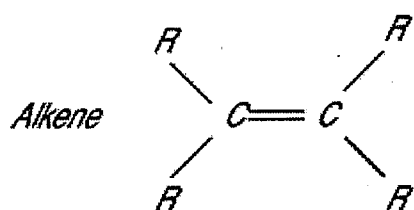
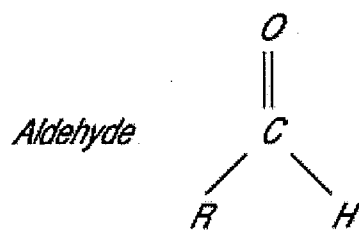
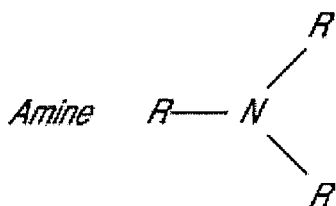
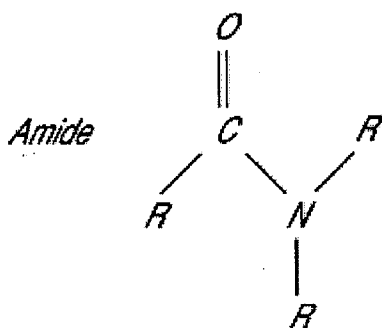


IDENTIFYING ORGANIC FUNCTIONAL GROUPS

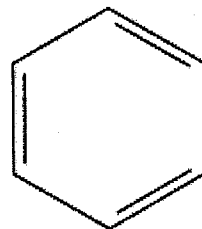
Alcohol $R-OH$



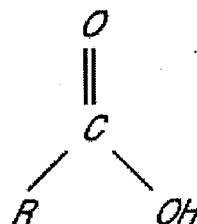
Alkyne $R-C\equiv C-R$



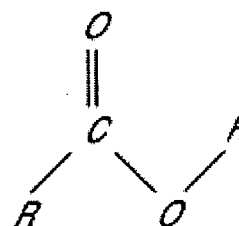
Aromatic



Carboxylic acid

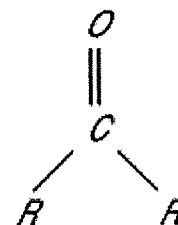


Ester



Ether $R-O-R$

Ketone



Nitrile $R-C\equiv N$

Thiol $R-SH$

Alkanes

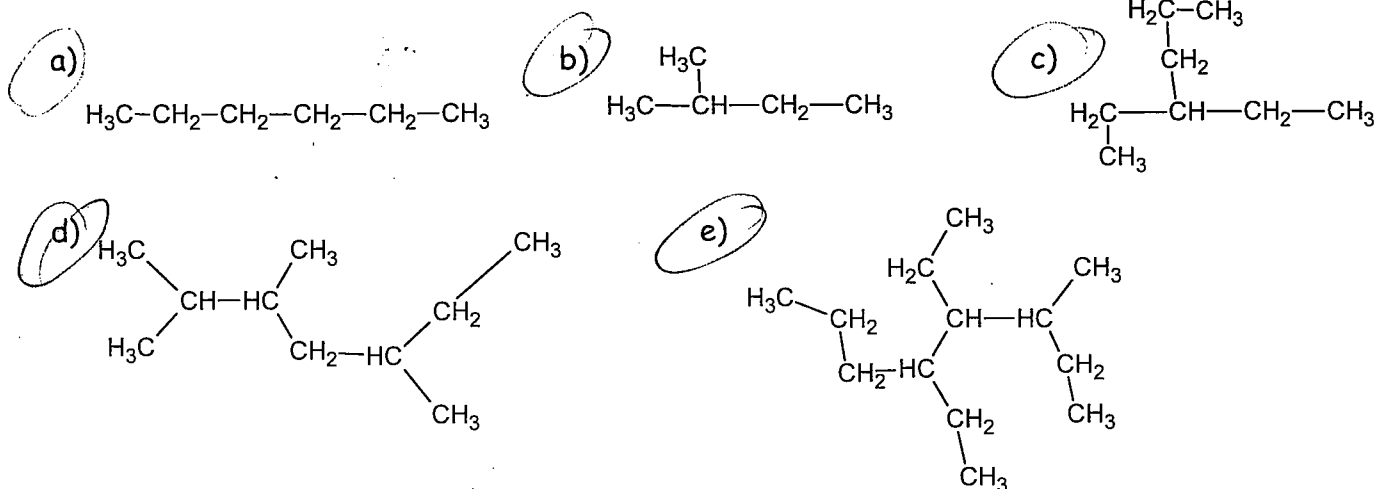
Alkanes are aliphatic hydrocarbons that only contain single bonds. Since each carbon is bonded to the maximum possible number of atoms, alkanes are described as being saturated compounds. Alkanes vary by the repeated unit CH_2 , and have the general formula $\text{C}_n\text{H}_{2n+2}$

Naming Alkanes

Scientists use the "Prefix + Root + Suffix" method for naming all organic chemicals. The root describes how many carbons are in your main chain or backbone. The suffix indicates what organic family the molecule is in. The prefix describes the type, number and location of any branches. The naming rules for organics use alkanes as the base molecule then add special rules for other families. Use the following steps to name an alkane:

1. Find the main chain (longest consecutive chain of C's). Use the appropriate organic prefix for your root name (1 = meth, 2 = eth, 3 = prop, 4 = but, 5 = pent, 6 = hex, 7 = hept, 8 = oct, 9 = non, 10 = dec).
2. Determine your suffix based on family. Alkane = suffix "ane"
3. Number the main chain. Start at the end that gives branches the lowest numbers.
4. Write the prefix by naming each branch as an alkyl group (organic prefix for # of carbons than "yl"), and placing a position number in front. If there is more than one type of branch, write them in alpha order. If there is multiple of the same type of branch, use a molecular prefix. Always put commas between numbers, and hyphens between numbers and letters.

Examples:



Drawing Structural Diagrams from Names

1. Draw the main chain horizontal across page.
3. Add branches on appropriate carbons.
4. Add enough hydrogens so each carbon has four bonds.

Ex 1. 3-ethyl-3,4-dimethylhexane

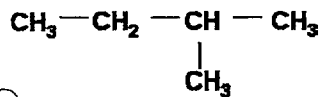
Ex 2. 3-ethyl-5-propyldecane

Properties of Alkanes

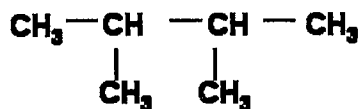
Property	Description
Melting Point	
Solubility in Water	
Other:	Mainly used as a fuel source. They undergo combustion reactions which release large amounts of energy.

Alkanes Worksheet

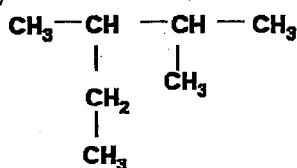
1. Name the following molecules:



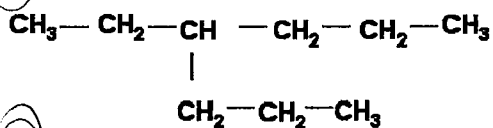
a) _____



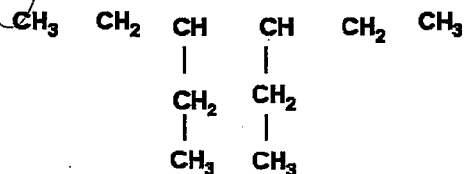
b) _____



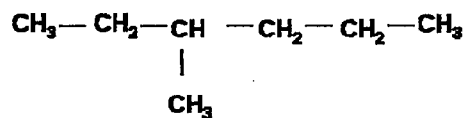
c) _____



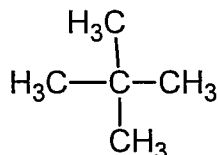
d) _____



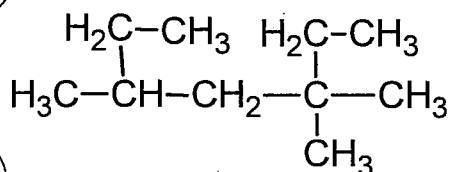
e) _____



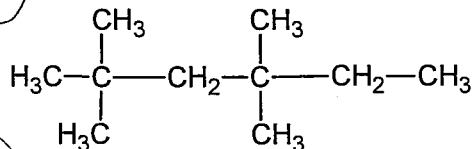
f) _____



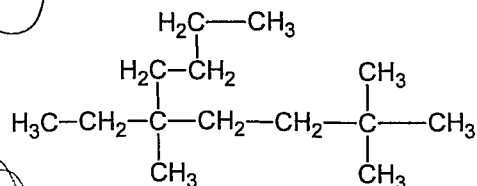
g) _____



h) _____



i) _____



j) _____

2. Draw condensed structural diagrams showing the appropriate number of hydrogens. Then provide the expanded molecular formula for each compound.

