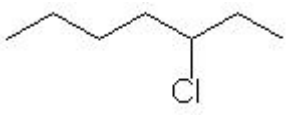
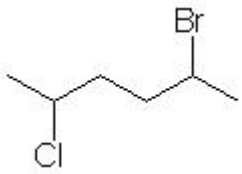
Name: _____ Class: _____ Date: _____

1. Give the IUPAC name of the following molecules

(a)  1(a) _____

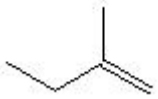
(b) 

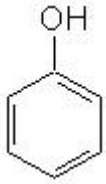
1(b) _____

(c) 

1(c) _____

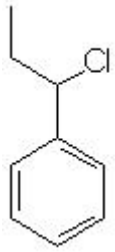
(d) $CH_3-CH_2-C(CH_3)_2-CH_2-CH_2-CH_3$ 1(d) _____

(e)  1(e) _____

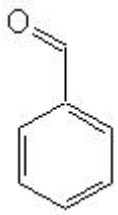
(f) 

1(f) _____

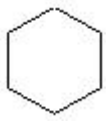
(g) $CH_3-(CH_2)_3-CHCl-CH_3$ 1(g) _____

(h) 

1(h) _____

(i) 

1(i) _____

(j)  1(j) _____

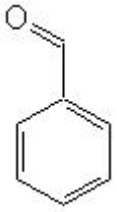
2. Give the IUPAC name of the following molecules

(a)

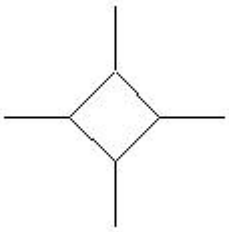
(b)

(c)

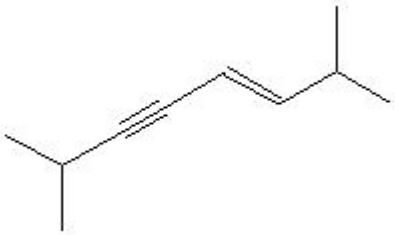
(d)



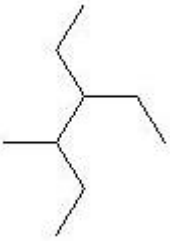
(e)



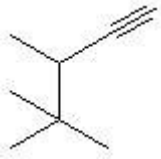
(f)



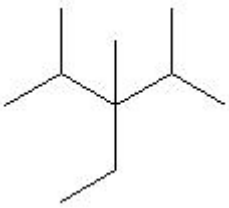
(g)



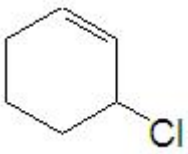
(h)



(i)

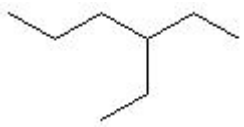


(j)

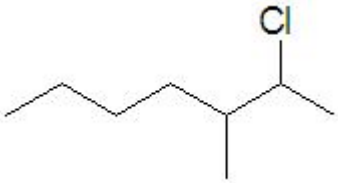


3. Give the IUPAC name of the following molecules

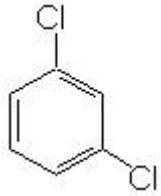
(a)



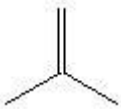
(b)



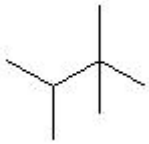
(c)



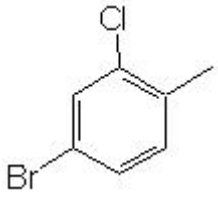
(d)



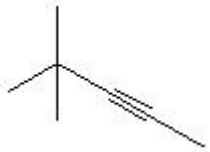
(e)



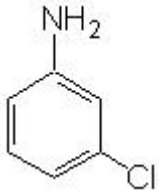
(f)



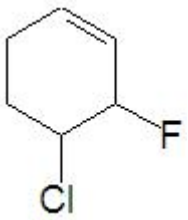
(g)



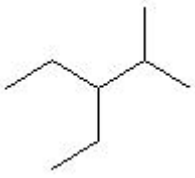
(h)



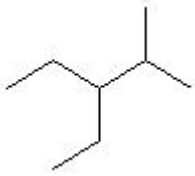
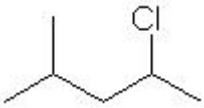
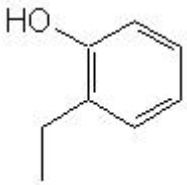
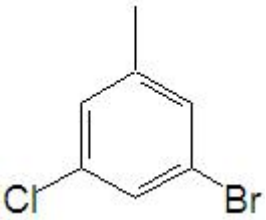
(i)



(j)



4. Give the IUPAC name of the following molecules

(k) 	(l) 
(m) 	(n) 
(o) 	Freebie!

