

Organic Nomenclature Practice

Name Key

Identify each of the following as organic (O) or inorganic (I)

- 1. CaCO_3 **I**
- 2. CH_4 **O**
- 3. CH_3CH_3 **O**
- 4. CO_2 **I**
- 5. NH_3 **I**
- 6. $\text{C}_6\text{H}_{12}\text{O}_6$ **O**
- 7. CO **I**
- 8. CH_3OH **O**
- 9. NaCl **I**

Fill in the chart so that each row has the name, molecular formula, and structural formula.

Name	Structural formula	Molecular formula
1-heptene	$\text{CH}_2=\text{CHCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$	C_7H_{14}
decane	$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$	$\text{C}_{10}\text{H}_{22}$
1-propyne	$\text{CH}\equiv\text{CCH}_3$	C_3H_4
1-butene	$\text{CH}_2=\text{CHCH}_2\text{CH}_3$	C_4H_8
hexyne	$\text{CH}\equiv\text{CCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$	C_6H_{10}
pentene	$\text{CH}_2=\text{CHCH}_2\text{CH}_2\text{CH}_3$	C_5H_{10}
methane	CH_4	CH_4
ethene	$\text{CH}_2=\text{CH}_2$	C_2H_4

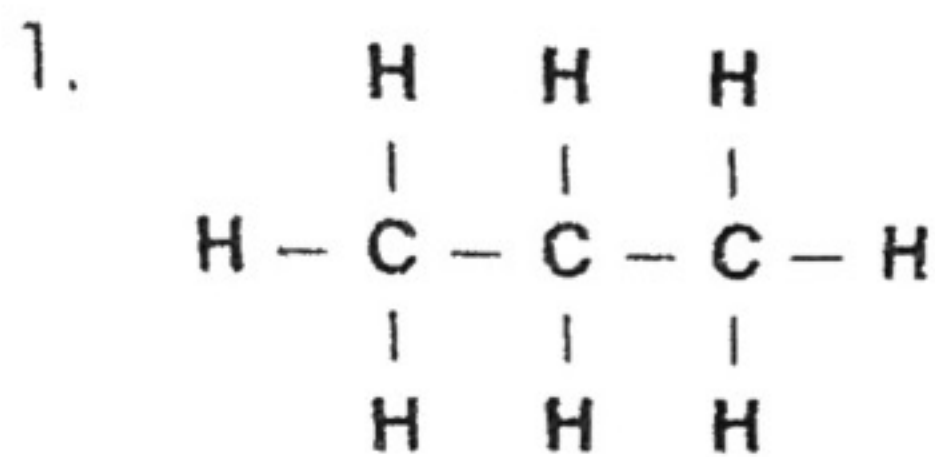
Name	Structural Formula	Molecular Formula
nonane	$\begin{array}{c} \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2 \\ \text{CH}_2\text{CH}_2\text{CH}_3 \end{array}$	C_9H_{20}
octyne	$\begin{array}{c} \text{CH}_3\equiv\text{CCH}_2\text{CH}_2\text{CH}_2\text{CH}_2 \\ \text{CH}_2\text{CH}_3 \end{array}$	C_8H_{14}

For each molecule in the lab, write the name, molecular formula, and structural formula.