Name

Diagram

Expanded Molecular Formula

a) 3-ethyl-3,4-dimethylhexane

Name

Diagram

Expanded Molecular Formula

b) 2,3,4-trimethylpentane

c) 5-ethyl-3,3-dimethylheptane

d) 2,3-diethyl-4-propyloctane

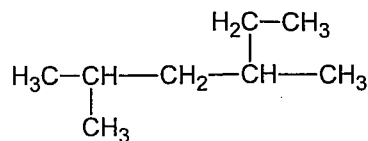
e) *trick*
3,4-diethyl-2,2-dimethyl-3-propyldecane

f) *trick*
4-butyl-6-ethyl-2,5-dimethylnonane

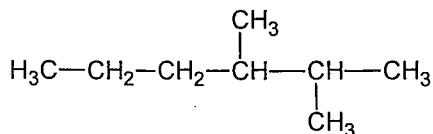
3. Identify any mistakes and correct the name

Name

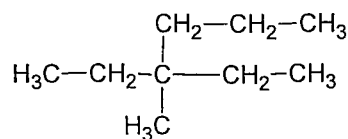
Describe Mistakes



4-ethyl-2-methylpentane



4,5-methylhexane



3-methyl-3-ethylpentane

Alkanes Worksheet

answers are online
q. on next sheet

1. Answer the following.

a. What is the general formula for an alkane? _____

b. If a saturated alkane had 15 carbon atoms in it, how many hydrogens would there be? _____

2. Draw all of the possible structure of following types of hydrocarbons using 4 carbon atoms:

a. alkane

b. cycloalkane

3. Give the molecular formula, the structural formula, the condensed structural formula, and the skeletal formula (line drawing) for pentane.

Molecular formula:	
Structural formula:	
Condensed structural formula:	
Skeletal formula (line diagram):	

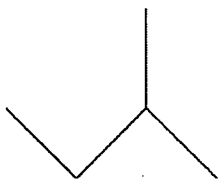
5. Give the molecular formula, the structural formula, the condensed structural formula, and the skeletal formula for 4-ethyl-2,3-dimethylheptane.

Molecular formula:	
Structural formula:	
Condensed structural formula:	
Skeletal formula (line diagram):	

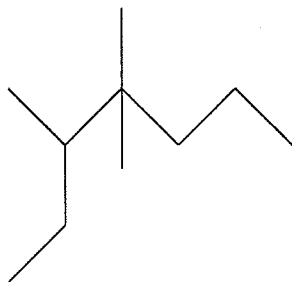
6. Give the molecular formula, the structural formula, the condensed structural formula, and the skeletal formula for 3,3-diethyloctane.

<i>Molecular formula:</i>	
<i>Structural formula:</i>	
<i>Condensed structural formula:</i>	
<i>Skeletal formula (line diagram):</i>	

7. What is the IUPAC name for the following structure?



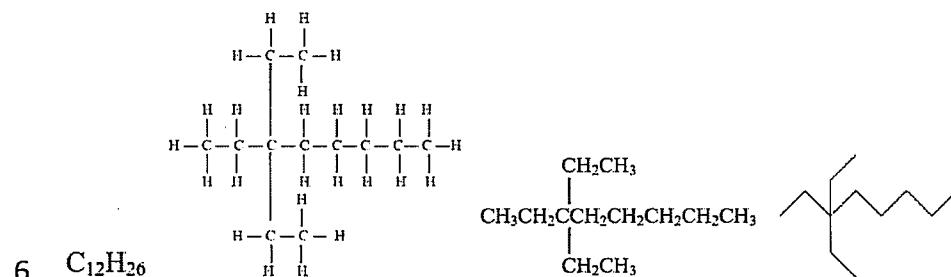
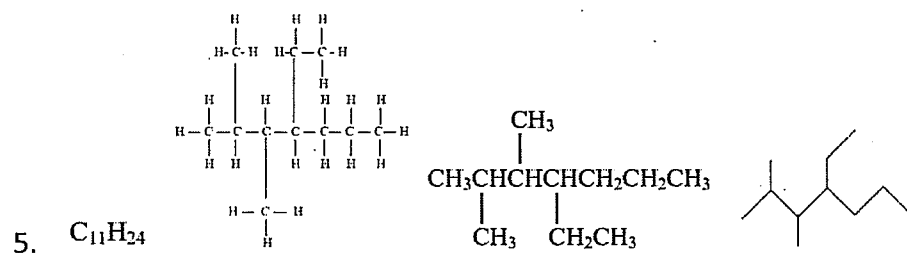
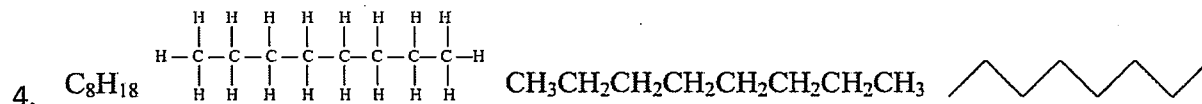
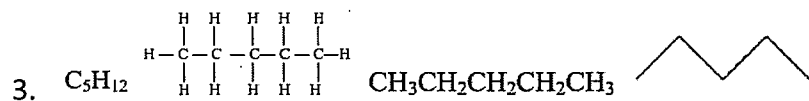
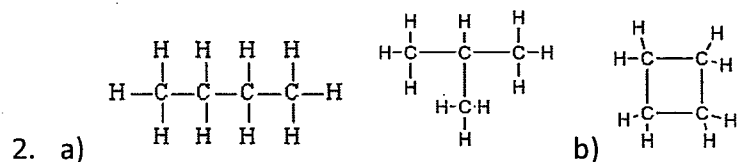
8. What is the IUPAC name for the following structure?



9. Draw and name four isomers of octane.

Solutions:

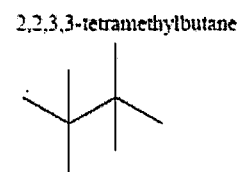
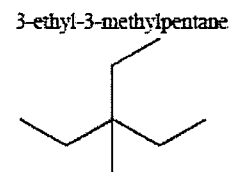
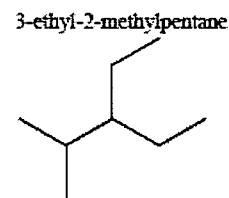
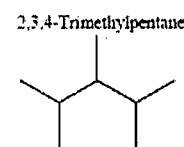
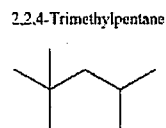
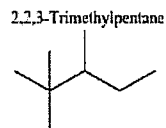
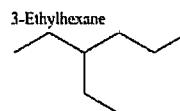
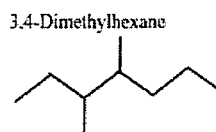
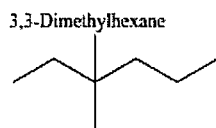
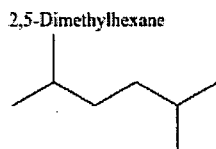
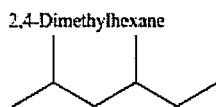
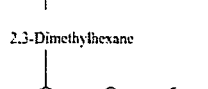
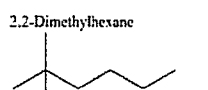
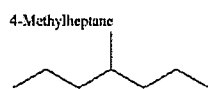
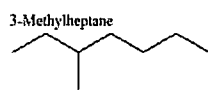
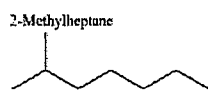
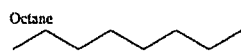
1. a) C_nH_{2n+2} b) 32



7. 2-methylbutane

8. 3,4,4-trimethylheptane

9. *extra credit on test*



More practice

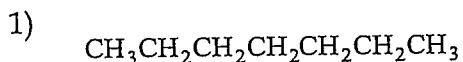
Alkane Nomenclature Worksheet
Physiological Chemistry
Spring 2005

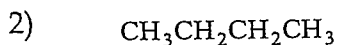
Naming Straight-Chain Alkanes

- 1) Use the appropriate prefix to indicate the number of carbon atoms.
- 2) Add the "ane" ending.

