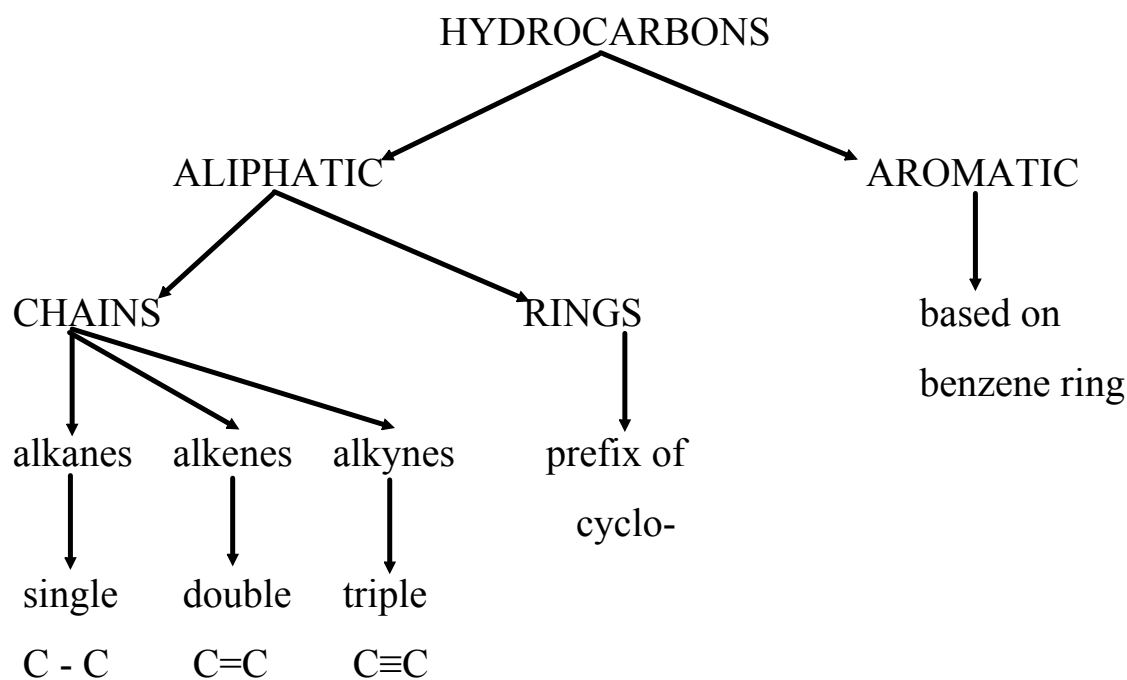


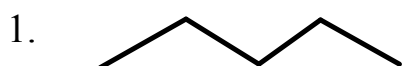
HYDROCARBONS



ROOT NAMES for ALIPHATICS:

# of C's	root
1	meth-
2	eth-
3	prop-
4	but-
5	pent-
6	hex-
7	hept-
8	oct-
9	non-
10	dec-

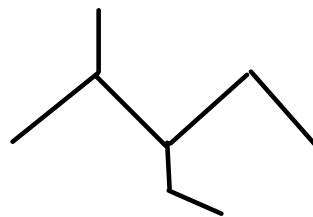
Name each molecule.



SIDE CHAINS

- substituent
- alkyl groups.

alkane → **alkyl**



substituent	line diagram	prefix
$R-CH_3$	R —	methane → methyl
$R-CH_2CH_3$	R —	ethyl
$R-CH_2CH_2CH_3$	R —	propyl
$ \begin{array}{c} CH_3 \\ \\ R-CH \\ \\ CH_3 \end{array} $	R —	isopropyl
$R-CH_2CH_2CH_2CH_3$	R —	butyl
$ \begin{array}{c} CH_3 \\ \\ R-CH_2CH \\ \\ CH_3 \end{array} $	R —	isobutyl
$ \begin{array}{c} CH_3 \\ \\ R-CH \\ \\ CH_2CH_3 \end{array} $	R —	sec-butyl
$ \begin{array}{c} CH_3 \\ \\ R-C-CH_3 \\ \\ CH_3 \end{array} $	R —	tert-butyl

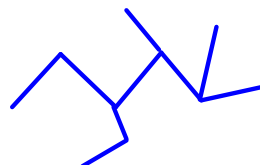
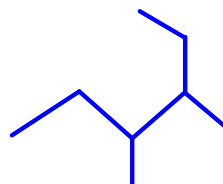
Naming alkanes:

Number the longest C- chain, ensuring side chains are in numerically lowest positions.

Numbers are separated by commas.

Numbers and letters are separated by dashes.

Side chains are written in alpha order.

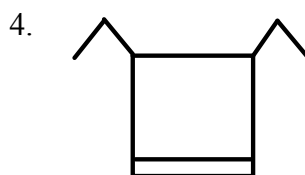
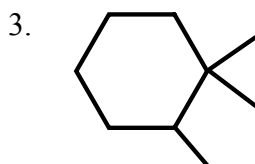
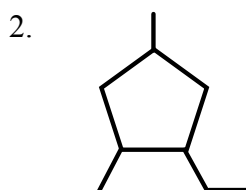
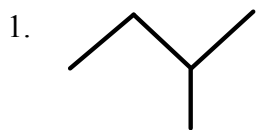


PREFIX - ROOT - SUFFIX

↓	↓	↓
substituent	longest	aliphatic?
	C-chain	

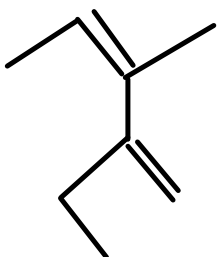
SEE WORKSHEET for practice with LONG CHAIN MOLECULES

EXAMPLES: Name each compound.

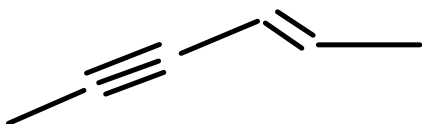


Name each organic compound.

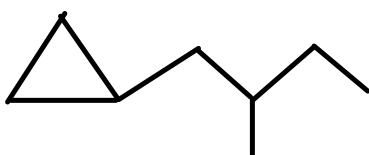
Eg.



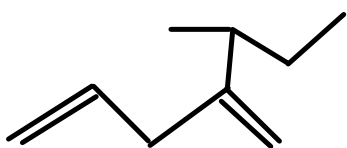
Eg.



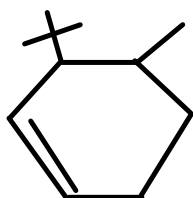
Eg.



Eg.



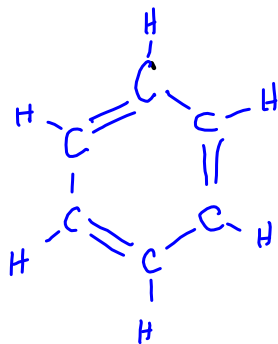
Eg.



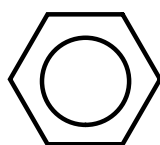
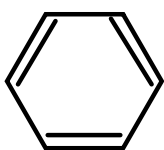
Draw the structure for each organic molecule.

1. 2, 2, 3-trimethylheptane
2. 2-methyl-4-isopropyloctane
3. 2-cyclopropyl-3-ethylpenta-1,3-diene
4. 1-bromo-3-ethyl-3,5-dimethylcyclohexene
5. 2-tert-butyl-1-chloro-4-nitrocyclopentene

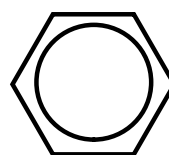
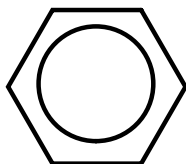
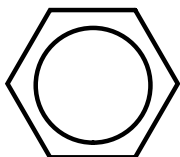
THE BENZENE RING



2 other representations:



When there are 2 side chains:



Special Names for Simple Molecules with Benzene ring:

