

Alkane Nomenclature Worksheet

Physiological Chemistry

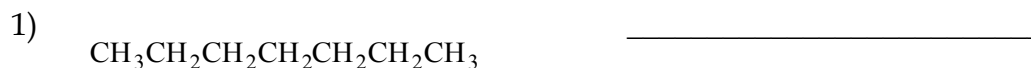
Spring 2005

Naming Straight-Chain Alkanes

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

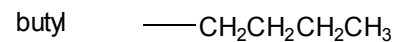
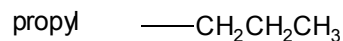
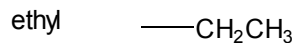
# of C atoms	Prefix
1	Meth-
2	Eth-
3	Prop-
4	But-
5	Pent-
6	Hex-
7	Hept-
8	Oct-
9	Non-
10	Dec-

Name the following compounds:

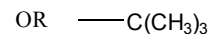
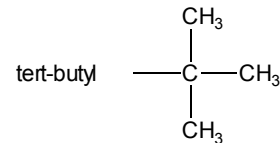
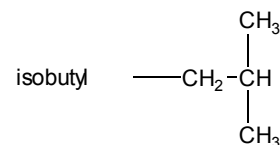
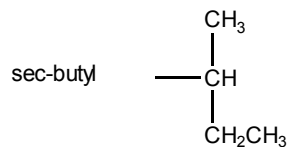
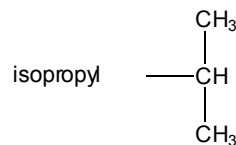


Alkyl Groups

Straight-chain alkyl groups:



Branched alkyl groups:

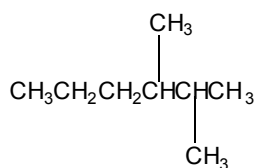


Naming Branched-Chain Alkanes

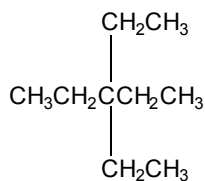
- 1) Find the parent hydrocarbon chain.
- 2) Number the atoms in the main chain.
 - Choose the numbering scheme that gives the lowest numbered positions for substituents
- 3) Identify and number the substituents.
- 4) Write the name as a single word.
 - Use prefixes to indicate 2 or more of the same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

Name the following compounds:

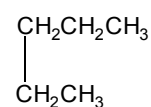
1)



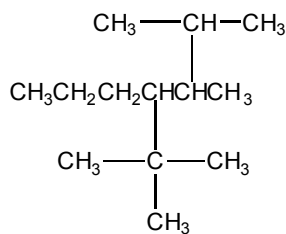
2)



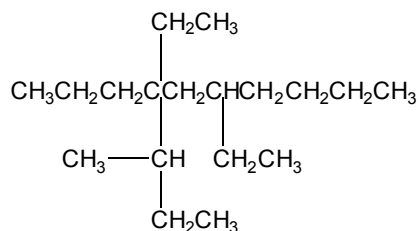
3)



4)



5)



Draw the structures of the following compounds:

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