# of C atoms	Prefix
1	Meth-
2	Eth-
3	Prop-
4	But-
5	Pent-
6	Hex-
7	Hept-
8	Oct-
9	Non-
10	Dec-

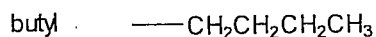
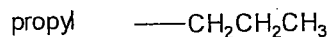
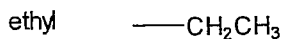
Name the following compounds:



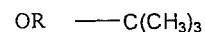
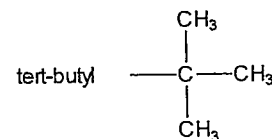
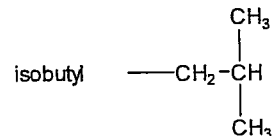
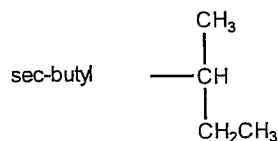
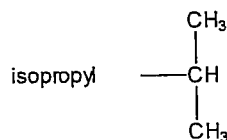


Alkyl Groups

Straight-chain alkyl groups:



Branched alkyl groups:

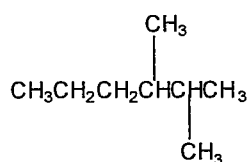


Naming Branched-Chain Alkanes

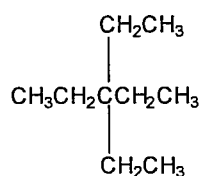
- 1) Find the parent hydrocarbon chain.
- 2) Number the atoms in the main chain.
 - Choose the numbering scheme that gives the lowest numbered positions for substituents
- 3) Identify and number the substituents.
- 4) Write the name as a single word.
 - Use prefixes to indicate 2 or more of the same substituent
 - List substituents in alphabetical order
 - Separate substituents with dashes

Name the following compounds:

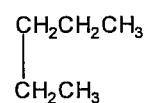
1)



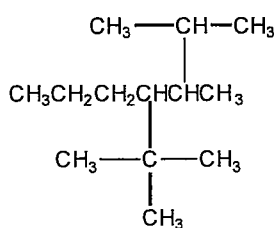
2)



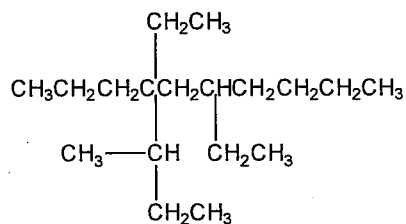
3)



4)



5)



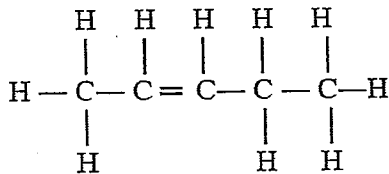
Draw the structures of the following compounds:

- 1) 2-methylheptane
- 2) 4-ethyl-3,4-dimethyloctane
- 3) 4-isopropyl-3-methylheptane

Don't do cis/trans

Naming and Drawing Alkenes Worksheet and Key

1) Draw and name the *cis* and *trans* condensed structure of:

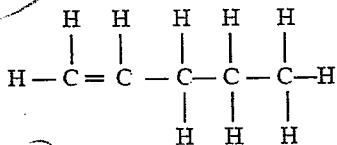


2-penten

<i>cis</i> condensed structure:	<i>trans</i> condensed structure:
name:	name:

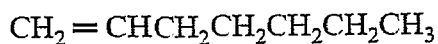
2. Name the following alkenes (include *cis*- or *trans*- for the alkenes that when appropriate)

a)



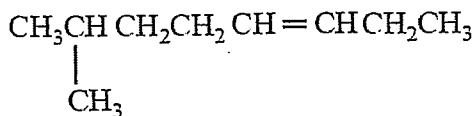
Name: _____

b)



Name: _____

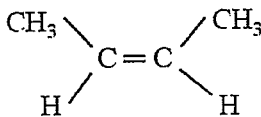
c)



Name: _____

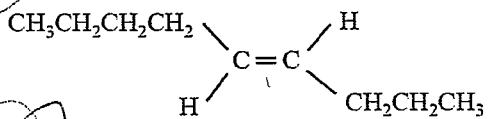
Be careful to correctly identify carbon #1.....

d)



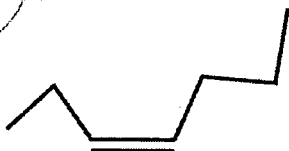
Name: _____

e)



Name: _____

f)



Name: _____

3. Draw the line bond, condensed, and skeletal structure of the following alkenes.

a) 1-hexene

line-bond structure	condensed structure	skeletal structure

b) 2-methyl-4-isopropyl-1-nonene

line-bond structure	condensed structure	skeletal structure

c) cis-2-hexene

line-bond structure	condensed structure	skeletal structure

d) trans-2-pentene

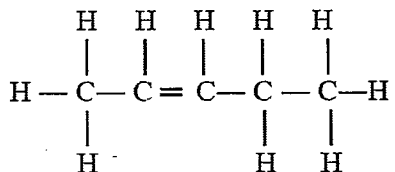
line-bond structure	condensed structure	skeletal structure

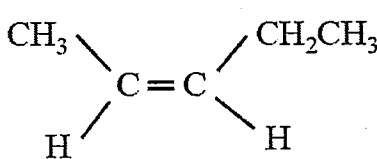
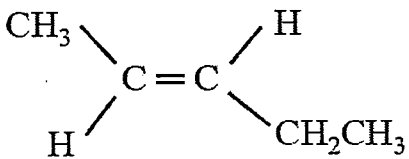
e) cis-2-methyl-3-hexene

line-bond structure	condensed structure	skeletal structure

Key

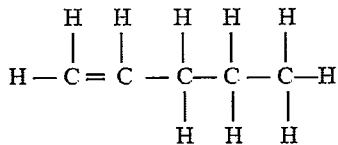
1) Draw and name the *cis* and *trans* condensed structure of:



<p><i>cis</i> condensed structure:</p> 	<p><i>trans</i> condensed structure:</p> 
name: <i>cis</i> -2-pentene	name: <i>trans</i> -2-pentene

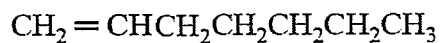
2. Name the following alkenes (include *cis*- or *trans*- for the alkenes that when appropriate)

a)



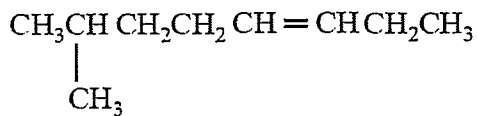
Name: 1-pentene

b)



Name: 1-heptene

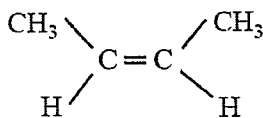
c)



Name: 7-methyl-3-octene

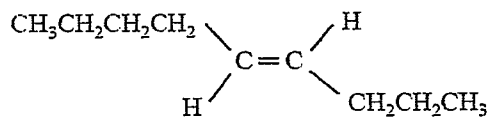
Note: Carbon #1 is the carbon nearest to the double bond

d)

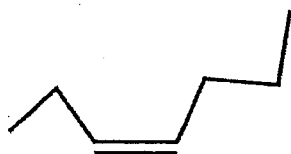


Name: *cis*-2-butene

e)

