

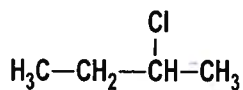
Organic Review and Practice

Concepts to know:

- Define hydrocarbon, aliphatic hydrocarbon, saturated hydrocarbon, unsaturated hydrocarbon, and aromatic hydrocarbon.
- Be able to name and draw
 - Straight chain alkanes, branched alkanes, cycloalkanes, alkenes, alkynes, and aromatics
- Know the general formulas for alkanes, alkenes, and alkynes
- Know the structure of benzene
- Physical properties of hydrocarbons
 - Polarity, state
 - Be able to predict which will have a higher boiling point
- Be able to name and draw
 - Alcohols, Haloalkanes, Ketones, Aldehydes, Carboxylic Acids, Esters, Ethers, Amines, and Amides
- Know the functional groups for: Alcohols, Haloalkanes, Ketones, Aldehydes, Carboxylic Acids, Esters, Ethers, Amines, and Amides
- Define the term polymer
- Describe the two reactions that may form polymers
- Organic Reactions
 - Be able to identify and predict the products of addition, elimination, esterification, and substitution reactions
 - Know the terms halogenation and hydrogenation
 - Be able to define/recognize combustion, condensation, hydrolysis, oxidation, reduction
 - Know Markovnikov's Rule and how to apply it.

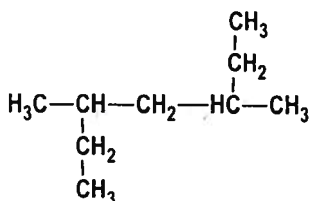
Name or draw the following compounds:

Chemical structure

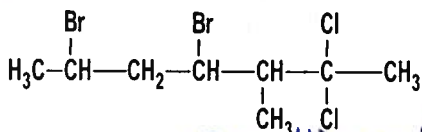


IUPAC Name

2-chlorobutane



3,5-dimethyl heptane.

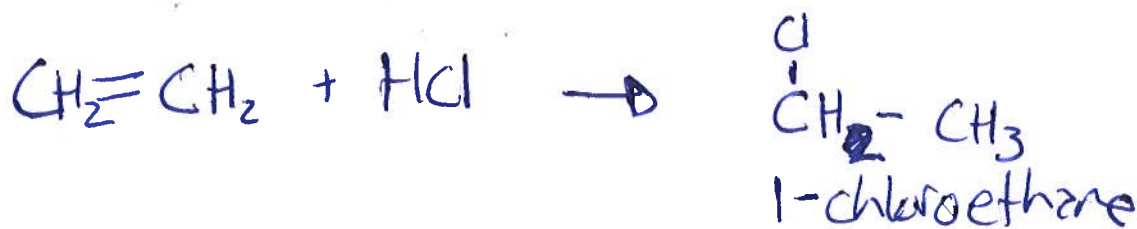


5,7-dibromo-2,2-dichloro-3-methyl heptane

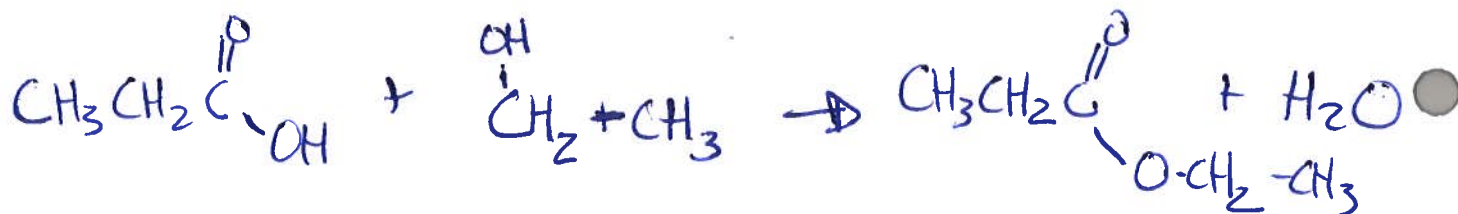
2. Write the equation for the addition reaction (halogenation) involving propene and bromine.



