

## Organic Review and Practice

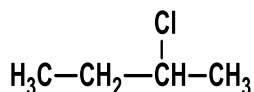
Concepts to know:

- 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.

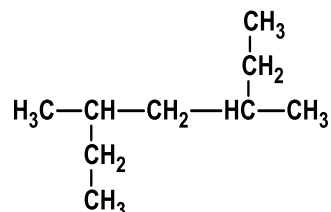
Name or draw the following compounds:

Chemical structure

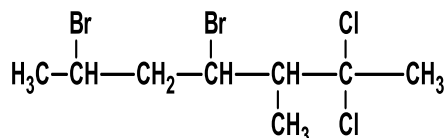
IUPAC Name



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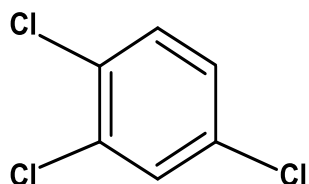


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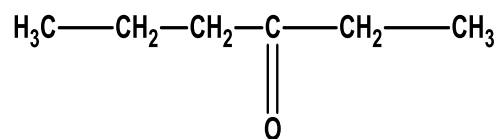
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2,4,4-trimethylhexane  
.....

2,3,7-trichloro-5-ethyloctane  
.....

2-bromo-4,4-dimethylhexane  
.....

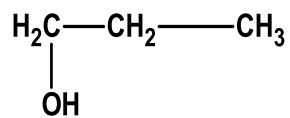
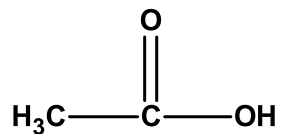
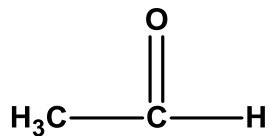


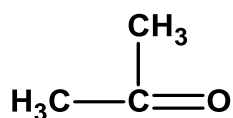
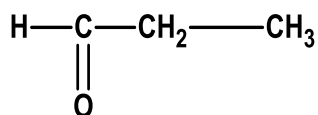
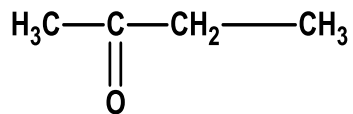
2,4-dimethylpentanal  
.....



ethanoic acid  
.....

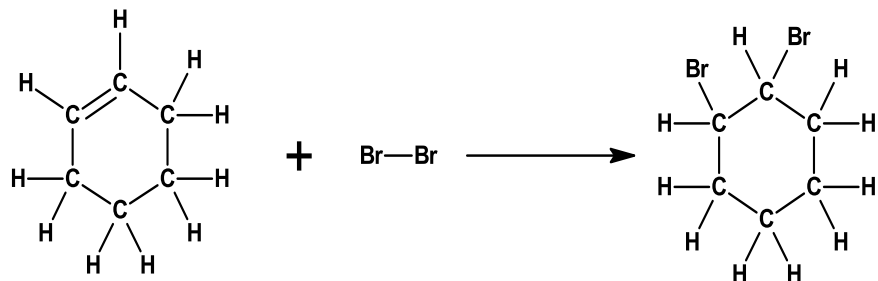
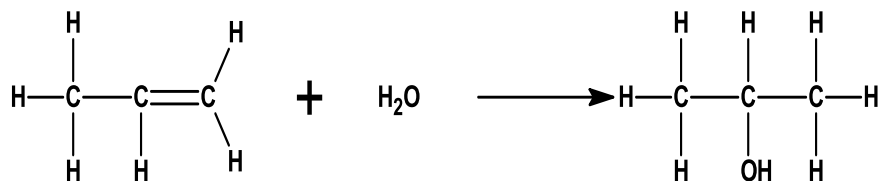
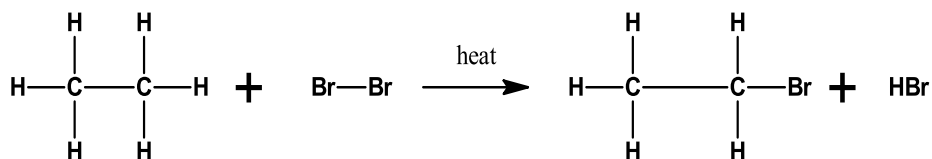
methanoic acid  
.....