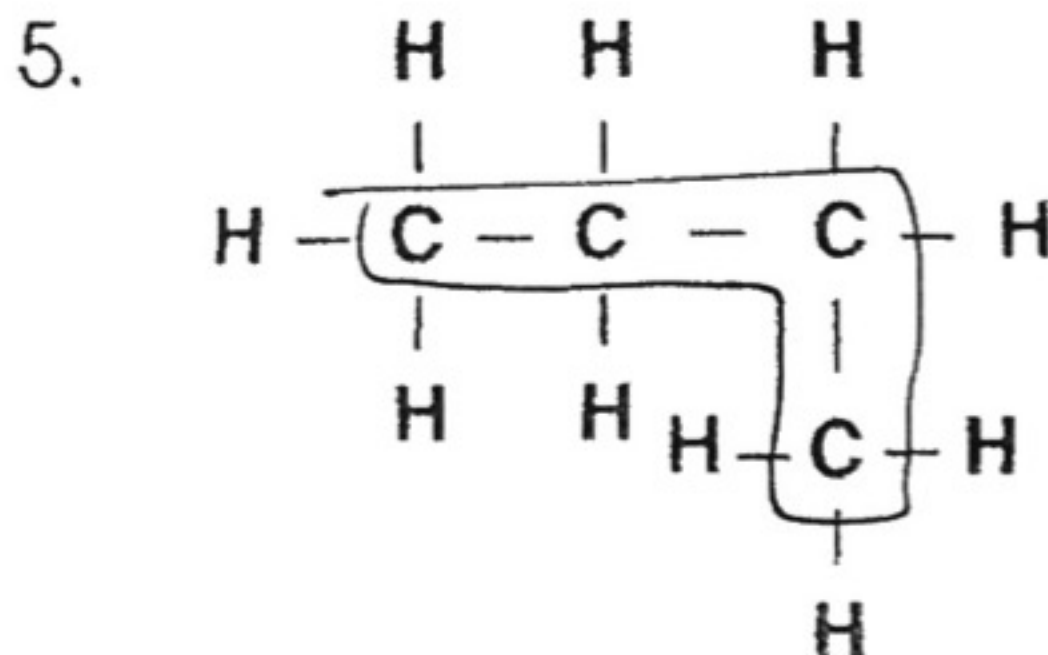
Naming Hydrocarbons

Key

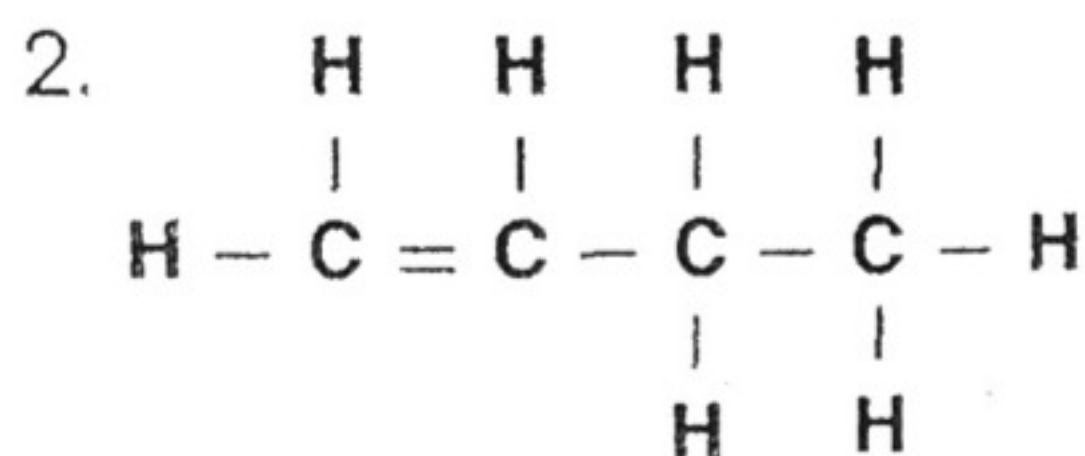
Name the compounds below according to the IUPAC naming system