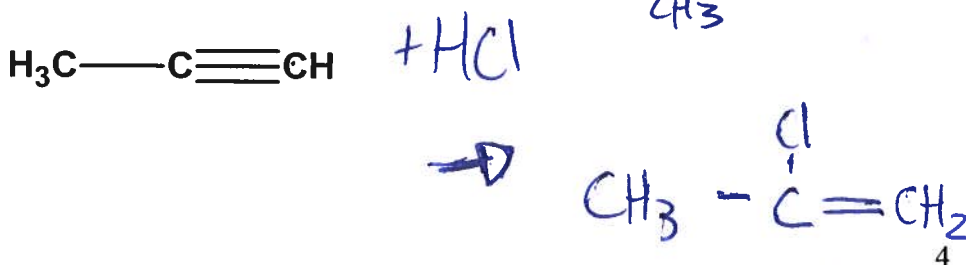
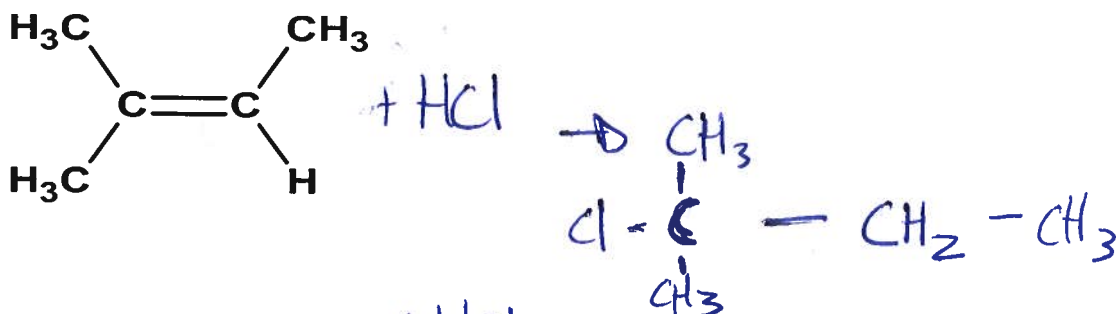
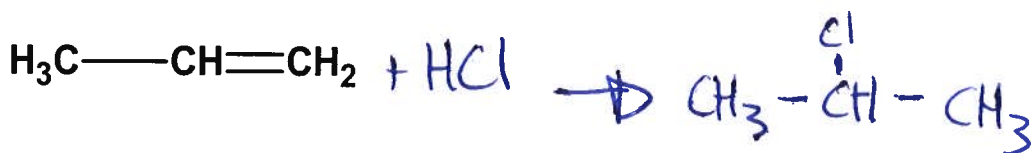
3. Write the equation for the addition of hydrochloric acid to ethene. What is the name of the product formed?

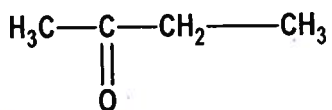


4. Write the equation for the esterification reaction of propanoic acid with ethanol.

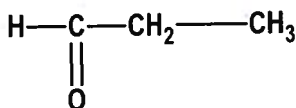


5. Predict the product formed when HCl is reacted with each of the following compounds. Use Markovnikov's Rule to predict the product.

