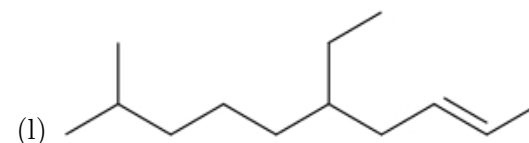
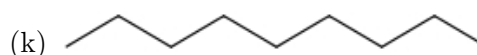
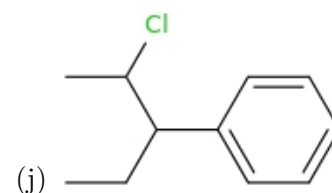
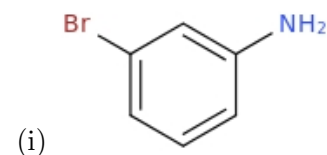
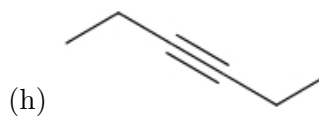
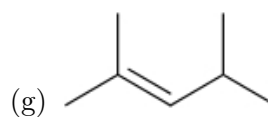
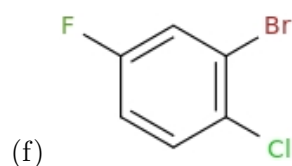
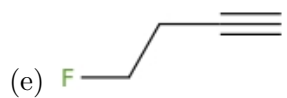
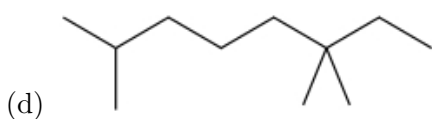
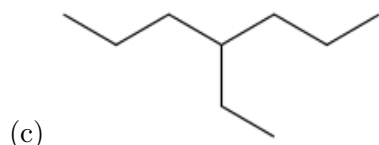
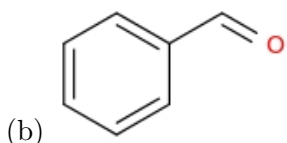
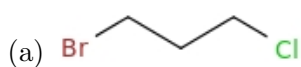


Name: _____

Class: _____

Date: _____

[24 pt] 1. Give the IUPAC name of the following molecules



(a) 1-bromo-3-chloropropane

(g) 2,4-dimethyl-2-pentene

(b) benzaldehyde

(h) 3-hexyne

(c) 4-ethylheptane

(i) m-bromoaniline

(d) 2,6,6-trimethyloctane

(j) 2-chloro-3-phenylpentane

(e) 4-fluoro-1-butyne

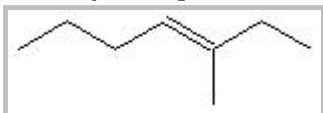
(k) nonane

(f) 2-bromo-1-chloro-4-fluorobenzene

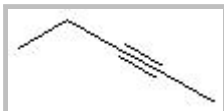
(l) 5-ethyl-9-methyl-2-decene

[20 pt] 2. Draw the following organic molecules:

