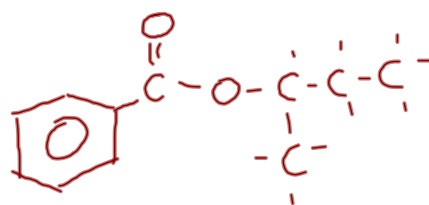
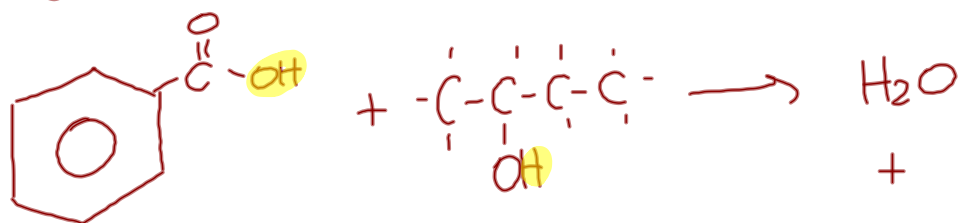
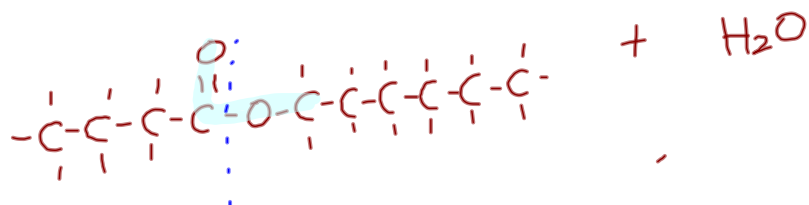
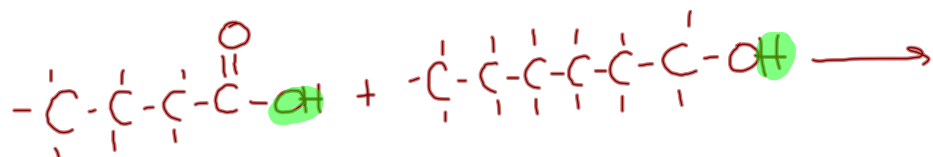


⑥ benzoic acid + 2-butanol →



② butanoic acid + 1-hexanol → hexyl butanoate + water



# Unit 1 - Organic Chemistry

- Characteristics of organic compounds
- Identifying and drawing isomers
- General formulas of alkanes, alkenes, alkynes, and cyclic compounds

• Sigma vs. Pi bonding  $C-C$ ,  $C=C$ ,  $C\equiv C$

• Draw and name hydrocarbons that have alkyl substituents

• Aromatic Compounds



phenyl  
O, M, P

• Name and draw the following hydrocarbon derivatives:

⇒ Organic Halides  $R-X$

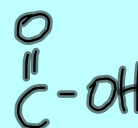
⇒ Alcohols  $R-OH$  "-ol"

$R_1-O-R_2$  ⇒ Ethers

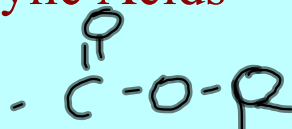
⇒ Aldehydes  $R-\overset{O}{\parallel}C-H$

$R_1-\overset{O}{\parallel}C-R_2$  ⇒ Ketones

⇒ Carboxylic Acids



⇒ Esters



• Reactions





# Reactions

- Cracking (*break into pieces*)
- Reforming (*two small* → *one big*)
- Combustion (*burned, common oxides*)
- Addition (*breaking a pi bond(s)*)
- Substitution (*break a C-H bond and  
replace with halide*)
- Elimination (*adding a pi bond*)
- Esterification  
(*carboxylic acid + alcohol* → *ester*)

p. 719-720 #37-46, 49, 50, 54-56, 59-61,  
63, 64

p. 757-758 #26-35, 38, 40, 43-45

# Reactions Worksheet