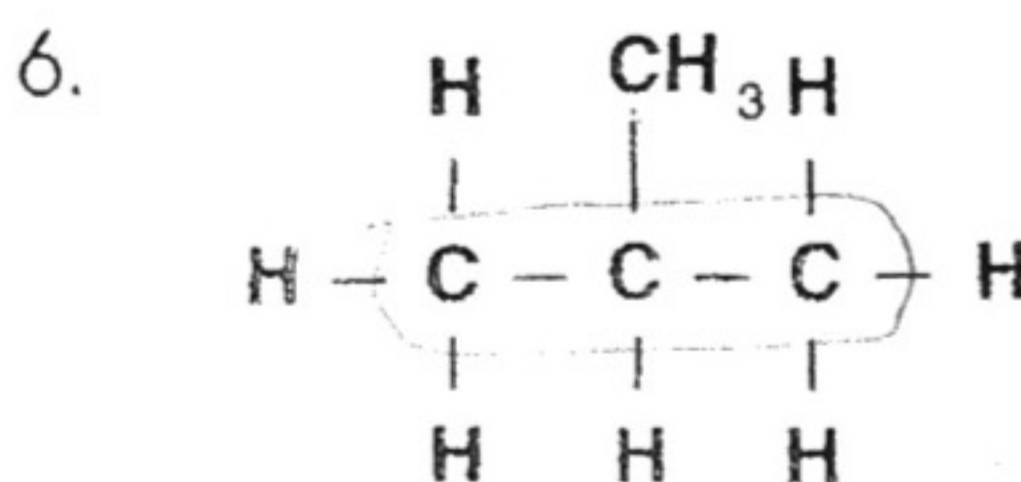
propane



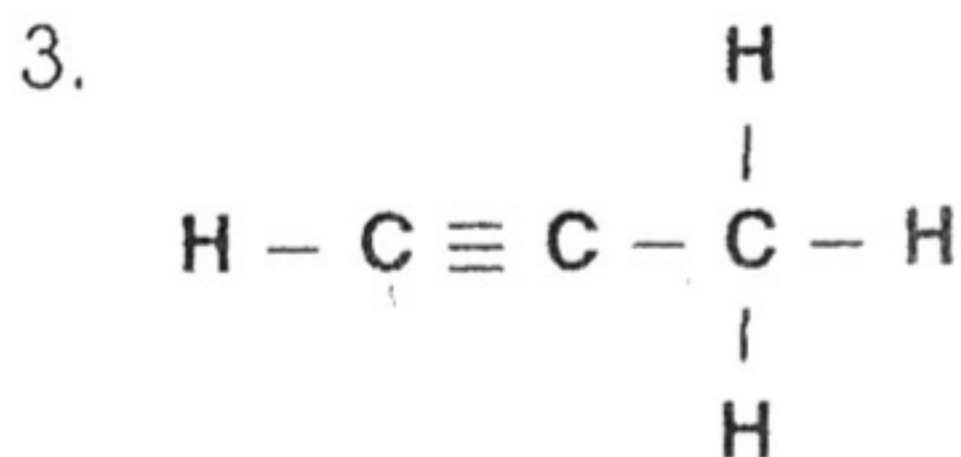
butane



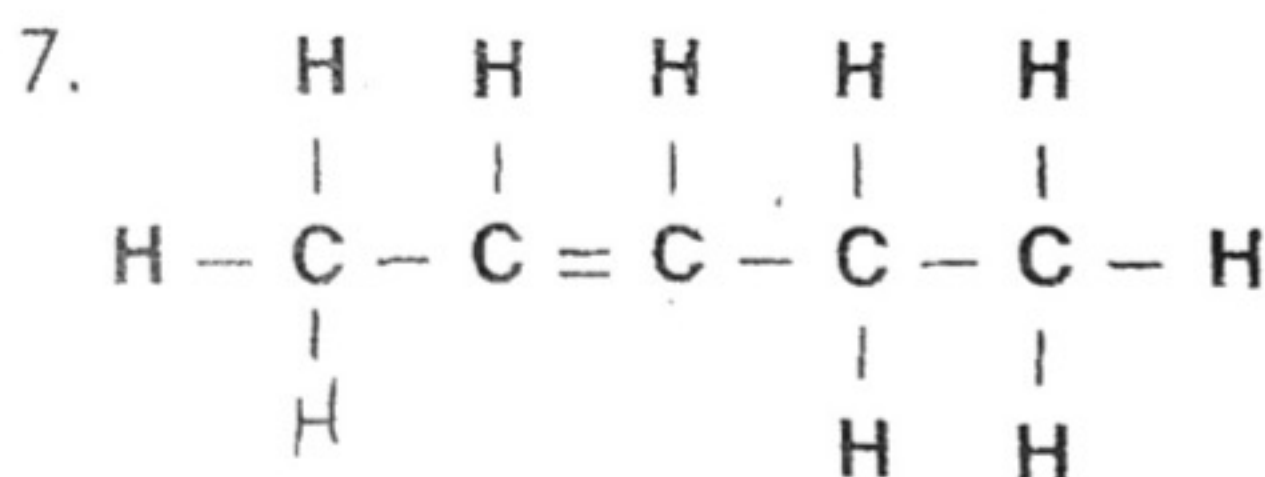
1-butene