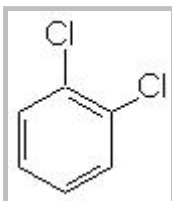
(a) 3-methyl-3-heptene



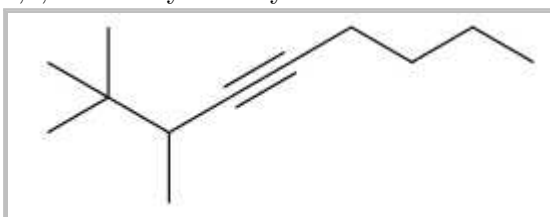
(b) 2-pentyne



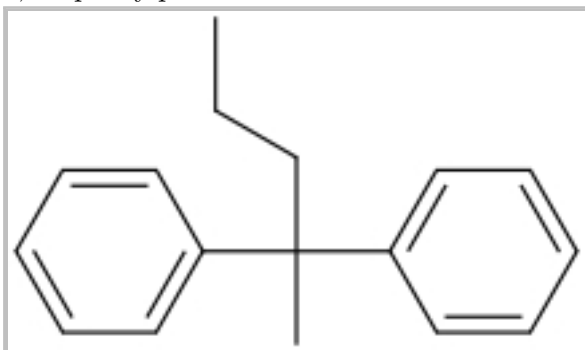
(c) o-dichlorobenzene



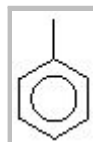
(d) 2,2,3-trimethyl-4-nonyne



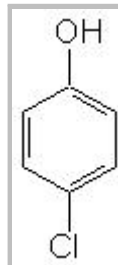
(e) 2,2-diphenylpentane



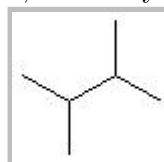
(f) toluene



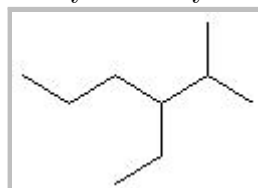
(g) p-chlorophenol



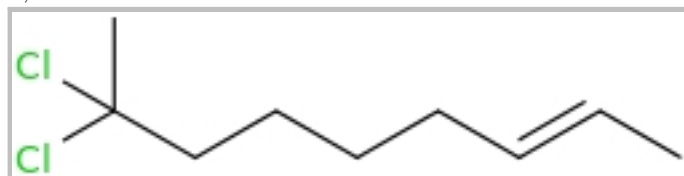
(h) 2,3-dimethylbutane



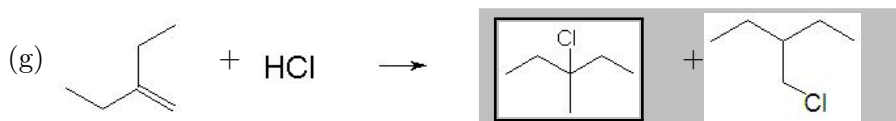
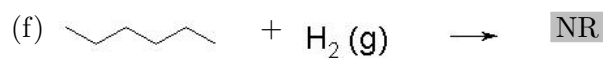
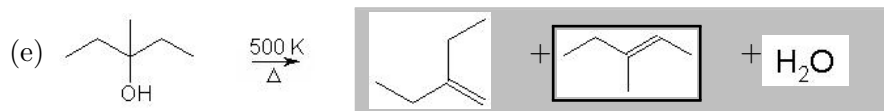
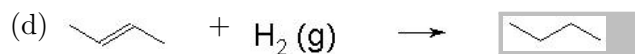
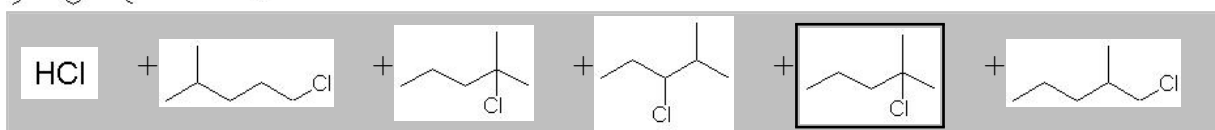
(i) 3-ethyl-2-methylhexane

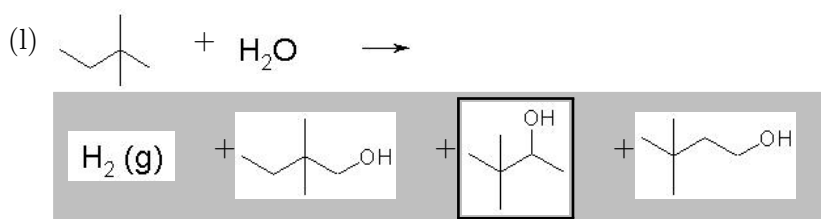
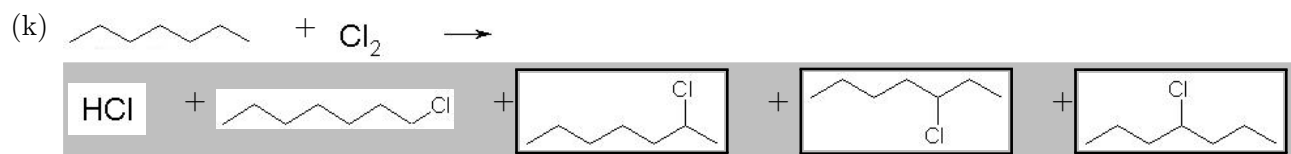
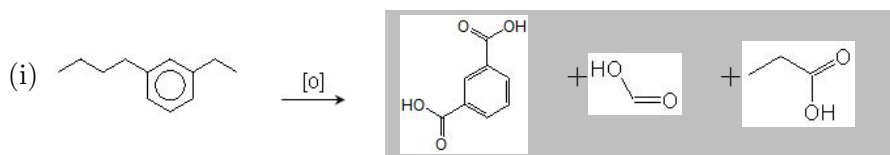


