

Practice Problems

For the next five questions, name each alcohol.

75.



2-butanol

79.



6-phenyl-2-propyl-1-heptanol

76.



2,3-pentanediol

For the next five questions, draw each alcohol.

80. ethanol



81. propan-1-ol



82. butane-1,3-diol



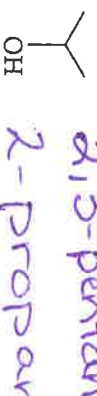
83. 3,4-dimethylhexan-2-ol



84. 2,3-diethylcyclohexanol

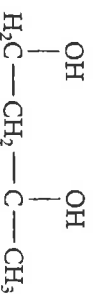


77.



2-propanol

78.



3-methyl-1,3-butanediol

For the next five questions, name each haloalkane.

85.



2-fluorobutane

For the next five questions, draw each haloalkane.

90. 1-iodopropane



91. 2-chloro-1-fluoroethane



92. 3-bromo-2,2-dimethylpentane



93. 2,4-dibromo-3-chlorohexane



94. 1,4-difluoro-3-propylcycloheptane



95. Identify any errors in the following names by drawing a line structure. Give the correct name for each haloalkane.



3-chloro-5-methylhexane

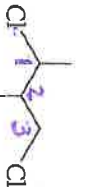
a. 3-chlorobutane (2-chlorobutane)

b. 4-chloro-3-bromohexane (3-bromo-4-chlorohexane)

c. 2,4-dichlorocyclopentane (1,3-dichlorocyclopentane)

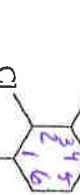
d. 3-chloro-2,2-dimethylbutane

88.



1,3-dichloro-2-fluoropropane

(2-chloro-3,3-dimethylbutane)



1,3-dibromo-2-chlorocyclohexane

Practice Problems

For the next four questions, name each aldehyde.

96.



propanal

For the next five questions, draw each aldehyde.

100. 3-methylbutanal



101. methanal (commonly known as formaldehyde)



102. 2-methylpropanal



103. 2-chloroethanal



104. 4,4-diethylhexanal



105. Explain why the following aldehydes are named incorrectly or cannot exist.

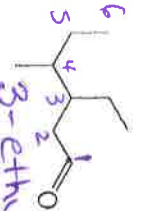
a. 2-ethanal (can't be on 2nd carbon)

b. 5-ethylhexanal (5-methylheptanal)

c. cyclobutanal (cyclobutanone)

d. 1-fluoropentanal (no room for fluorine)

98.



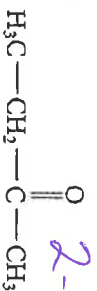
3-ethyl-1,4-dibromopentanal

99.

2,4-dibromopentanal

For the next three questions, name each ketone.

106.



2-butanone

For the next three questions, draw each ketone.

109. propanone (commonly known as acetone)



110. 3-ethylhexan-2-one



111. 4,4-diethylhexane-2,3-dione



For the next four questions explain why each ketone is named incorrectly or cannot exist. If it can exist, give the proper name.

112. propan-1-one (propanal)



113. pentan-4-one (2-pentanone)

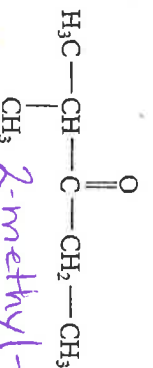


114. 2-propylhexan-3,4-dione



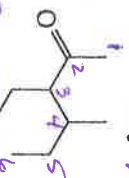
115. benzen-1-one (does not exist)

107.



2-methyl-3-pentanone

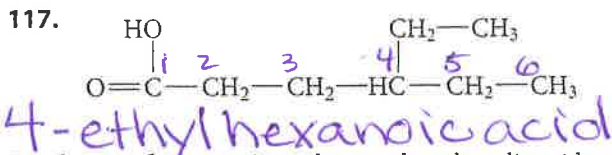
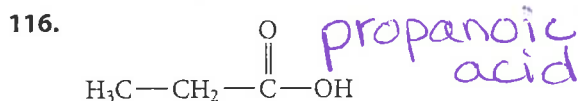
108.



3-ethyl-1,4-dimethyl-2-hexanone

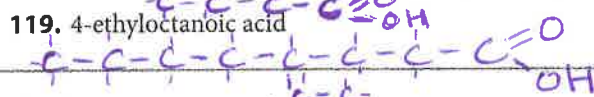
Practice Problems

For the next two questions, name each carboxylic acid.



For the next four questions, draw each carboxylic acid.

118. butanoic acid (commonly known butyric acid)



120. 3-methyl-4-phenylhexanoic acid

121. pentandioic acid (commonly name: glutaric acid)

For the next four questions, explain why each carboxylic acid is named incorrectly or cannot exist. If it can exist, give the proper name.

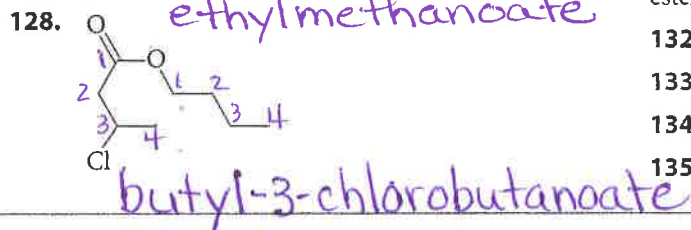
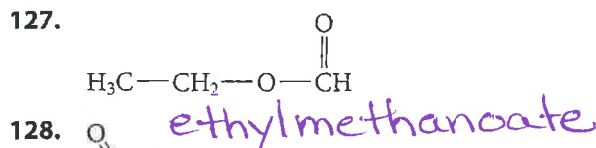
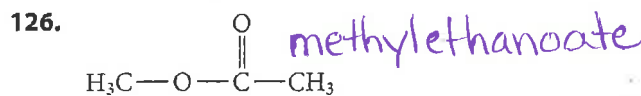
122. hexan-6-oic acid **(hexanoic acid)**

123. butan-2-oic acid **(does not exist)**

124. 3-butylpentanoic acid **(3-ethylheptanoic acid)**

125. cyclohexanoic acid **(does not exist)**

For the next three questions, name each ester.



For the next three questions, draw the condensed structural formula each ester.

129. butylethanoate

130. ethylbutanoate

131. ethyl 2-cyclobutylpropanoate

For the next four questions, draw the line structure of the ester formed from each reaction.

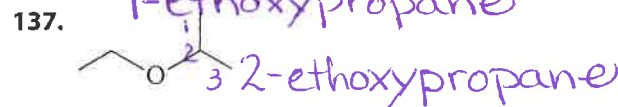
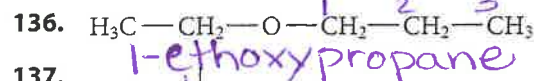
132. propanoic acid and ethanol

133. butanoic acid and propanol

134. 3-fluoropentanoic acid and methanol

135. butanol and 4-phenylhexanoic acid

For the next three questions, name each ether.



For the next four questions, draw the condensed structural formula for each ether.



140. 2-propoxybutane

141. 3-ethoxy-4-methylhexane

142. 2-phenoxyheptane

For the next four questions, explain why each ether is named incorrectly or cannot exist. If it can exist, give the correct name.

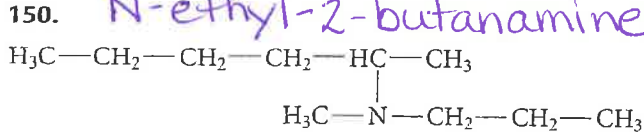
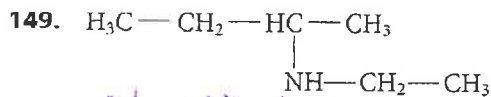
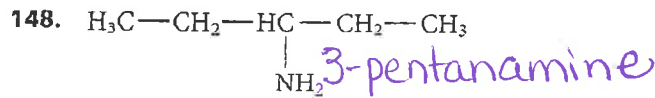
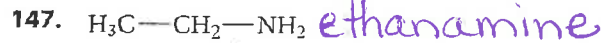
143. ethoxymethane **methoxyethane**

144. 3-propoxybutane **2-propoxybutane**

145. 4-methoxy-4-methylbutane

146. 2-ethoxybenzene **2-methoxypentane**  
**ethoxybenzene**

For the next four questions, name each amine.



For the next four questions, draw the condensed structural formula for each amine.

151. methanamine

152. N-propylbutan-1-amine

153. hexan-1,4-diamine

154. N-ethyl-N-methylheptan-3-amine

For the next four questions, draw line structures of each amine.

155. propan-1-amine

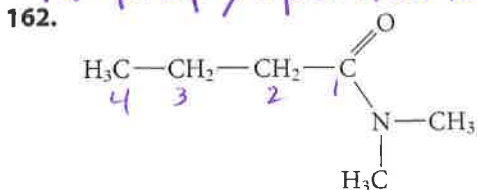
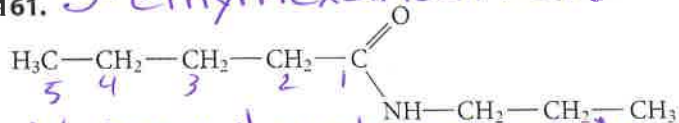
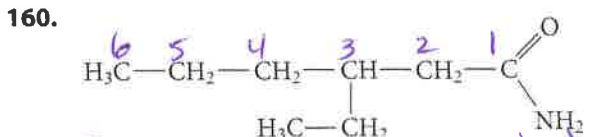
156. N-ethyl-pentan-2-amine

157. N,N-dimethylbutan-2-amine

158. N-ethyl-N-propylhexan-3-amine

Practice Problems

For the next four questions, name each amide.



For the next four questions, draw the condensed structural formula for each amide.

163. ethanamide

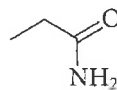
164. 2-methylpropanamide

165. N,N-diethylhexanamide

166. N-ethyl-N-propyl-2-methylbutanamide

For the next three questions, name each amide.

167.



168.



169.