Name: trans-4-nonene

f)

Name: cis-3-heptene

3. Draw the line bond, condensed, and skeletal structure of the following alkenes.

a) 1-hexene

line-bond structure	condensed structure	skeletal structure
$\begin{array}{cccccccc} & \text{H} & \text{H} & \text{H} & \text{H} & \text{H} & \text{H} & \\ & & & & & & & \\ \text{H} - & \text{C} = & \text{C} - & \text{C} - & \text{C} - & \text{C} - & \text{C} - & \text{H} \\ & & & & & & & \\ & & & \text{H} & \text{H} & \text{H} & \text{H} & \end{array}$	$\text{CH}_2 = \text{CHCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$	

b) 2-methyl-4-isopropyl-1-nonene

line-bond structure	condensed structure	skeletal structure
$\begin{array}{ccccccccccc} & & & \text{H} & & & & & & & \\ & & & & & & & & & & \\ & \text{H} & & \text{C} & - & \text{H} & & & & & \\ & & & & & & \text{H} & \text{H} & \text{H} & \text{H} & \text{H} \\ \text{H} - & \text{C} = & \text{C} - & \text{C} - & \text{C} - & \text{C} - & \text{C} - & \text{C} - & \text{C} - & \text{H} \\ & & & & & & & & & \\ & & & \text{H} & & & \text{H} & \text{H} & \text{H} & \text{H} & \\ & & & & & & & & & & \\ & & & \text{H} & & & \text{H} & & & & \\ & & & & & & & & & & \\ & & & \text{H} - & \text{C} - & \text{C} - & \text{C} - & \text{H} \\ & & & & & & & \\ & & & \text{H} & \text{H} & \text{H} & & \end{array}$	$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_2 = \text{CCH}_2\text{CHCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3 \\ \\ \text{CH}_3\text{CHCH}_3 \end{array}$	<p>Note: There are several correct ways to draw many of these skeletal structures.</p>

c) *cis*-2-hexene

line-bond structure	condensed structure	skeletal structure
$ \begin{array}{cccccc} & \text{H} & \text{H} & \text{H} & \text{H} & \text{H} & \text{H} \\ & & & & & & \\ \text{H} & -\text{C} & -\text{C} & =\text{C} & -\text{C} & -\text{C} & -\text{C}-\text{H} \\ & & & & & & \\ & \text{H} & & & \text{H} & \text{H} & \text{H} \end{array} $ <p>Note: <i>cis/trans</i> is not displayed in line-bond structures (only displayed in condensed and skeletal structures).</p>	$ \begin{array}{c} \text{CH}_3 \quad \quad \text{CH}_2\text{CH}_2\text{CH}_3 \\ \quad \quad \diagdown \quad \diagup \\ \quad \quad \text{C}=\text{C} \\ \quad \quad \diagup \quad \diagdown \\ \text{H} \quad \quad \quad \text{H} \end{array} $	

d) *trans*-2-pentene

line-bond structure	condensed structure	skeletal structure
$ \begin{array}{cccccc} & \text{H} & \text{H} & \text{H} & \text{H} & \text{H} \\ & & & & & \\ \text{H} & -\text{C} & -\text{C} & =\text{C} & -\text{C} & -\text{C}-\text{H} \\ & & & & & \\ & \text{H} & & & \text{H} & \text{H} \end{array} $ <p>Note: <i>cis/trans</i> is not displayed in line-bond structures (only displayed in condensed and skeletal structures).</p>	$ \begin{array}{c} \text{CH}_3 \quad \quad \text{H} \\ \quad \quad \diagdown \quad \diagup \\ \quad \quad \text{C}=\text{C} \\ \quad \quad \diagup \quad \diagdown \\ \text{H} \quad \quad \quad \text{CH}_2\text{CH}_3 \end{array} $	

e) *cis*-2-methyl-3-hexene

line-bond structure	condensed structure	skeletal structure
$ \begin{array}{cccccc} & & \text{H} & & & & \\ & & & & & & \\ & \text{H} & -\text{C} & -\text{H} & & & \\ & & & & \text{H} & \text{H} & \text{H} & \text{H} \\ & & & & & & & \\ \text{H} & -\text{C} & -\text{C} & -\text{C} & =\text{C} & -\text{C} & -\text{C} & -\text{H} \\ & & & & & & & \\ & \text{H} & \text{H} & & & \text{H} & \text{H} & \end{array} $	$ \begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH} \quad \quad \text{CH}_2\text{CH}_3 \\ \quad \quad \diagdown \quad \diagup \\ \quad \quad \text{C}=\text{C} \\ \quad \quad \diagup \quad \diagdown \\ \text{H} \quad \quad \quad \text{H} \end{array} $	

Review of Hydrocarbons: Naming Aliphatic and Aromatic Hydrocarbons

1. For each of the following IUPAC names, draw a structural diagram.

(a) 2-methylpentane

(b) octane

(c) 2,2,3-trimethylpentane

(d) ethene

(e) propyne

(f) methylpropyne

(g) cyclohexane

(h) 1,2-dimethylbenzene

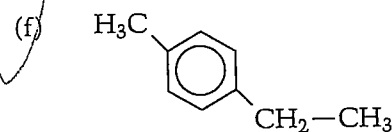
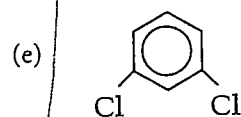
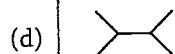
(i) ethylbenzene

2. For each of the following structural diagrams, write the IUPAC name.

(a) $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{CH}=\text{CH}_2$

(b) $\text{CH}_3-\text{CH}=\text{C}(\text{CH}_3)-\text{C}(\text{CH}_3)_2-\text{CH}_3$

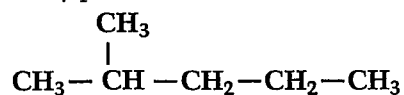
(c) $\text{CH}_3-\text{C}\equiv\text{C}-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2-\text{CH}$



Review of Hydrocarbons: Naming Aliphatic and Aromatic Hydrocarbons, Solution

1. For each of the following IUPAC names draw a structural diagram.

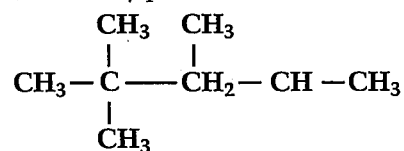
(a) 2-methylpentane



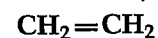
(b) octane



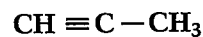
(c) 2,2,3-trimethylpentane



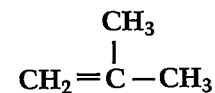
(d) ethene (ethylene)



(e) propyne



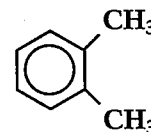
(f) methylpropene



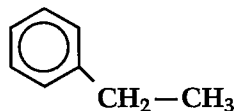
(g) cyclohexane



(h) 1,2-dimethylbenzene



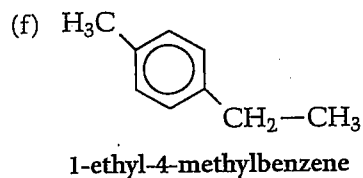
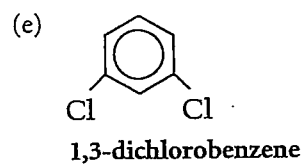
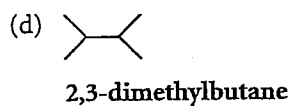
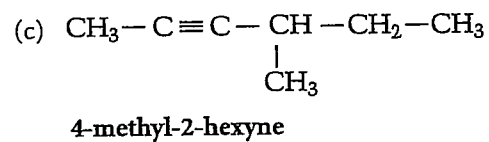
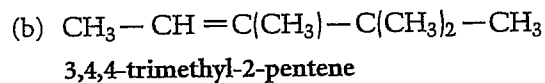
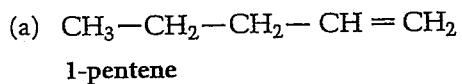
(i) ethylbenzene