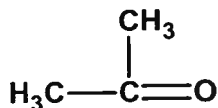




butan-2-one



propanal

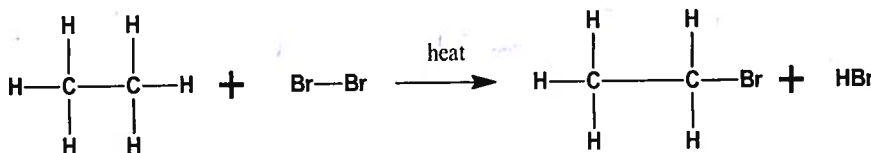


propan-2-one

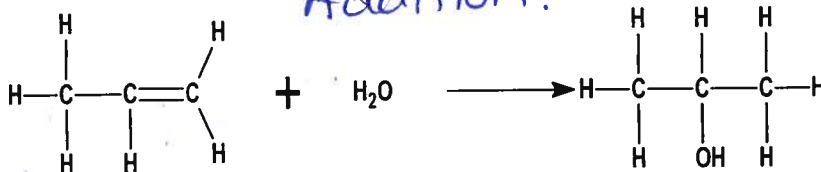
Types of organic reactions

1. Identify the type of organic reaction represented by each of the following equations:

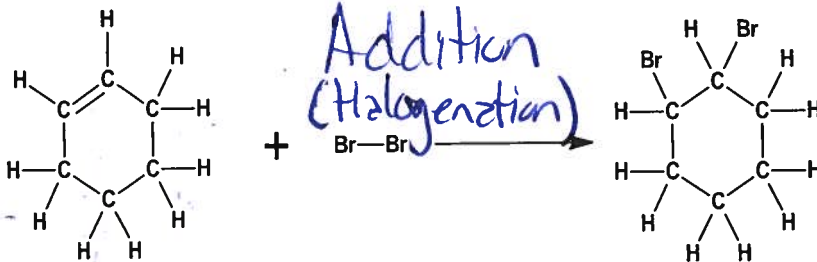
Substitution



Addition

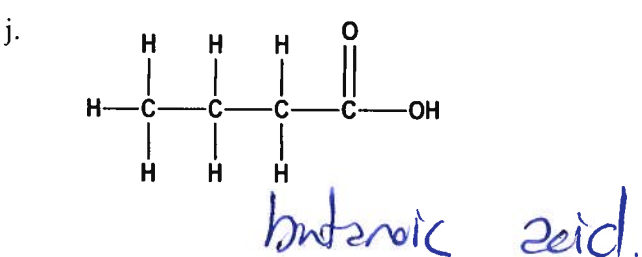
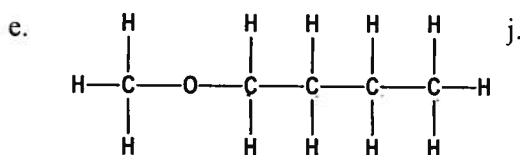
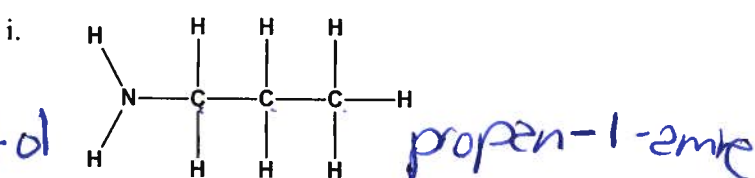
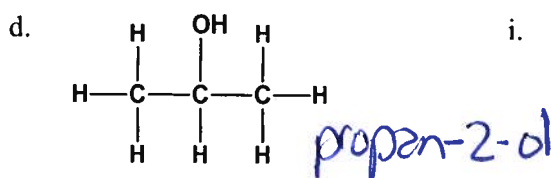
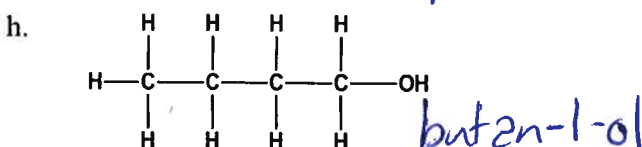
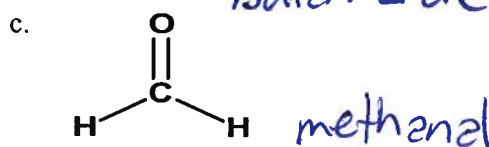
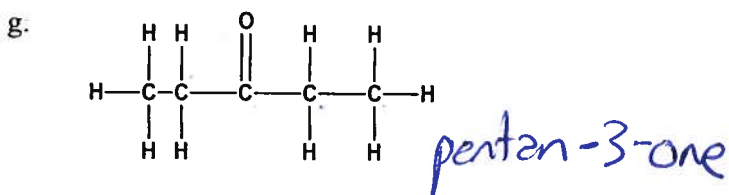
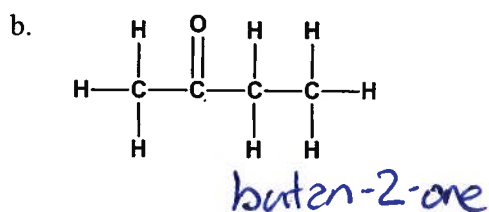
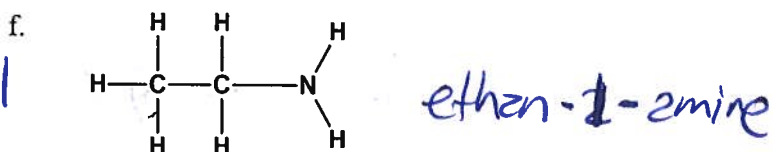
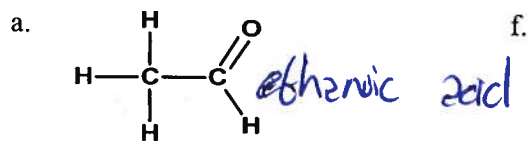


