1. All carboxylic acid derivatives can be converted to a carboxylic acid under either acidic or basic hydrolysis. Draw the anion-leaving group when the following carboxylic acid derivatives are hydrolyzed under basic conditions.

Knowing the relative stability of the leaving groups, predict the relative reactivity of the carboxylic acid derivatives.

Predict the relative reactivity of the following esters. Explain your reasoning.

2. Indicate a method to synthesize the following amides A, B or C by starting with aniline. Any other reagents may be used, but you must start with aniline.
3. Identify the following C₉H₁₀O₂ isomers with the following ¹H NMRs and the indicated carbonyl stretch in the IR.

a. 1719 cm⁻¹

![1H NMR spectrum for isomer a with peaks at 3, 2, and 1 ppm.]

b. 1763 cm⁻¹

![1H NMR spectrum for isomer b with peaks at 3, 2, and 1 ppm.]

c. $1687\text{ cm}^{-1}$