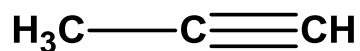
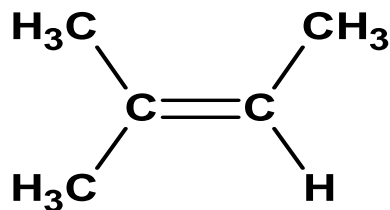
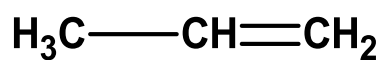


### Types of organic reactions

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

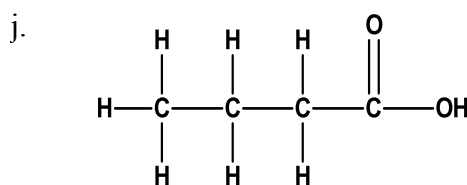
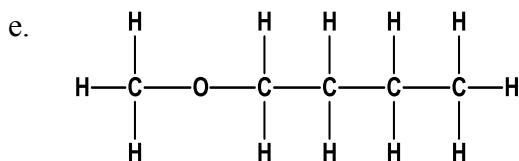
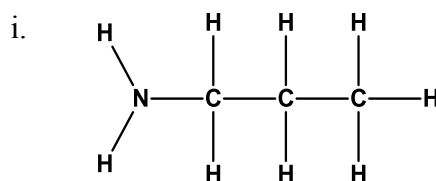
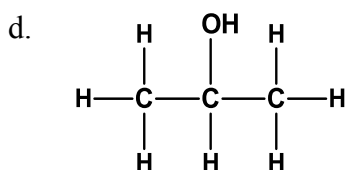
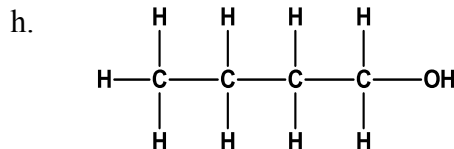
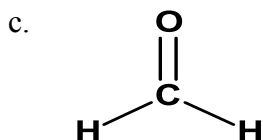
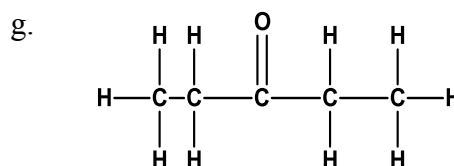
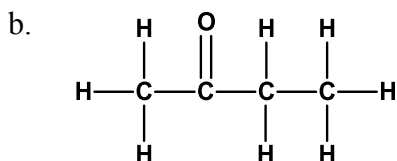
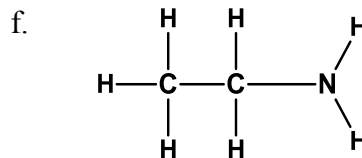
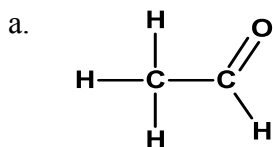


- Write the equation for the addition reaction(halogenation) involving propene and bromine.
- Write the equation for the addition of hydrochloric acid to ethene. What is the name of the product formed?
- Write the equation for the esterification reaction of propanoic acid with ethanol.
- Predict the product formed when HCl is reacted with each of the following compounds. Use Markovnikov's Rule to predict the product.

