

Alkenes

-unsaturated, contain at least one carbon-carbon double bond

-alkenes and cycloalkanes are isometric (alkenes with one double bond)

General formula:

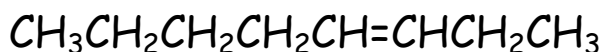


note: this formula is true for alkenes containing one carbon-carbon double bond

Naming Alkenes:

-name the longest chain containing the C=C

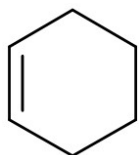
ex.



3-octene (oct-3-ene is also acceptable)

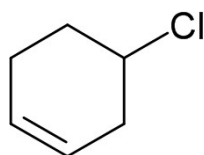
-remove "ane" from the end of the parent alkane and replace it with "ene" to indicate the presence of a carbon-carbon double bond

ex.



cyclohexene

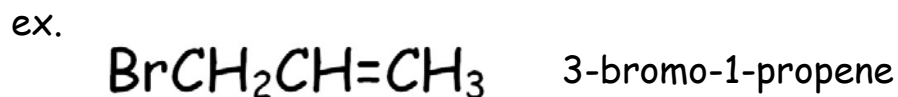
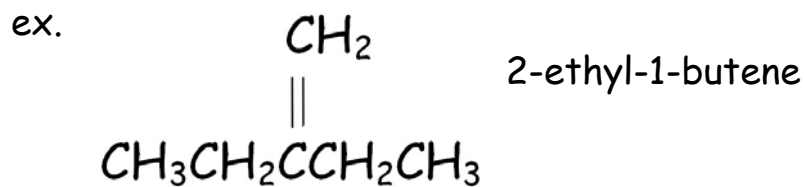
ex.



4-chloro-1-cyclohexene

When other functional groups are present, the lowest number is determined by an established priority with the hydroxide group having a higher priority than a double bond which is higher than a halogen which is higher than an alkyl group.

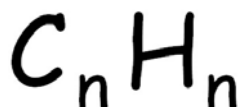
OH > carbon-carbon double bond > halogens > alkyl groups



Alkynes

-unsaturated, contain at least one carbon-carbon triple bond

General formula:



Naming Alkynes:

-name the longest chain containing the carbon-carbon triple bond



-remove "ane" from the end of the name of the parent alkane and replace it with "yne" to indicate the presence of a carbon-carbon triple bond