

KEY

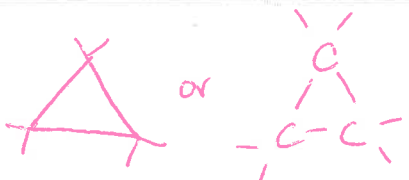
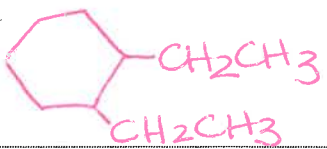
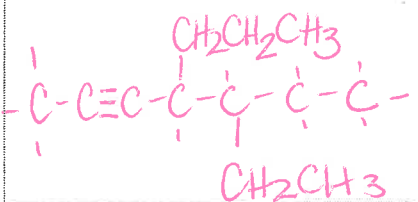
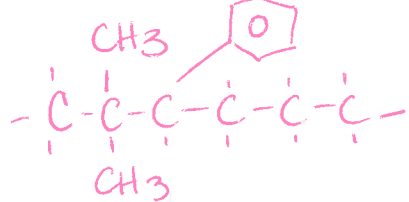
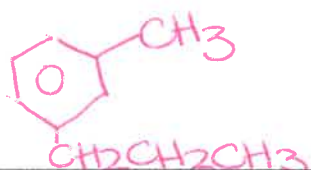
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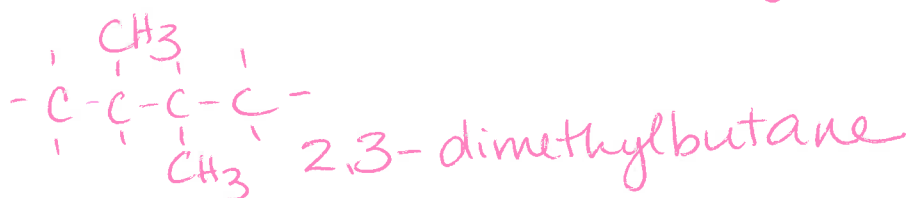
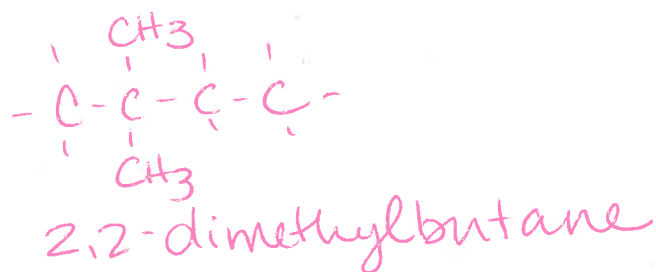
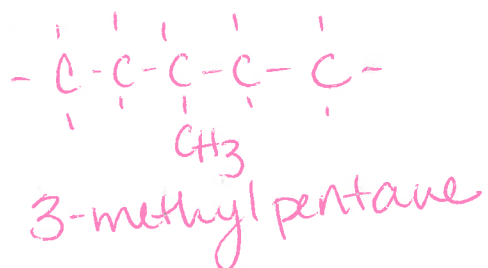
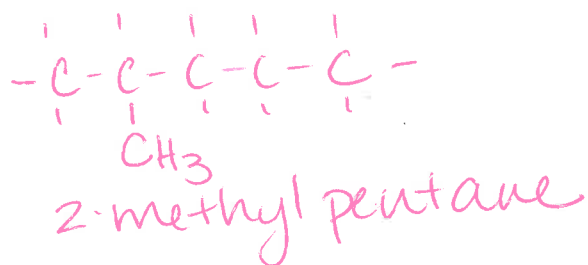
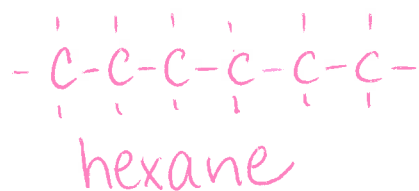
Organic Chemistry - HYDROCARBONS WORKSHEET

Draw the complete structural formula and condensed molecular formula for each compound.

IUPAC Name	Complete Structural Formula	Condensed Formula
butane	$\begin{array}{c} & & & \\ -C & -C & -C & -C- \\ & & & \end{array}$	C_4H_{10}
2-methylhexane	$\begin{array}{c} & & & & & \\ -C & -C & -C & -C & -C & -C- \\ & & & & & \\ & & & & & CH_3 \end{array}$	C_7H_{16}
3-ethyl-2-methylnonane	$\begin{array}{c} CH_3 \\ \\ & & & & & & & & \\ -C & -C & -C & -C & -C & -C & -C & -C & -C- \\ & & & & & & & & \\ & & & & & & & & CH_2CH_3 \end{array}$	$C_{12}H_{26}$
propene	$\begin{array}{c} & & \\ -C & =C & -C- \\ & & \end{array}$	C_3H_6
4-methyl-2-heptene	$\begin{array}{c} & & & & & \\ -C & -C & =C & -C & -C & -C & -C- \\ & & & & & \\ & & & & & CH_3 \end{array}$	C_8H_{16}
ethyne	$-C \equiv C-$	C_2H_2
5,6-dimethyl-2-octyne	$\begin{array}{c} & & & & & & \\ -C & -C & \equiv C & -C & -C & -C & -C & -C- \\ & & & & & & \\ & & & & & & CH_3 \\ & & & & & & \\ & & & & & & CH_3 \end{array}$	$C_{10}H_{18}$

cyclopropane		C_3H_6
1,3-diethylcyclohexane		$C_{10}H_{20}$
5-ethyl-4-propyl-2-heptyne		$C_{12}H_{22}$
2,2-dimethyl-3-phenylhexane		$C_{14}H_{22}$
1-methyl-3-propylbenzene		$C_{10}H_{14}$

Draw structural formulae and give the names for the five possible (noncyclic) isomers of C_6H_{14} .



Use IUPAC naming rules to name the following hydrocarbon compounds:

