

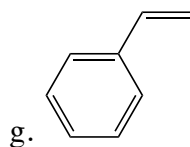
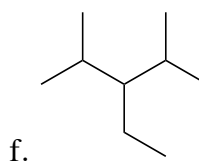
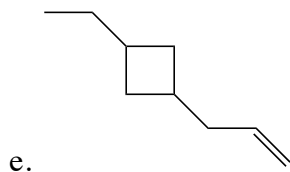
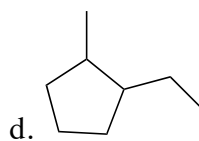
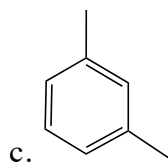
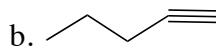
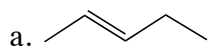
CHEMISTRY 104 – Practice Sheet #1
Identifying Organic Functional Groups; Naming Organic Molecules

Functional groups: Alkane, alkene, alkyne, cyclic, and aromatic.

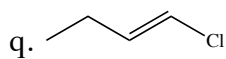
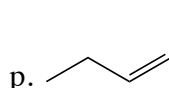
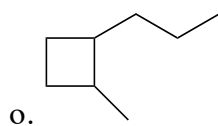
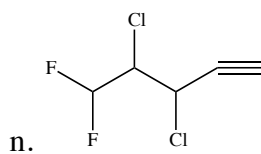
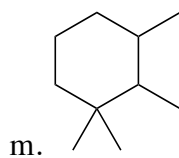
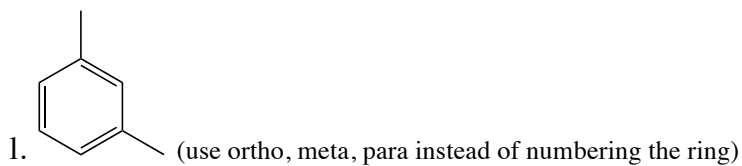
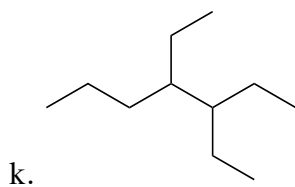
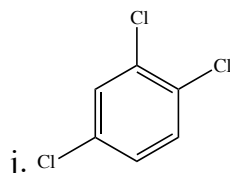
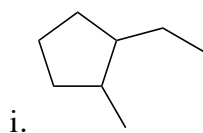
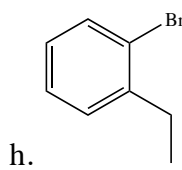
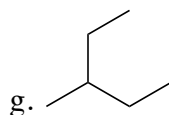
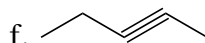
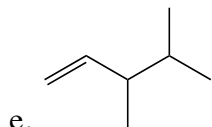
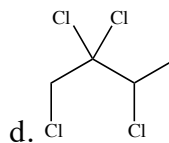
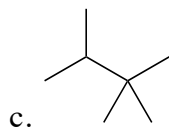
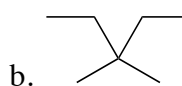
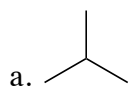
Prepared by Dr. Tony Jacob

<http://www.chem.wisc.edu/areas/clc> (Resource page)

1. For each molecule circle and name the functional group. Some molecules will have more than one functional group; in those cases circle and name all functional groups present.



2. Write the names for the chemicals shown below.



3. Draw the organic structures using line notation given the names below.

a. 2-methylbutane

b. 3,3-dichloro-2,2-dimethylhexane

c. 2,3-dibromopentane

d. 3-chloro-2-methyl-1-butene

e. 3-bromo-1-butyne

f. 1-ethylcyclopropane

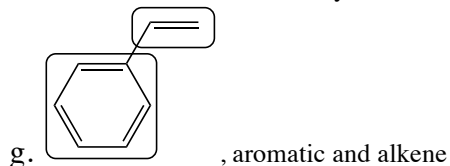
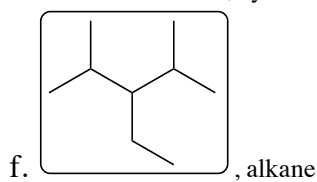
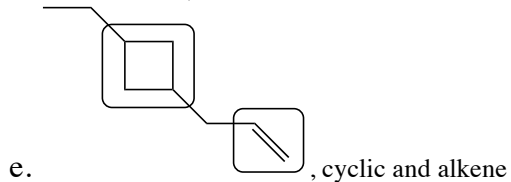
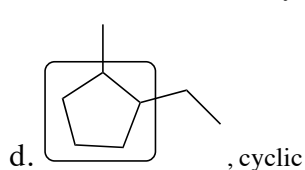
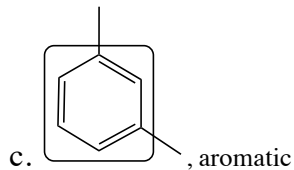
g. 1,3-diethylbenzene

h. 3,4-dibromo-2-methyl-2-pentene

i. 1,4,4-trimethylcyclohexane

j. para-dichlorobenzene

ANSWERS



2. a. 2-methylpropane

b. 3,3-dimethylpentane

c. 2,3,3-trimethylbutane

d. 1,2,2,3-tetrachlorobutane

e. 3,4-dimethyl-1-pentene

f. 2-pentyne

g. 3-methylpentane

h. 1-bromo-2-ethylbenzene

i. 1-ethyl-2-methylcyclopentane

j. 1,2,4-trichlorobenzene

k. 3,4-diethylheptane

l. meta-dimethylbenzene (1,3-dimethylbenzene)

m. 1,1,2,3-tetramethylcyclohexane

n. 3,4-dichloro-5,5-difluoro-1-pentyne

o. 1-methyl-2-propylcyclobutane

p. *cis*-2-pentene (*cis* is explained on Help Sheet #3)

q. *trans*-1-chloro-1-butene (*trans* is explained on Help Sheet #3)