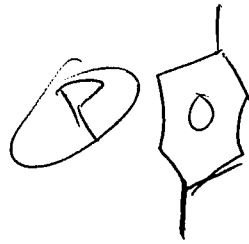
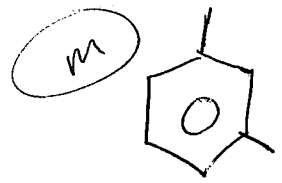
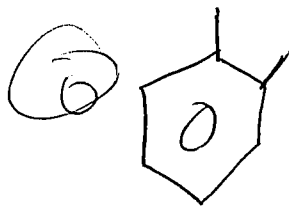


(continued)

LSM 1.2-3

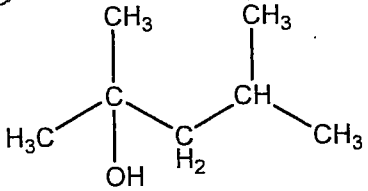
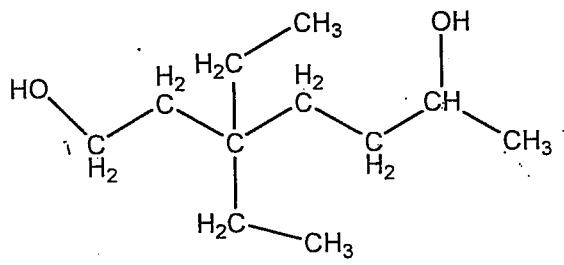
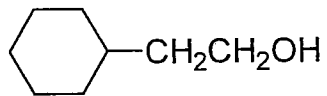
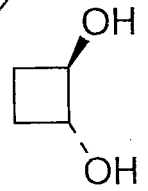
2. For each of the following structural diagrams, write the IUPAC name.



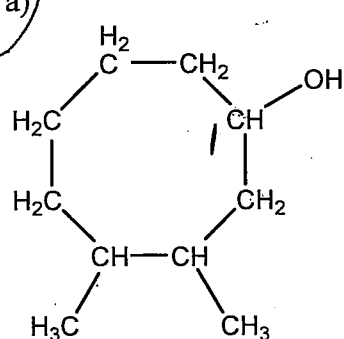
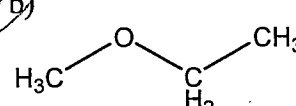
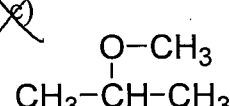
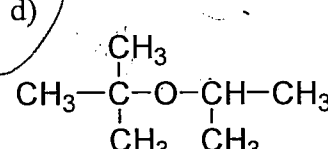
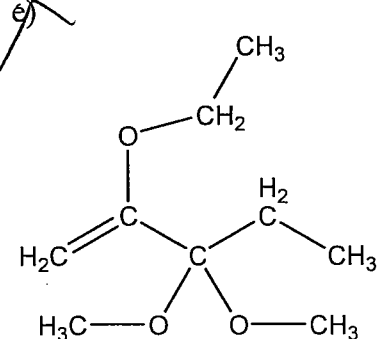


Alcohols, Phenols, Ethers, Thiols Worksheet Key

1. Name the following compounds:

<p>a)</p> $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\overset{\text{CH}_3}{\text{C}}\text{HOH}$	<p>2-octanol</p>
<p>b)</p> 	<p>2,4-Dimethyl-2 – pentanol</p>
<p>c)</p> 	<p>3,3-Diethyl-1,6-heptandiol</p>
<p>d)</p> 	<p>2-cyclohexylethanol</p>
<p>e)</p> 	<p>cis-1,2-cyclobutandiol</p>

2. Name the following compounds:

<p>a)</p> 	<p>3,4 2,3-dimethylcyclooctanol</p>
<p>b)</p> 	<p>Ethyl Methyl Ether</p>
<p>c)</p> 	<p>2-methoxypropane</p>
<p>d)</p> 	<p>tert-butyl isopropyl ether</p>
<p>e)</p> 	<p>2-Ethoxy-3,3-dimethoxy-1-pentene</p>
<p>f)</p>	

NAMING AND DRAWING FUNCTIONAL GROUPS PRACTICE WORKSHEET
Organic Chemistry Worksheet – Organic Functional Group Nomenclature



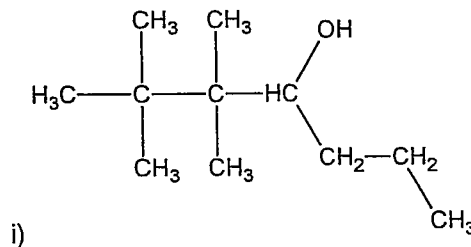
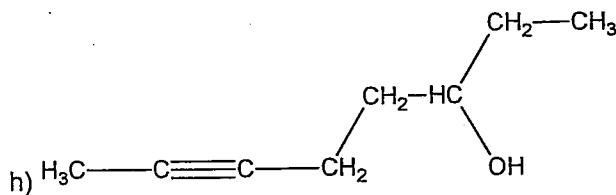
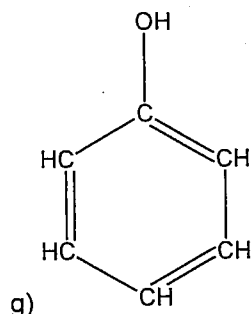
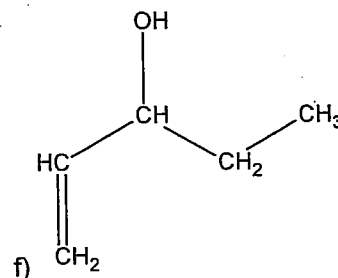
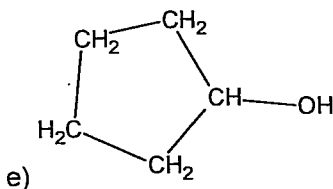
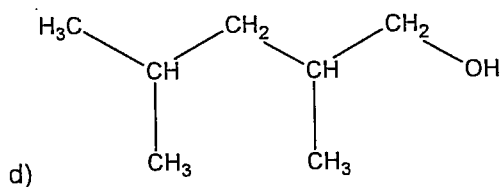
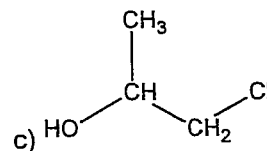
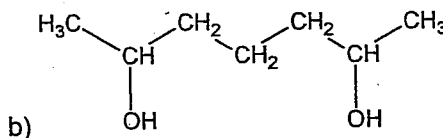
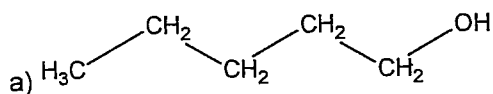
1. Draw the following alcohols

- a) heptan-2-ol
 b) 3-methylhexan-1-ol
 c) cyclopropanol

- d) 2,4,6-trichlorooctan-2-ol
 e) pentan-1,4-diol
 f) benzene-1,3-diol

- g) but-2-ene-1-ol
 h) 4-methylpent-2-yne-1-ol
 i) 3,4-dimethylcycloheptan-1-ol

2. Name the following alcohols



3. Explain why the propane that is used as a fuel in a BBQ is gas at room temperature, but 2-propanol used as rubbing alcohol is a liquid at room temperature.