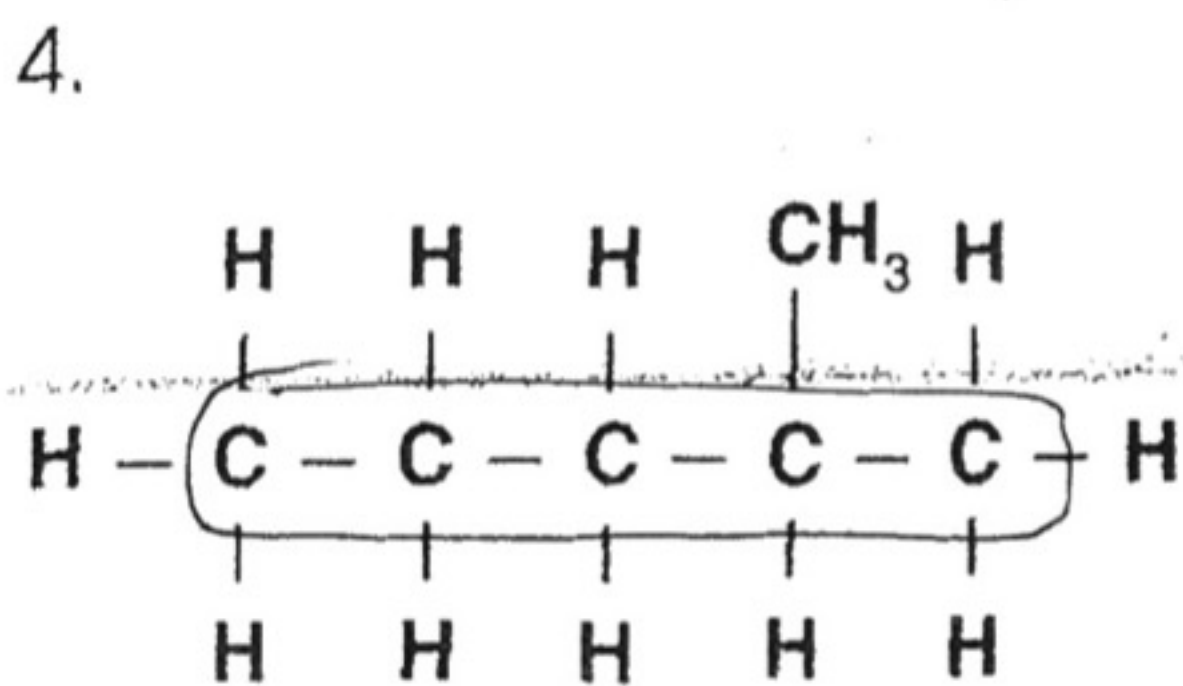
2-methyl propane



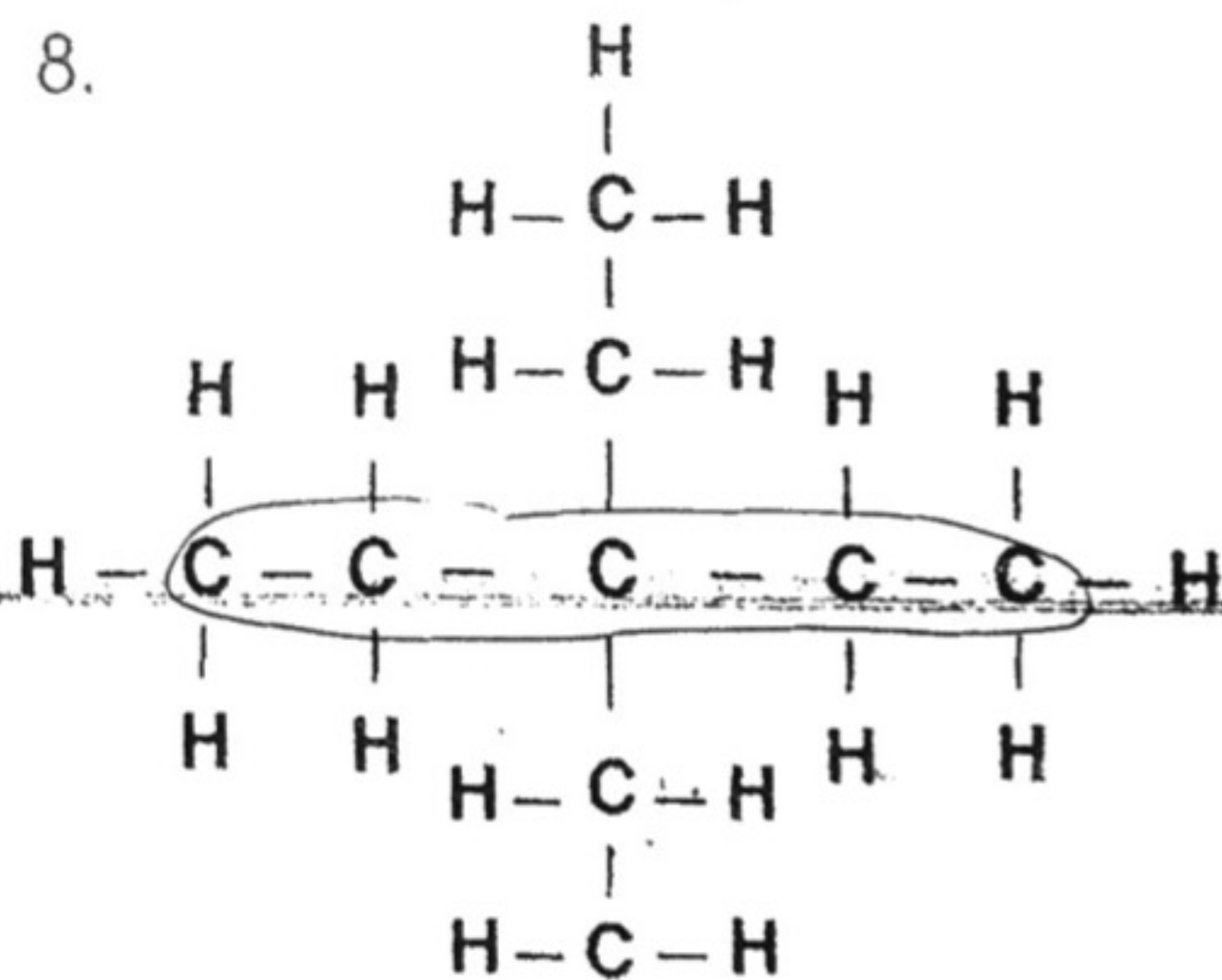
propyne



2-pentene



2-methyl pentane

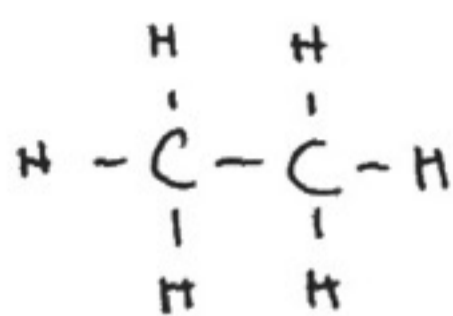


3,3-dimethyl pentane

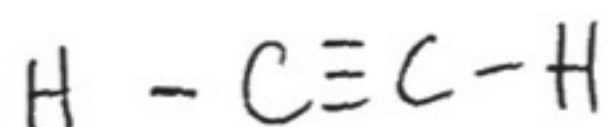
Structure of Hydrocarbons

Draw the structure of the compounds below.

