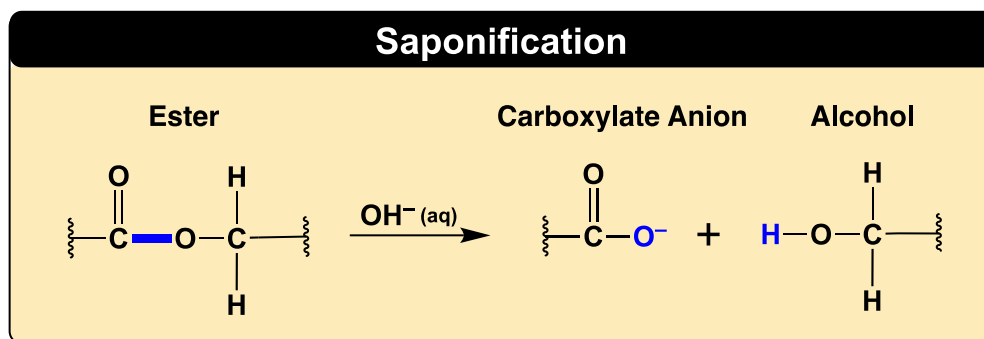
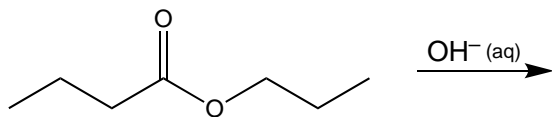


## CONCEPT: ESTER REACTIONS: SAPONIFICATION

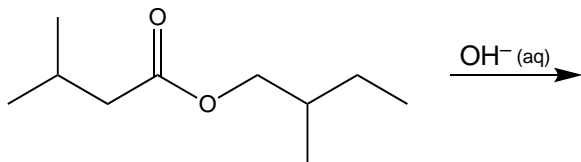
- Under this reaction the \_\_\_\_\_ ion dissolved in water reacts with an ester.
  - This reaction cuts ( \_\_\_\_\_ ) the **ester bond** to create a *carboxylate anion* and an alcohol.
  - **Carboxylate Anion**: the conjugate \_\_\_\_\_ form of a carboxylic acid.
  - Considered to be the opposite process of \_\_\_\_\_.



**EXAMPLE:** Determine the products when propyl butanoate is treated with an aqueous sodium hydroxide solution.



**PRACTICE:** Name alcohol formed when the following ester undergoes a saponification reaction.



a) 4-methyl-4-butanol

b) 2-methyl-4-butanol

c) 2-methyl-1-butanol

d) 2-methylhexanoate