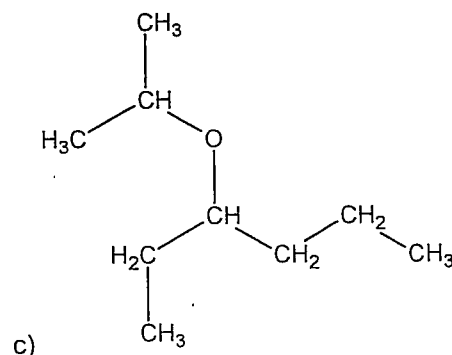
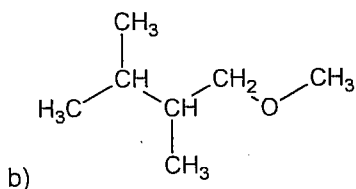
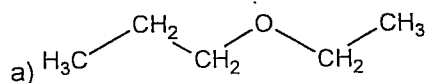
4. Draw the following ethers

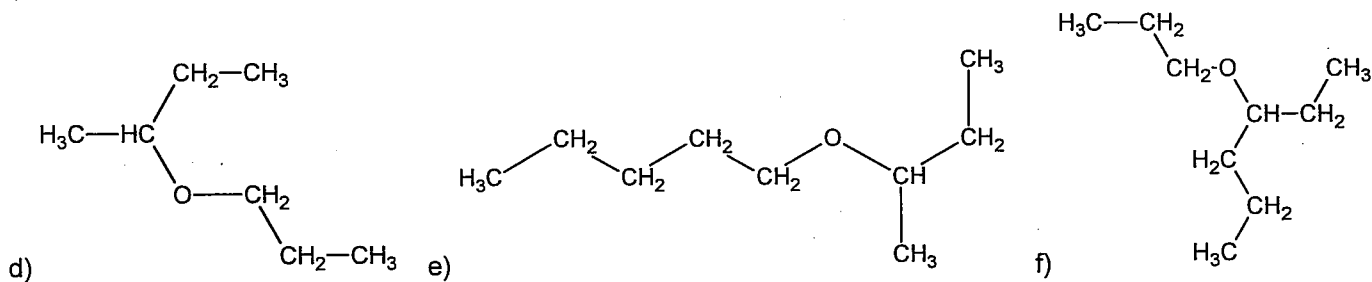
- a) 1-propoxypentane
 b) 2-ethoxybutane

- c) 1-methoxy-4-chlorohexane
 d) 3-butoxy-2,4-dimethyloctane

- e) 2-propoxy-4-phenylheptane
 f) 1-ethoxycyclopentane

5. Name the following ethers

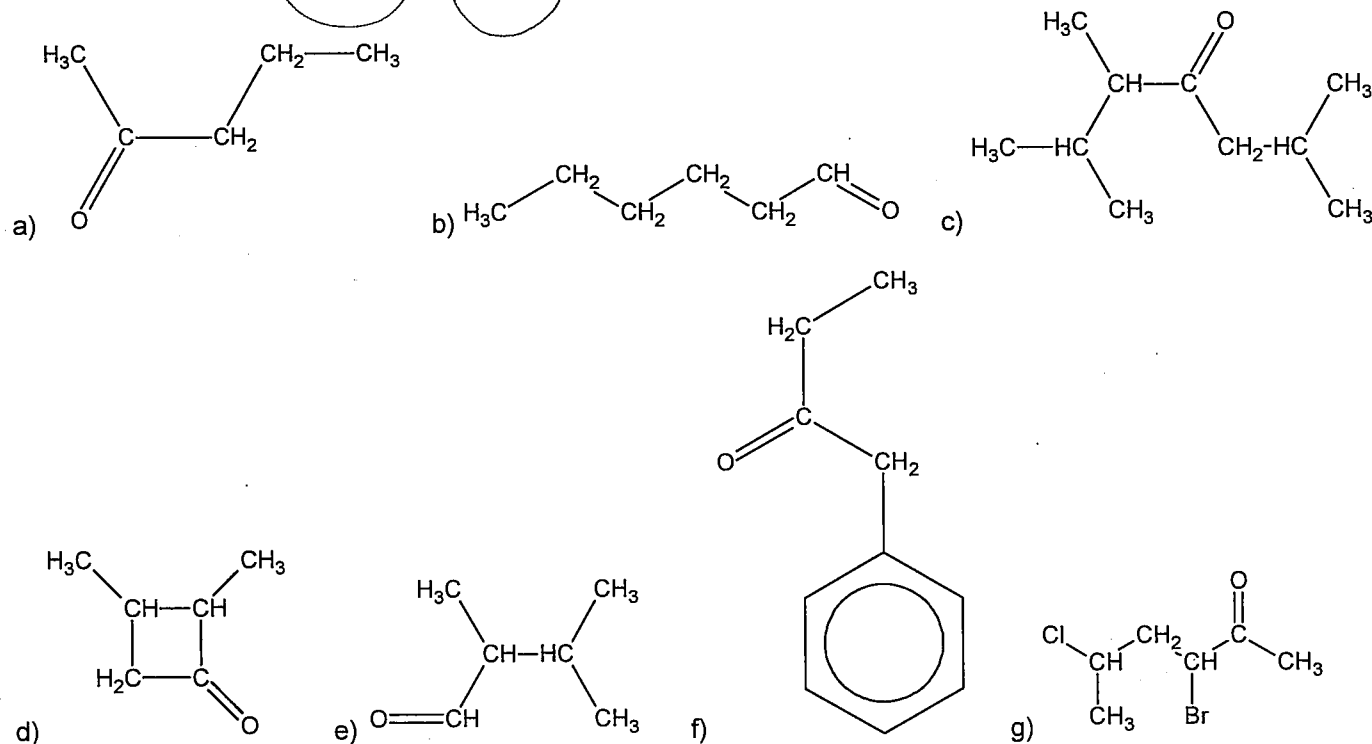




7. Draw the following aldehydes and ketones

- a) hexanal
 b) heptan-3-one
 c) 3-methyloctanal
 d) 2,2-dimethylhexan-3-one
 e) 2,4,6-trichloroheptanal
 f) 4-phenyloctan-2-one
 g) 2-methylcyclohexanone
 h) 4-hydroxyhexanal
 i) penta-1,4-dione

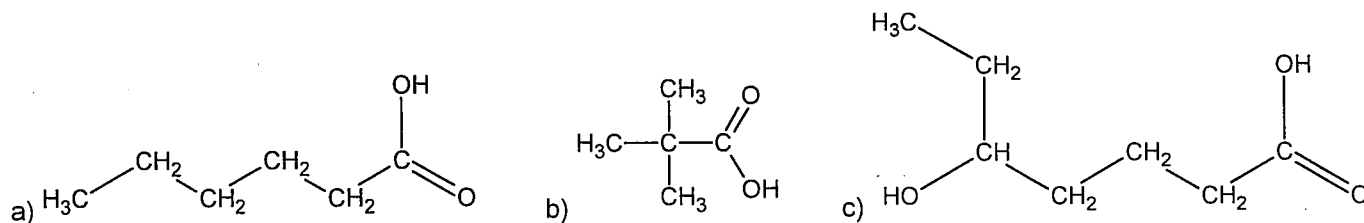
8. Name the following aldehydes and ketones

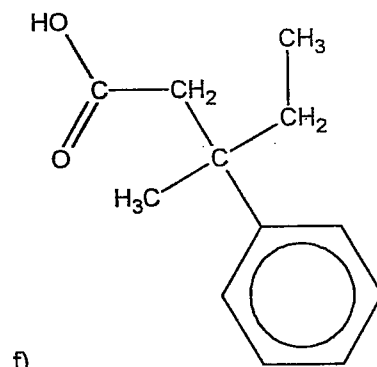
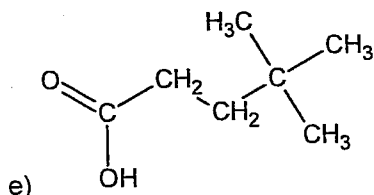
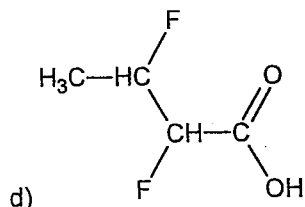


11. Draw the following carboxylic acids

- a) butanoic acid
 b) 2-methylpentanoic acid
 c) 3,5-dimethylheptanoic acid
 d) 5-hydroxyhexanoic acid
 e) 2,3,4-trichlorobutanoic acid
 f) 2-bromoethanoic acid