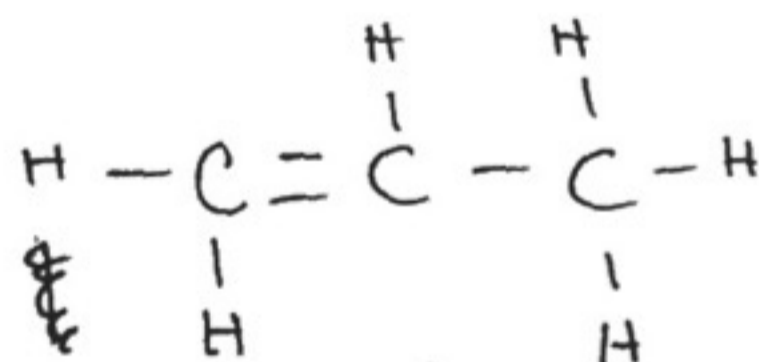
1. ethane



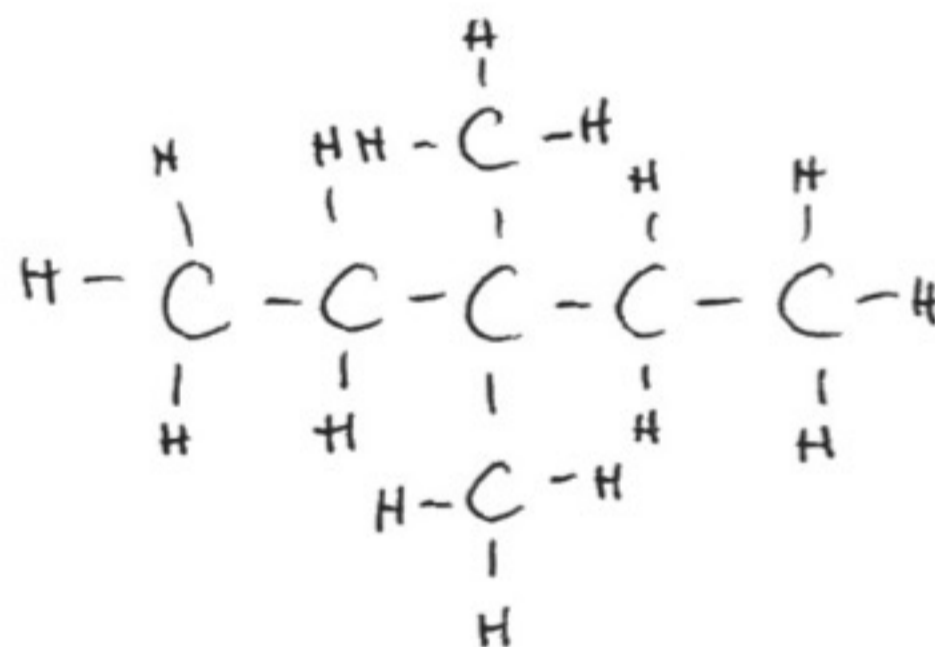
5. ethyne



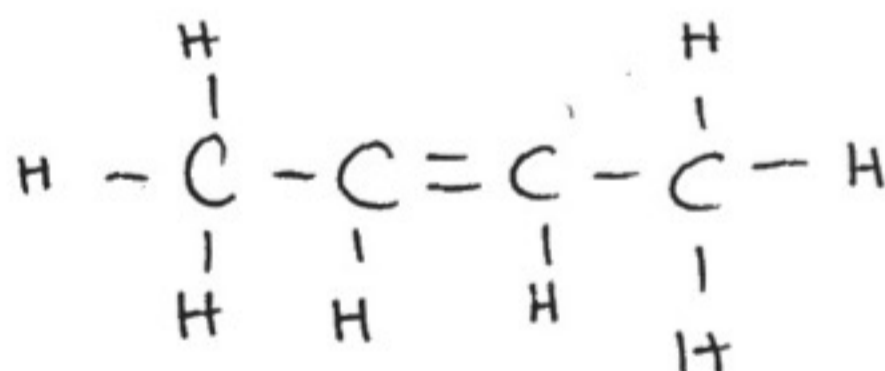
2. propene