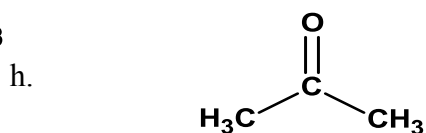
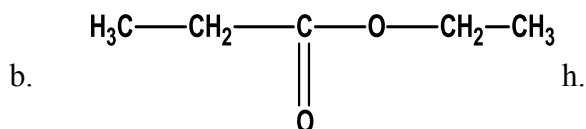
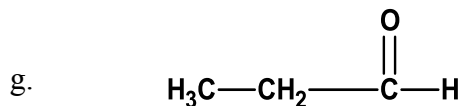
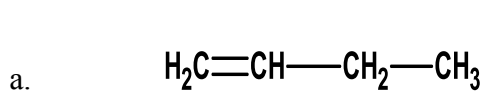


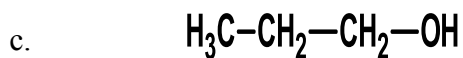
## More Practice

Write the name for each of the following:

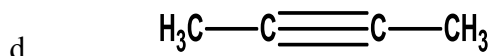


Name the type of organic compound each of the following would be classified as:

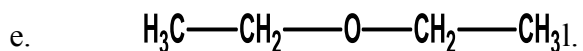
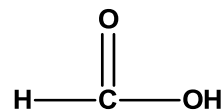




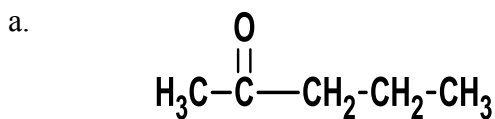
i.



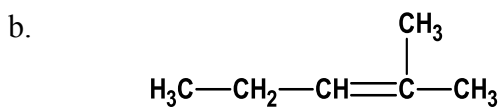
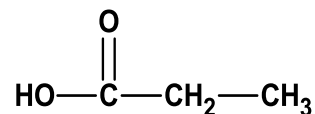
j.



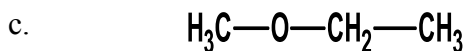
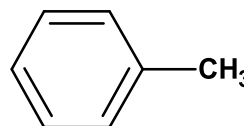
Name and classify each organic compound:



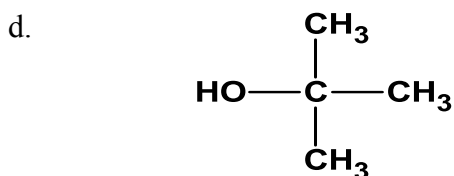
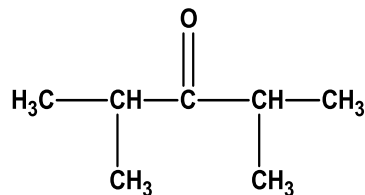
k.



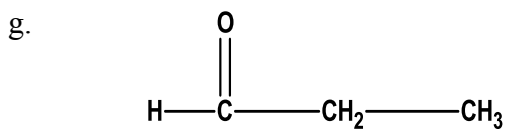
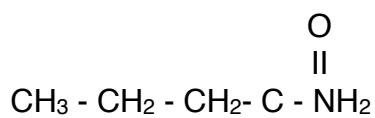
l.



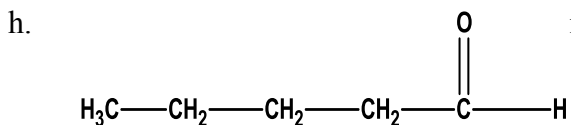
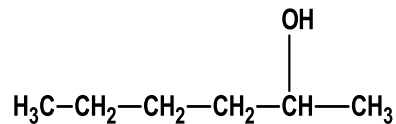
o.



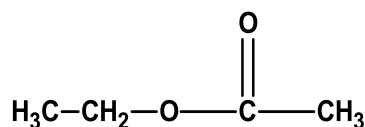
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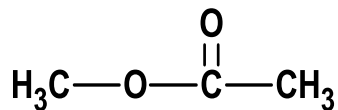
q.



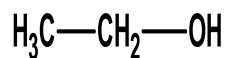
r.



i.



s.



### Even More Practice