(j) 8,8-dichloro-2-nonene

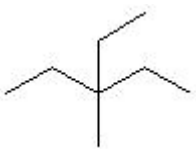
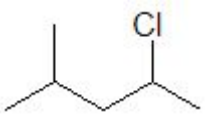
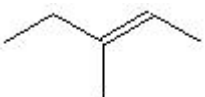
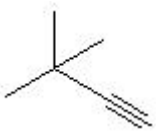
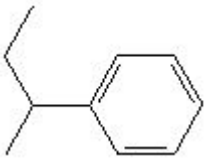
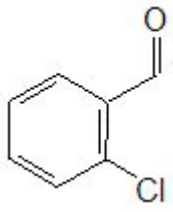
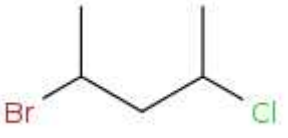
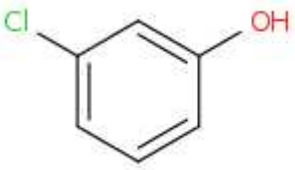
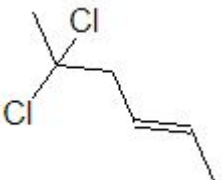
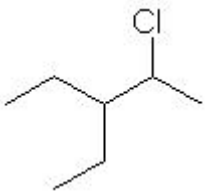


[36 pt] 3. Complete the following reactions in the format given. Assume all substitution reactions are monosubstitutions only. Circle the favored product in a reaction. Include states where appropriate. Be sure to balance any combustion reactions. If no reaction occurs put NR for the products.





[20 pt] 4. Give the IUPAC name of the following molecules

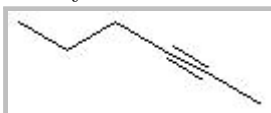
<p>(a) 3-ethyl-3-methylpentane</p> 	<p>(b) 2-chloro-4-methylpentane</p> 
<p>(c) 3-methyl-2-pentene</p> 	<p>(d) 3,3-dimethyl-1-butyne</p> 
<p>(e) 2-phenylbutane</p> 	<p>(f) o-chlorobenzaldehyde</p> 
<p>(g) 2-bromo-4-chloropentane</p> 	<p>(h) m-chlorophenol</p> 
<p>(i) 5,5-dichloro-2-hexene</p> 	<p>(j) 2-chloro-3-ethylpentane</p> 

[20 pt] 5. Draw the following organic molecules:

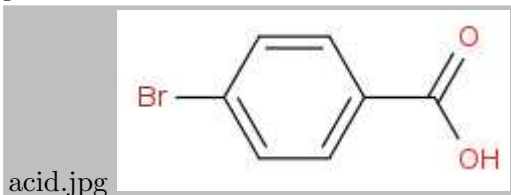
(a) 3-heptene



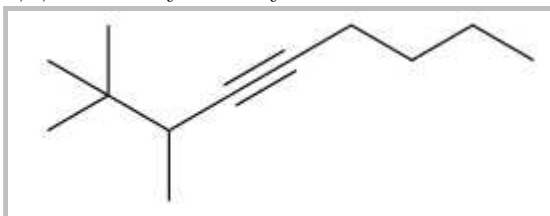
(b) 2-hexyne



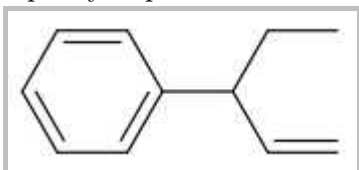
(c) p-bromobenzoic acid



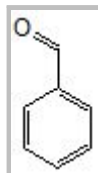
(d) 2,2,3-trimethyl-4-nonyne



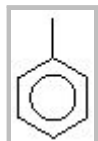
(e) 3-phenyl-1-pentene



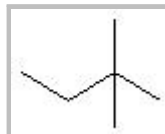
(f) benzaldehyde



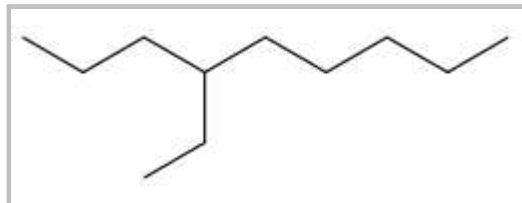
(g) toluene



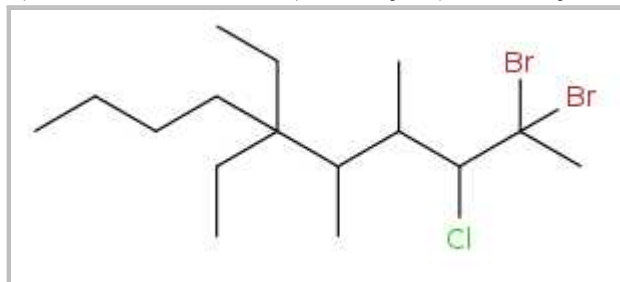
(h) 2,2-dimethylbutane



(i) 4-propyloctane



(j) 2,2-dibromo-3-chloro-6,6-diethyl-4,5-dimethyldecane



[30 pt] 6. Complete the following reactions in the format given. Assume all substitution reactions are monosubstitutions only. Circle the favored product in a reaction. Include states where appropriate. Be sure to balance any combustion reactions. If no reaction occurs put NR for the products.