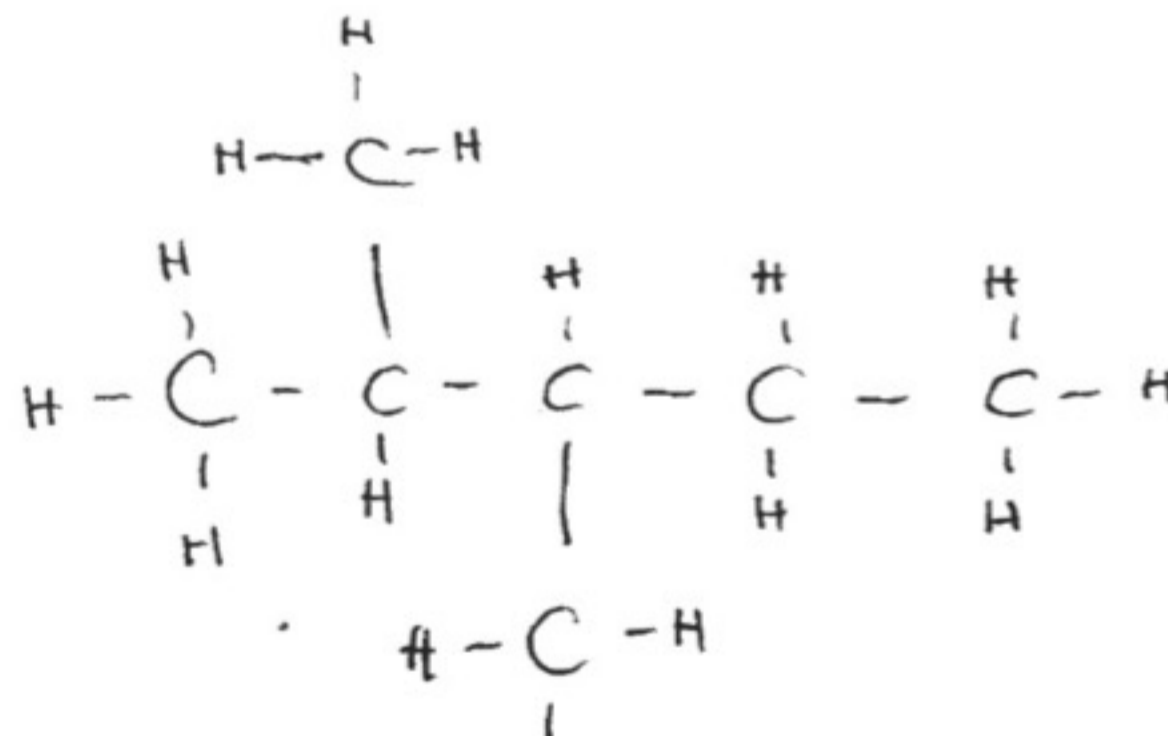
6. 3,3-dimethyl pentane



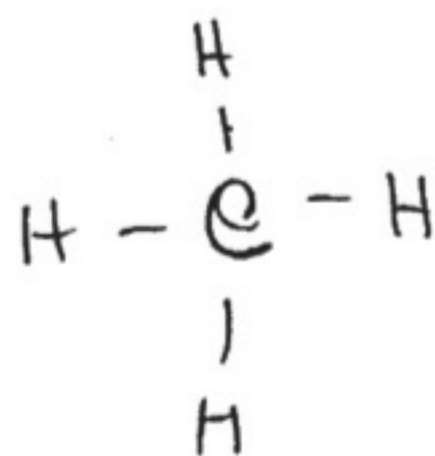
3. 2-butene



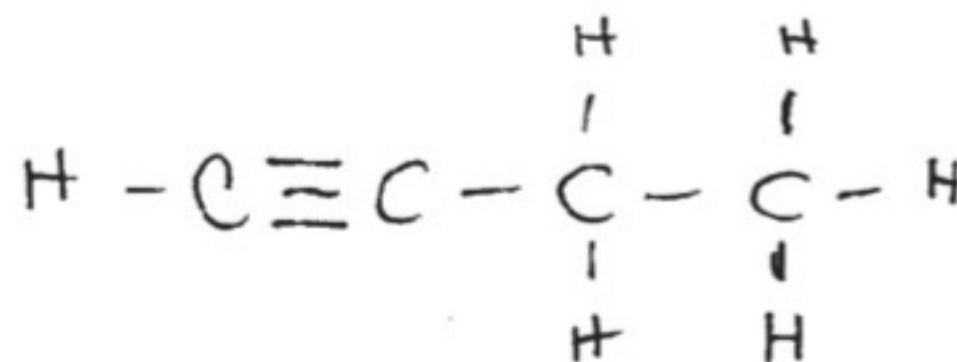
