



Hydrocarbon Rings

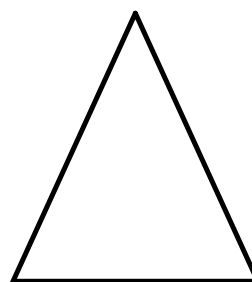
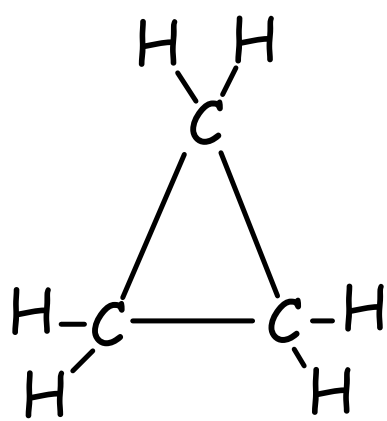
Cyclic **Hydrocarbons**

Saturated and unsaturated straight-chain and branched-chain hydrocarbons are not the only types of hydrocarbons.

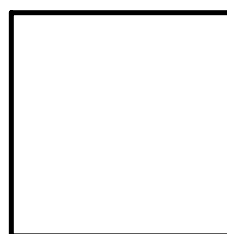
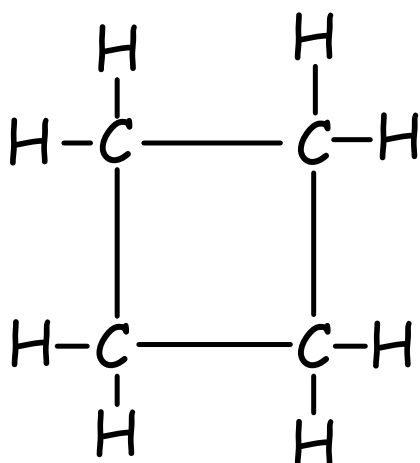
In some hydrocarbon compounds, the carbon chain is in the form of a **ring**.

Compounds that contain a hydrocarbon ring are called **cyclic** hydrocarbons.

Examples



cyclopropane



cyclobutane

Practice

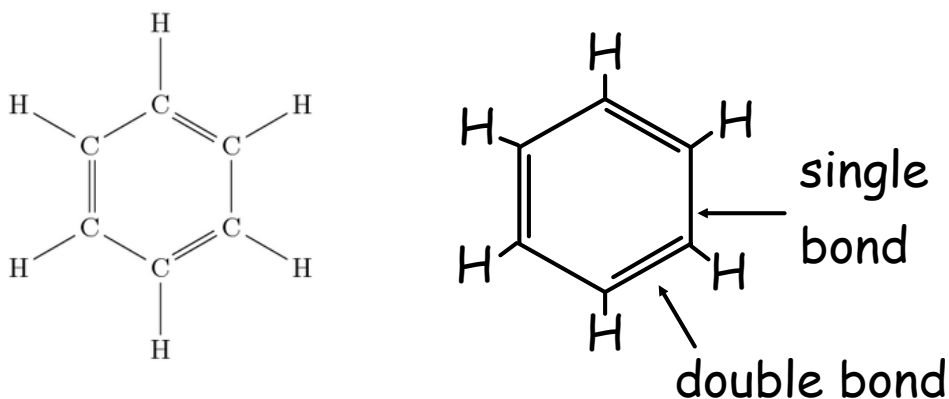
Draw and name the cyclic hydrocarbons that have 5 and 6 carbons respectively.

Aromatic Hydrocarbons

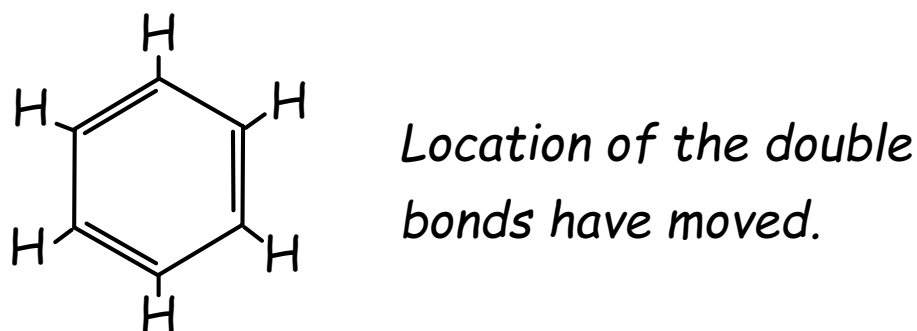
Molecules of aromatic compounds contain a single ring or a group of rings. **Benzene** (C_6H_6) is the simplest example of an aromatic compound.

An aromatic compound is an organic compound that contains a benzene ring or has a different ring that has similar bonding characteristics to benzene.

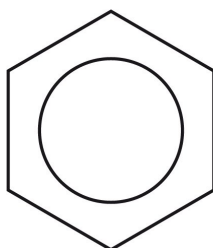
The benzene ring has 6 cyclic carbons with attached hydrogen bonds.



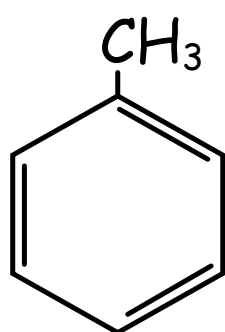
It can be drawn with a different structure as well



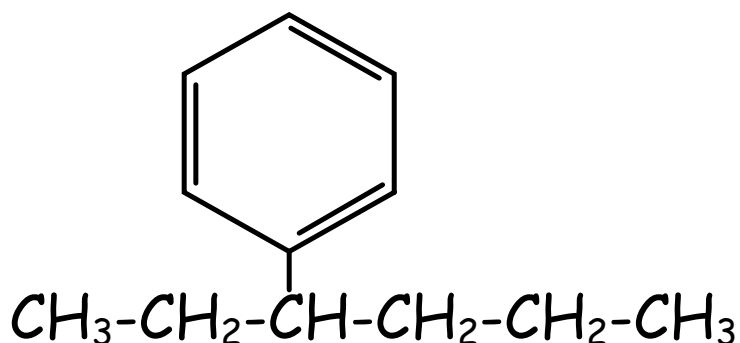
Because of the way electrons are distributed in a benzene ring, often times it is drawn with a circle in the middle.



Compounds containing substituents attached to a benzene ring are named as derivatives of benzene.

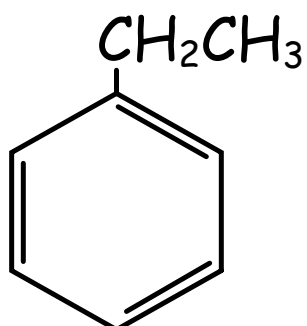


When the benzene ring is a substituent on an alkane, the C_6H_5 group is called a phenyl group.



Practice

What would be the name for the following aromatic compound?



Practice

There are 3 dimethylbenzene structural isomers. Draw and name each one.

Aromatic Isomers and Natural
Gases Worksheet