12. Name the following carboxylic acids





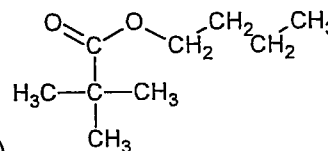
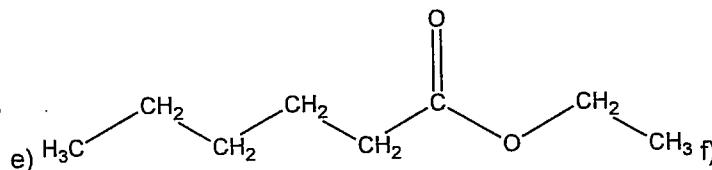
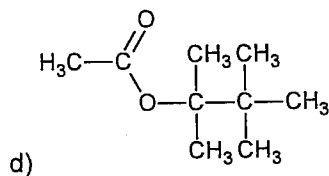
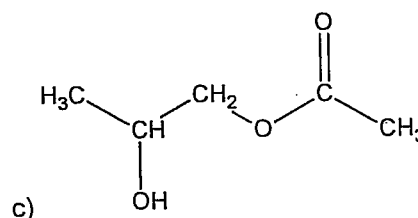
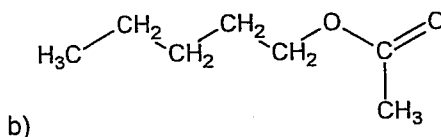
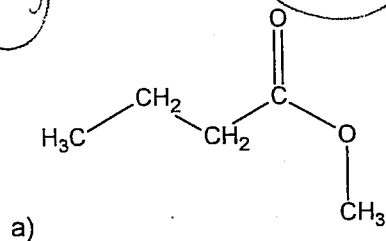
14. Draw the following esters.

- a) ethyl butanoate
b) pentyl propanoate

- c) propyl 3-ethylhexanoate
d) methyl 4-phenylpentanoate

- e) 2,3-dimethylpentyl ethanoate
f) butyl 3-hydroxyheptanoate

15. Name the following esters.



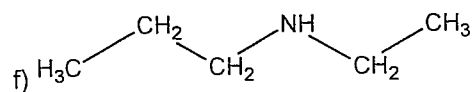
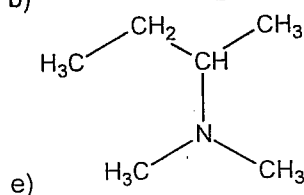
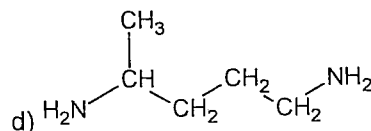
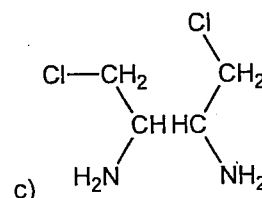
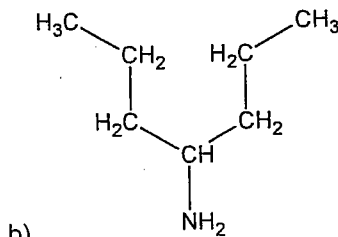
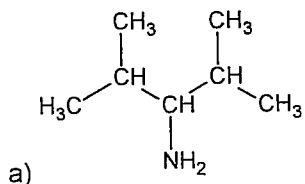
17. Describe the steps used to name an ester.

18. Draw the following amines

- a) butan-1-amine
b) pentan-2-amine
c) propan-1,2-diamine

- d) N-ethyl-hexan-2-amine
e) N,N-dimethyl-pentan-3-amine
f) N-methyl-N-propyl-ethanamine

19. Name the following amines

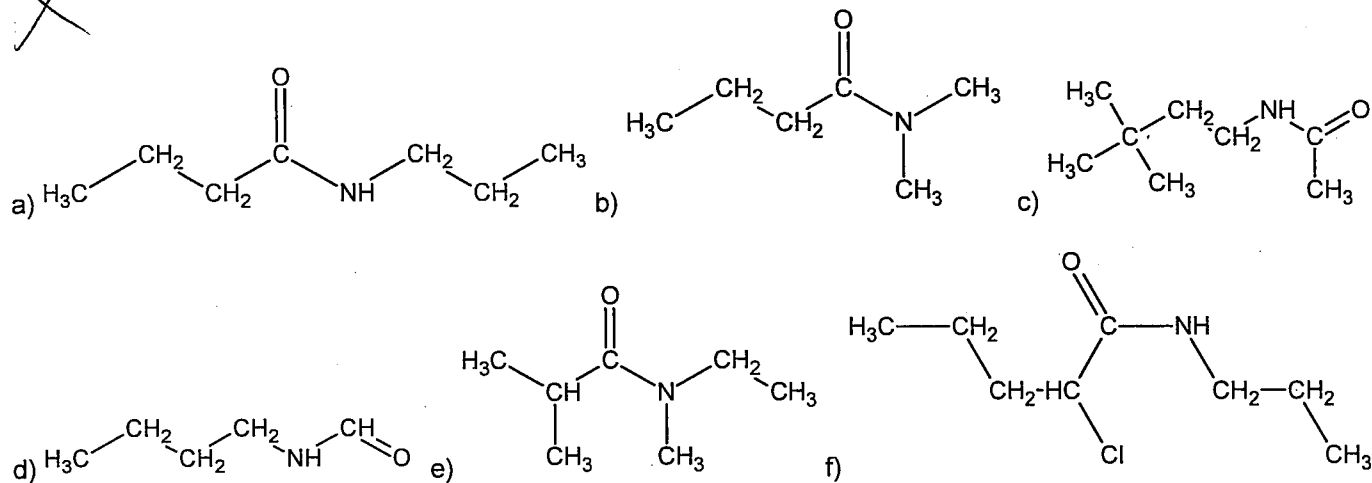


23. Draw the following amides

- a) N-ethylbutanamide
- b) N-propylpentanamide
- c) N-methyl-3-methylhexanamide

- d) N-2,3-dichlorobutylpropanamide
- e) N,N-diethyl-2-methylbutanamide
- f) N-pentyl-3-hydroxypentanamide

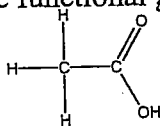
24. Name the following amides



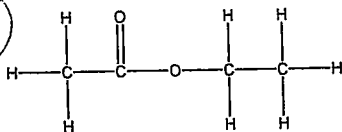
FUNCTIONAL GROUP IDENTIFICATION WORKSHEET

1. Identify the functional groups on the following organic molecules.

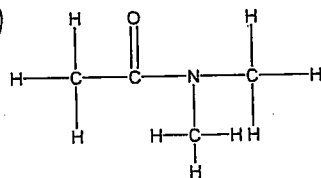
a.



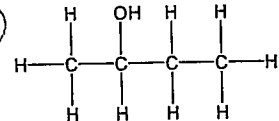
b.



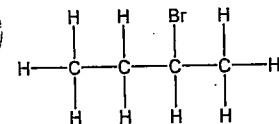
c.



d.



e.



2. Draw simple organic molecules that contain the following functional groups.

f. Cycloalkane

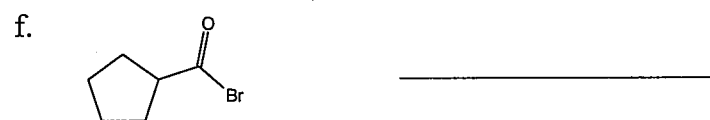
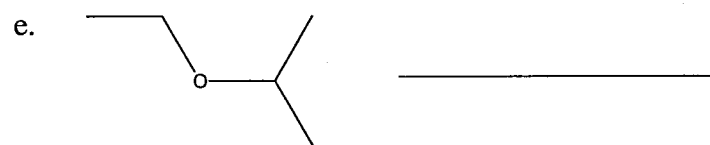
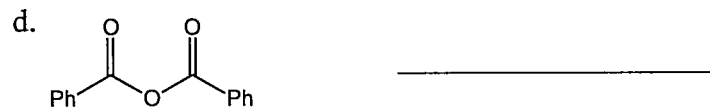
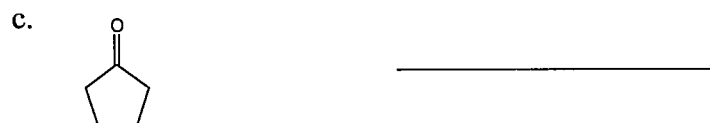
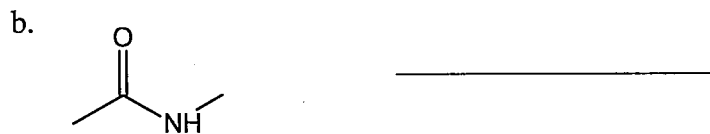
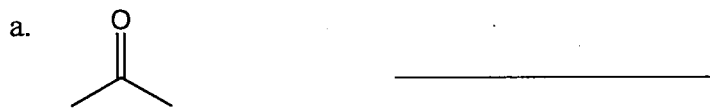
g. Amine