Addition
(Halogenation)

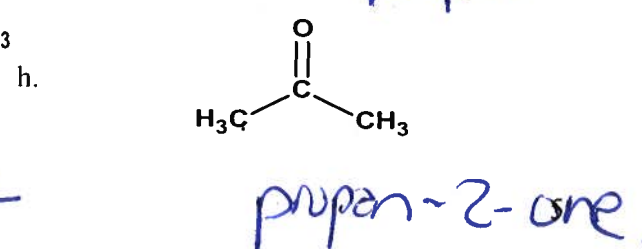
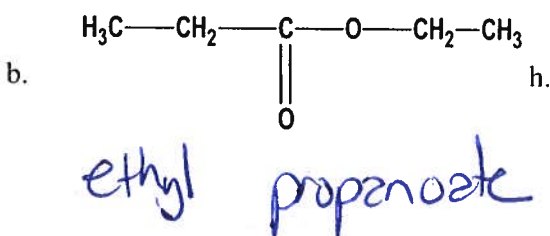
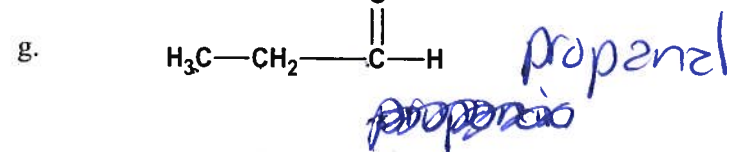
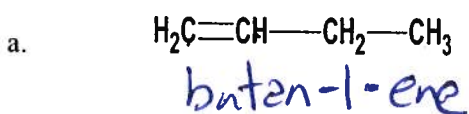


More Practice

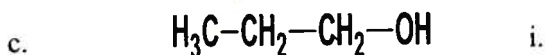
Write the name for each of the following:



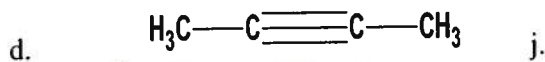
Name the type of organic compound each of the following would be classified as:



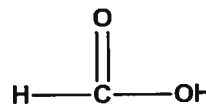
propan-1-ol



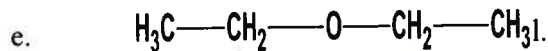
cyclopentane



butan-2-yne

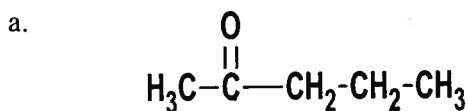


methanoic acid

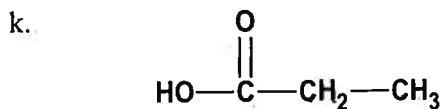


1-ethoxyethane

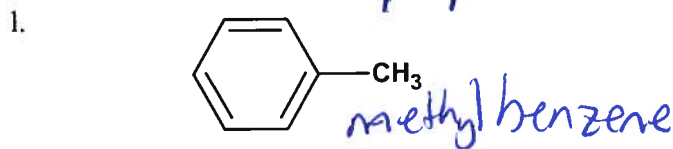
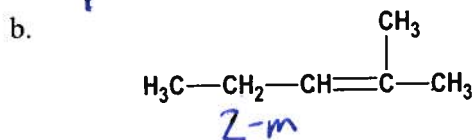
Name and classify each organic compound:



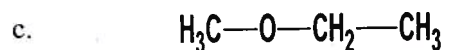
pentan-2-one



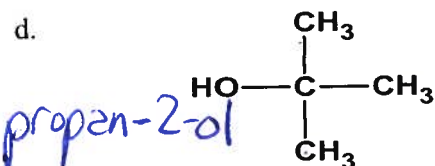
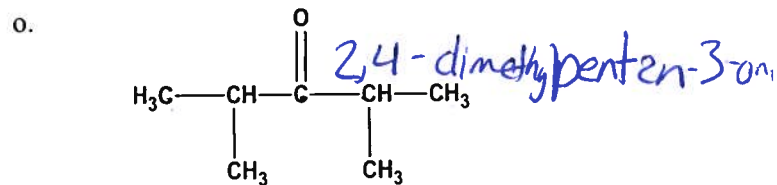
propanoic acid



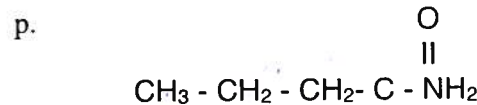
methylbenzene



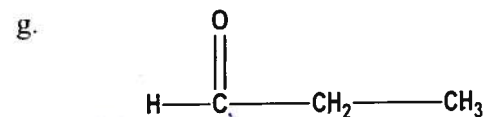
methoxyethane



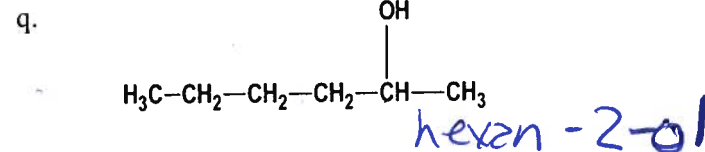
2-methylpropan-2-ol



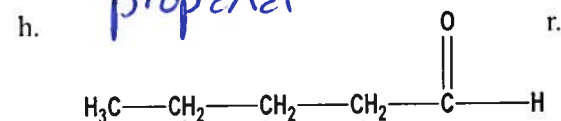
butanamide



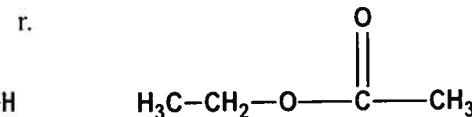
propanal



hexan-2-ol

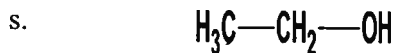
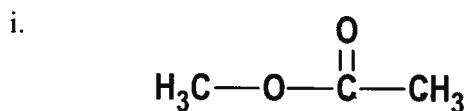


pentanal



ethyl ethanoate

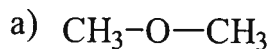
methyl ethanoate



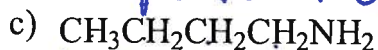
ethan-1-ol
(ethanol)

Even More Practice

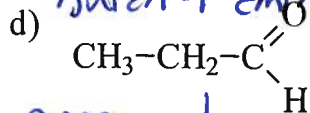
1-methoxy methane



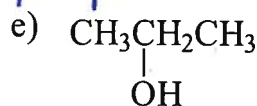
pentan-1-ol



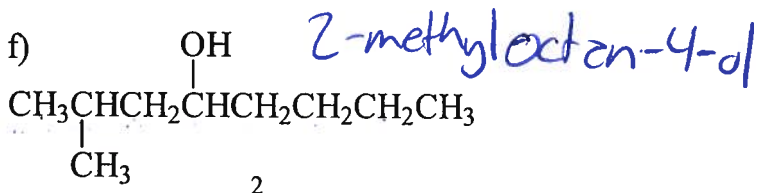
butan-1-amine



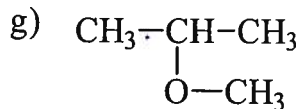
propanal



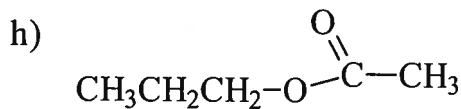
propan-2-ol



2-methyloctan-4-ol



2-methoxy propane



propyl ethanoate