5. Draw **AND** name the 8 isomers of pentene.

6. Draw the following organic molecules:
   (a) cis-2-hexene

   (b) m-chloroaniline

   (c) 4-octene-2-yne

   (d) 3-methylcylopentene

   (e) Benzoic Acid

   (f) 2-chloro-3-ethyl-4,5-dimethylnonane

   (g) 2-chloro-3-phenylheptane

   (h) Toluene

   (i) 3-Ethyl-2,2-dimethylpentane

   (j) 1,2,4-trichlorobenzene

7. Draw the following organic molecules:
   (a) trans-3-heptene

   (b) 2-phenylpentane

   (c) benzoic acid

   (d) cis-2-methyl-3-hexene

   (e) 2,3-dichloro-3,4,5-trifluorononane

   (f) 3-methylcyclopentene

   (g) p-bromochlorobenzene

   (h) 2,4-octadiene

   (i) 2,2-dimethyl-3-ethylhexane

(j) 3-hexyne

8. Draw the following organic molecules:

(a) cis-2-pentene

(b) trans-2-methyl-3-hexene

(c) m-bromochlorobenzene

(d) 2,4-dichlorobenzoic acid

(e) 4-fluorocyclohexene

(f) 2-chloro-3-ethylpentane

(g) 3-butyl-3-butene-1-yne

(h) 3-methyl-4-phenyl-2-hexene

(i) 1,2,4-trichlorobenzene

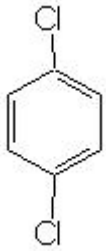
(j) nitrobenzene

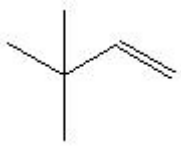
9. Complete the following reactions in the format given. If more then one organic product can be made, include only the major one. Be sure to balance any combustion reactions.

(a)  + HBr $\longrightarrow$

(b)  + $O_2 \longrightarrow$

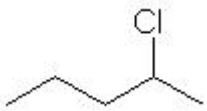
(c)  + HF $\longrightarrow$

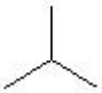
(d)  + $Br_2 \longrightarrow$

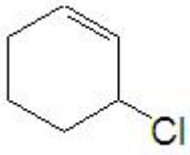
(e)  $+KMnO_4 + H_2O \longrightarrow$

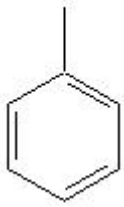
10. Complete the following reactions in the format given. If more then one organic product can be made, include only the major one. Be sure to balance any combustion reactions.

(a)  $\xrightarrow[\Delta]{500\,K}$

(b)  +  $\xrightarrow{AlCl_3}$

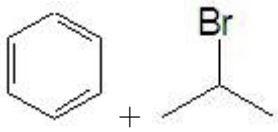
(c)  + $Cl_2 \longrightarrow$

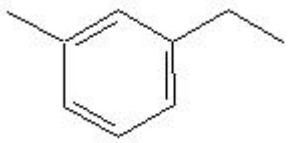
(d)  + $Cl_2 \longrightarrow$

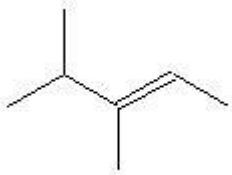
(e)  $\xrightarrow{[O]}$

Complete the following reactions in the format given.

(a)  $+ \ HCl \longrightarrow$

(b)  $\longrightarrow$

(c)  $\xrightarrow[H_2SO_4]{K_2Cr_2O_7}$

(d)  $+ \ F_2 \longrightarrow$

(e)  $+ \ KMnO_4 + H_2O \longrightarrow$