h. Ether

~~i. Thiol~~

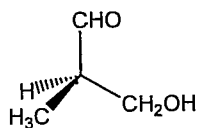
j. Aldehyde

3. Identify the functional group in each of the following molecules.



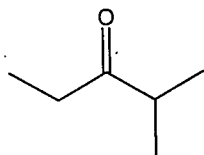
1. Name the following compounds

~~(a)~~



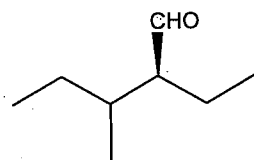
3-hydroxy-2-methylpropanal

(b)



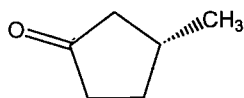
2-methyl-3-pentanone

(c)



2-ethyl-3-methylpentanal

(d)

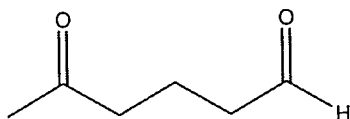


3-methylcyclopentanone

2. Draw structures for the following compounds.

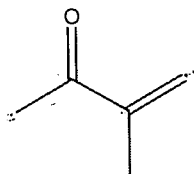
~~(a)~~

5-oxohexanal



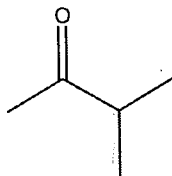
(b)

3-methyl-3-buten-2-one



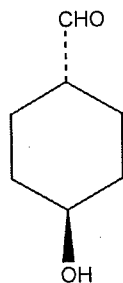
(c)

isopropyl methyl ketone



~~(d)~~

trans-4-hydroxycyclohexanecarbaldehyde

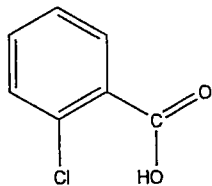


3-methylbutan-2-one
aka (MIPK)

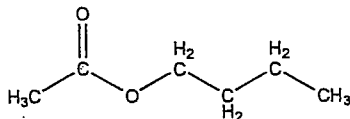
ANSWERS WORKSHEET FOR CARBOXYLIC ACIDS AND ESTER

1.

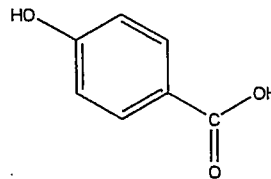
Provide the IUPAC name for each of the following compounds.



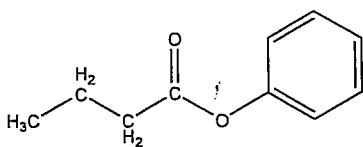
2 chloro benzoic acid



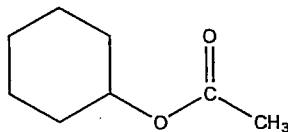
Butyl ethanoate



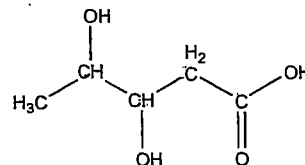
4 hydroxy benzoic acid



Phenyl butanoate



cyclohexyl ethanoate

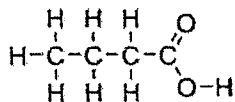
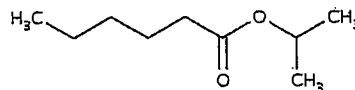


3, 4 dihydroxy pentanoic acid

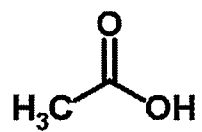
2. Write the full or condensed structural formula for each of the following compounds.

~~Butyric acid~~

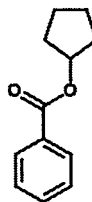
isopropyl hexanoate



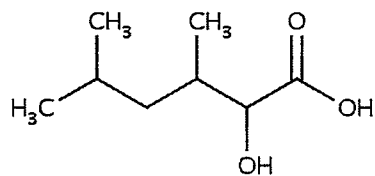
acetic acid



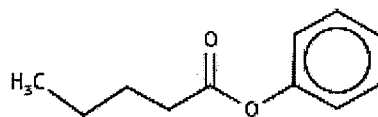
cyclopentyl benzoate



2-hydroxy-3, 5-dimethyl heptanoic acid



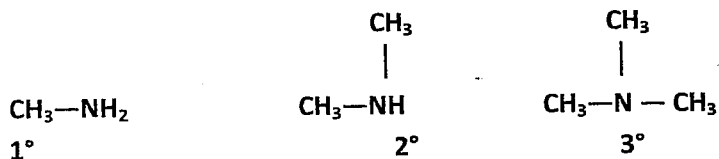
phenyl pentanoate



NAME: _____

AMINES AND AMIDES ANSWERS

- Organic compounds of nitrogen N
- Classified as primary, secondary, tertiary



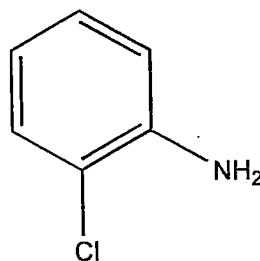
IUPAC NAMING

aminoalkane

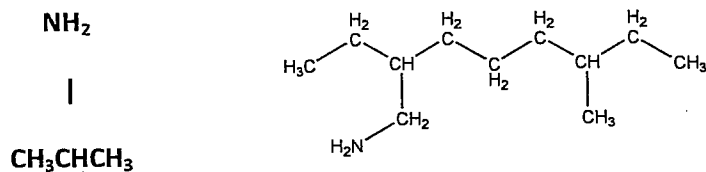
Common alkylamine

$\text{CH}_3\text{CH}_2\text{NH}_2$
aminoethane
(ethylamine)

$\text{CH}_3\text{—NH—CH}_3$
N-methylaminomethane
(dimethylamine)



chloroaniline



PRACTICE

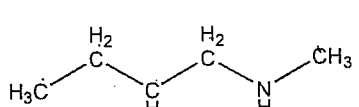
1. $\text{CH}_3\text{NHCH}_2\text{CH}_3$ — ethylmethylamine —

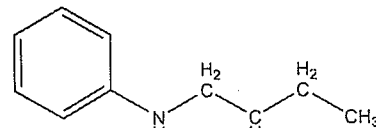
~~2.~~ CH_3
|
 $\text{CH}_3\text{CH}_2\text{NCH}_3$ — ethyl N, N dimethylamine, —

3. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{—NH}_2$ — 1-aminopentane —

Pentylamine / peltanamine

4.  — diisopropylamine —

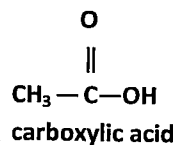
5.  — butyl methyl amine —

~~6.~~  — N-butyl aniline —

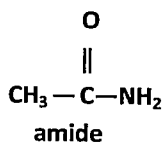
NAME: _____

~~AMIDES~~

Derivatives of carboxylic acids where an amino (-NH₂) group replaces the -OH group.



acetic acid

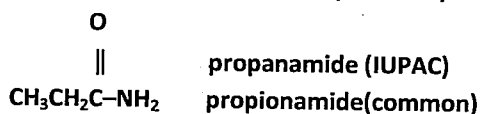
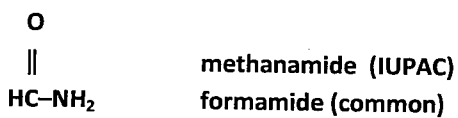


acetamide

Naming Amides

Alkanamide

from acid name



PRACTICE:

