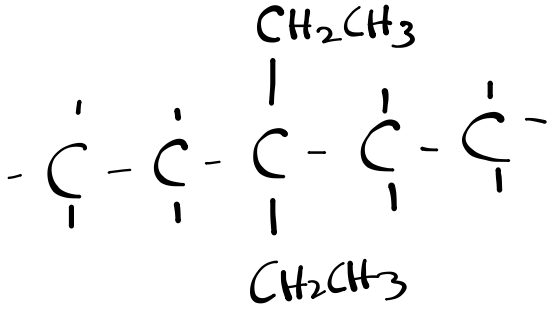
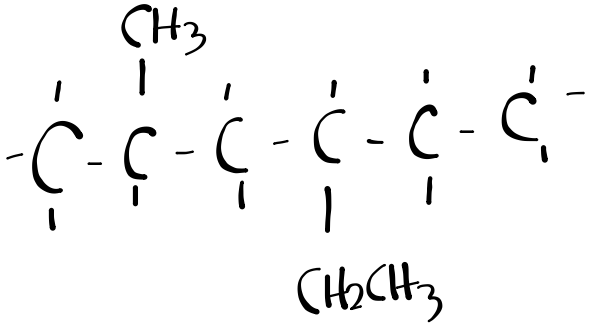
Warm Up

Draw the following compounds:

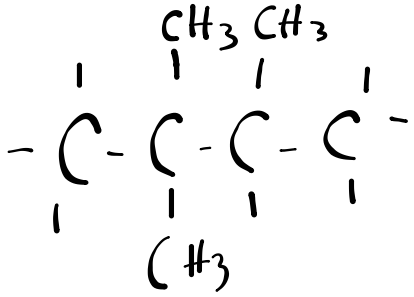
a) diethylpentane



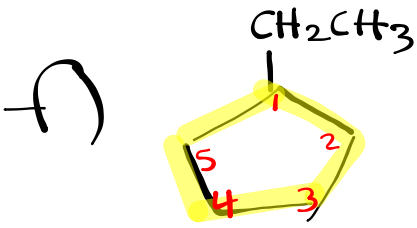
b) 4-ethyl-2-methylhexane



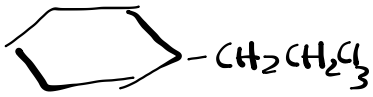
c) trimethylbutane



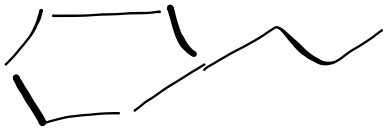
Worksheets - Naming Alkanes

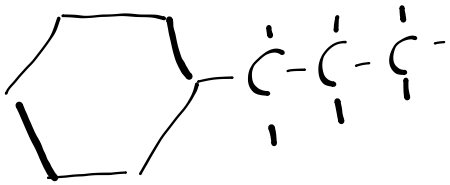
a) 

ethyl cyclopentane

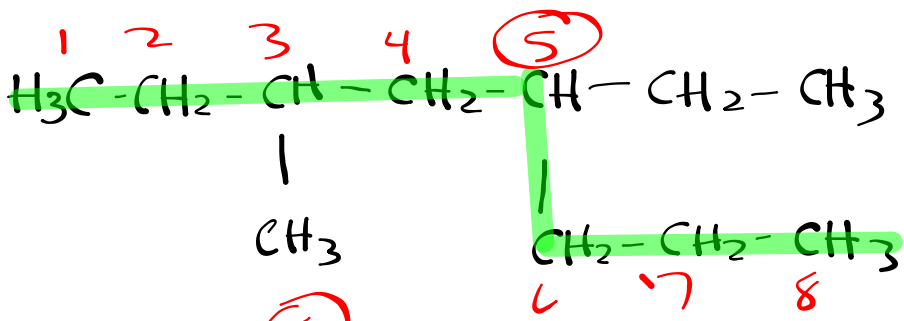


b) propylcyclohexane

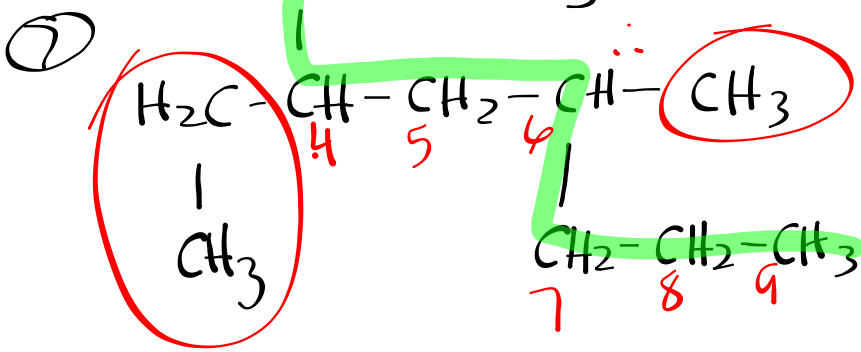




5-ethyl-3-methyloctane

5) 

4-ethyl-6-methylnonane

7) 

Naming Alkenes / Alkynes

Naming alkenes (double bonds) and alkynes (triple bonds) are very similar to alkanes. When naming, take these two points into consideration:

- the longest parent chain of carbon atoms must include the multiple bond, and the chain is numbered from the end closest to the multiple bond
- the name of the compound's parent chain is preceded by a number that indicates the position of the multiple bond on the parent chain.

Ex. $CH_2 = CH - CH_2 - CH_3$ (1 2 3 4)

1 - butene

$CH_3 - C \equiv C - CH_3$ (1 2 3 4)

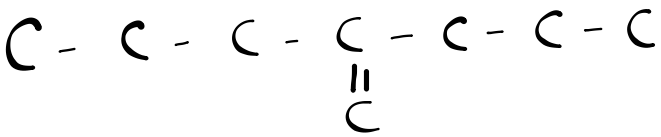
2 - butyne

4 - methyl - 2 - pentene

$CH_3 - CH = CH - CH(CH_3) - CH_3$ (1 2 3 4 5)

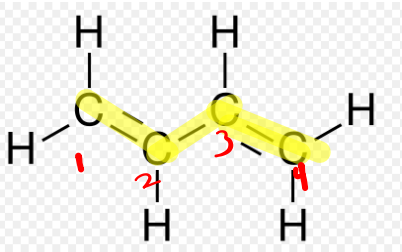
2 - methyl - 1 - hexene

$CH_3 - CH(CH_2CH_2CH_2CH_3) = CH_2$ (2 1; 3 4 5 6)

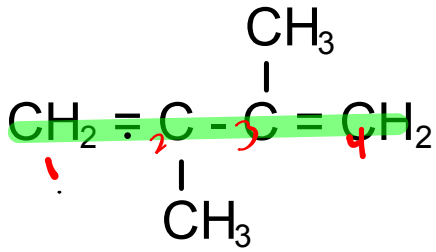


Multiple Multiple Bonds

If there is more than one multiple bond in an organic compound, the name of the compound is changed to a _____ diene, with the placing of the double bonds indicated at the beginning of the parent name.



1,3-butadiene



dimethyl 1,3-butadiene

Homework

Worksheet 46