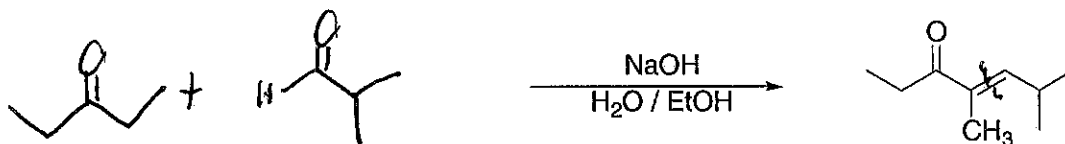
1. Show how cyclohexanone might be converted to the following diketone (Hint: stork). (4 points, problem 22-53)



2. Predict the expected major product of the following reaction. (3 points)



3. Show how the following reaction might be synthesized using an aldol reaction by indicating the necessary starting materials. (3 points)



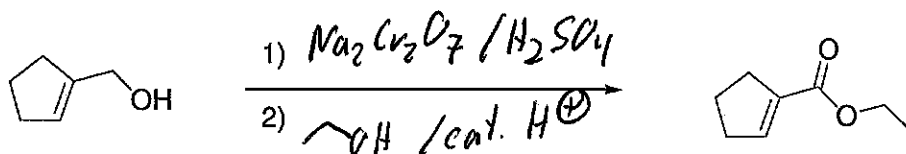
Name: Key

Organic II Lecture
Spring 2013
Quiz #7
(10 points)

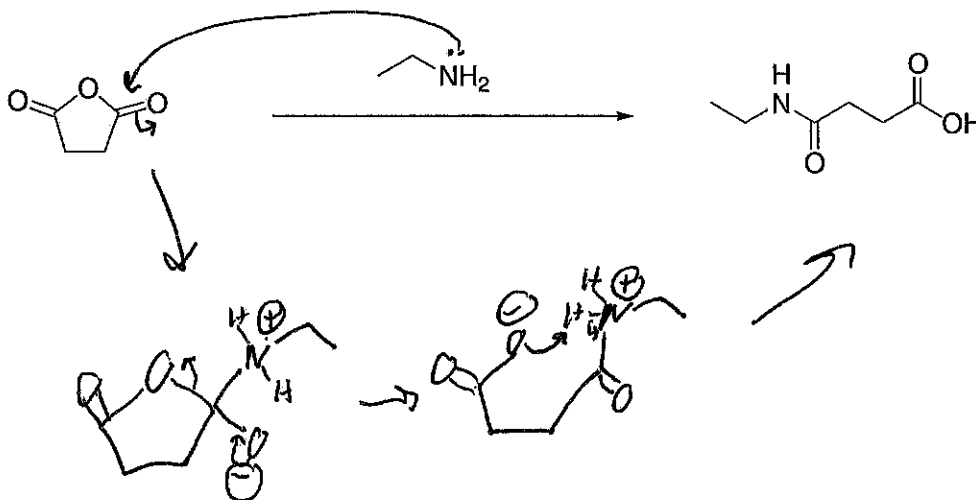
1. Provide a common name for the following compound. (2 points, problem 21-43h)



2. Complete the following reaction by filling in the necessary reagents. (4 points)



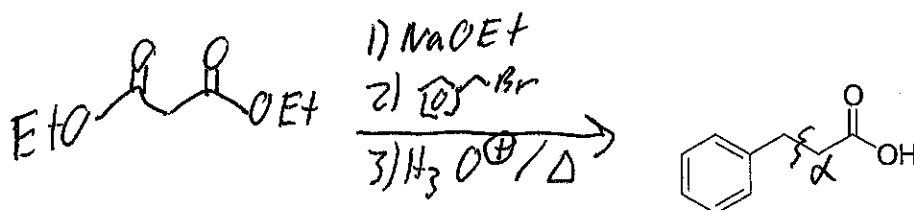
3. Provide an electron arrow pushing mechanism for the following reaction. Include all formal charges and intermediates. (4 points)



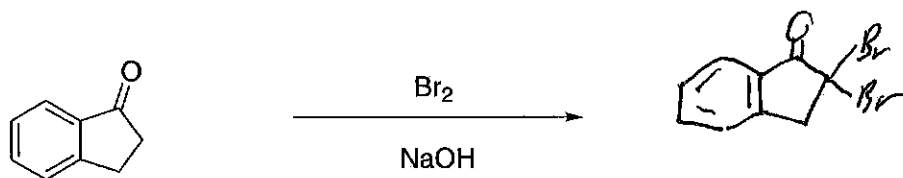
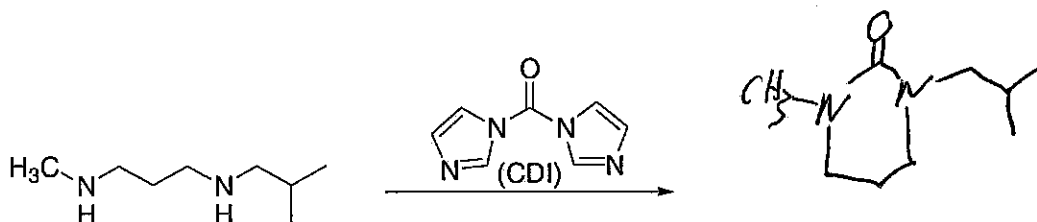
Name: Key

Organic II Lecture
Spring 2013
Quiz #8
(10 points)

1. Show how the following compound can be made using the malonic ester synthesis. (5 points, problem 22-70a)



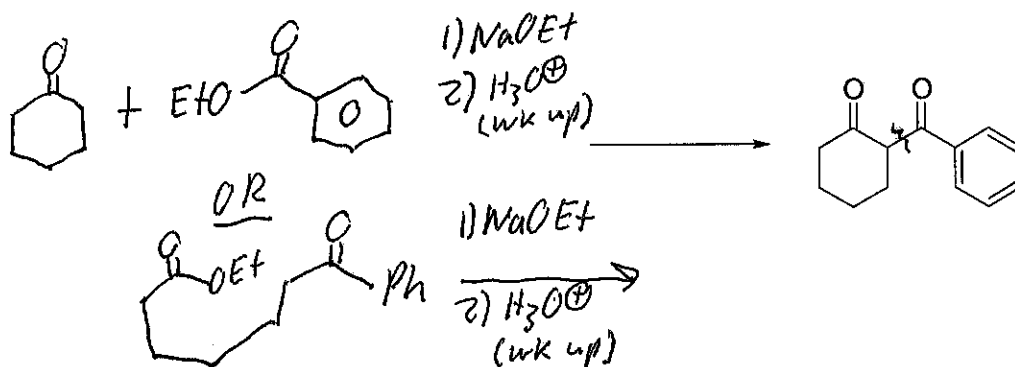
2. Complete each of the following reactions by drawing a structure for the expected product. (5 points)



Name: Key

Organic II Lecture
Spring 2013
Quiz #9
(10 points)

1. Show how the following compound can be made using an aldol, Claisen, or another type of condensation. (4 points, problem 22-67f)



2. Complete each of the following reactions by drawing a structure for the expected product. (6 points)

