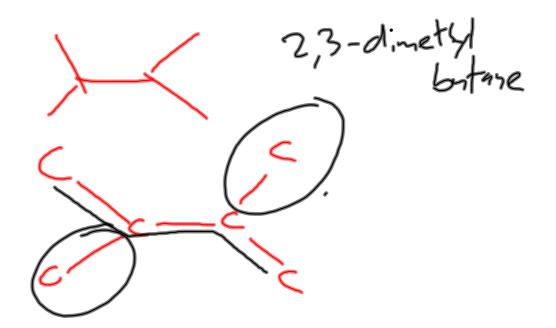
Worksheet 47 - Questions?



Reactions

cracking - reaction in which hydrocarbons are broken into smaller fragments

• this reaction occurs in the absence of air, and with a catalyst or heat, to speed up the reaction.

Ex.
$$C_{17}H_{36(l)} \longrightarrow C_9H_{20(l)} + C_8H_{16(l)}$$
*atoms must be conserved!

reforming - reaction in which large molecules are formed from smaller ones

• this reaction normally occurs with the help of a catalyst or heat

Ex.
$$C_5H_{12(l)} + C_5H_{12(l)} \longrightarrow C_{10}H_{22(l)} + H_{2(g)}$$

combustion - a reaction between a compound and oxygen to produce the most common oxides.

Ex.
$$2C_8H_{18(l)} + 25O_2$$
 \longrightarrow $16CO_{2(g)} + 18H_2O_{(g)} + energy$ "burning"

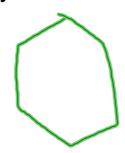
addition (hydrogenation) reaction - a reaction in which an unsaturated molecule reacts with hydrogen (diatomic).

Common Mistakes...

Benzene vs. Cyclohexane

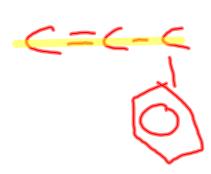
cyclohexene





Benzene as a branch (phenyl)

C-E-C



3-phant 1-propere

ortho, meta, para-dimethylbenzene

12 13 14

dimethyl-2-butene

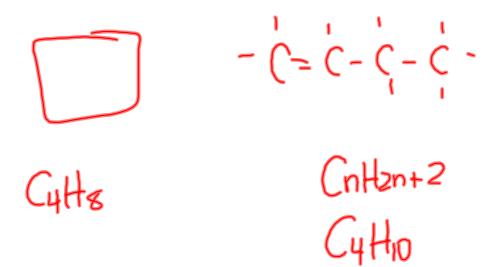
$$1,2$$
-pentadiene
 $C = C - C - C$

CnHentz

C12 H24 -> Cn H2n

double bond or

cycloalkane



Worksheet

Quiz - Tomorrow