7. 2,3-dimethyl pentane



4. methane



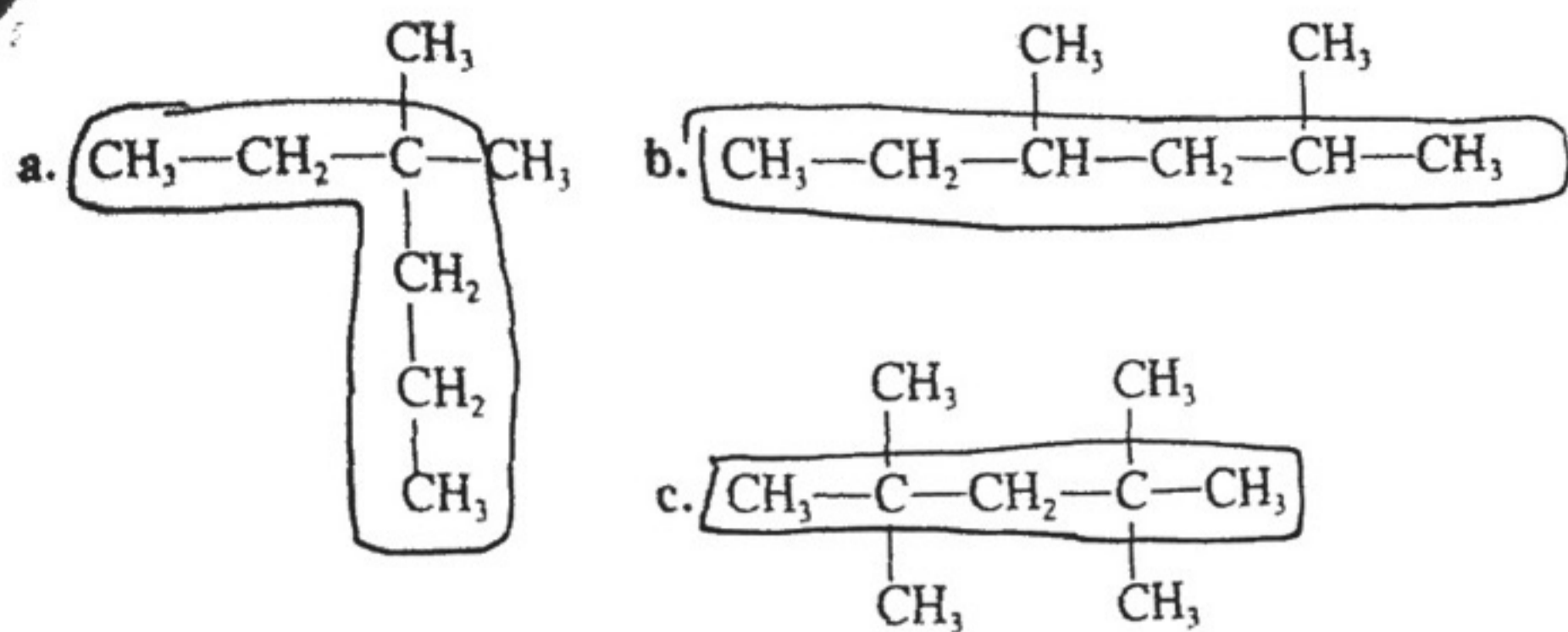
8. n-butyne



name these compounds

name

key



a. 3,3-dimethylhexane

b. 2,4-dimethylhexane

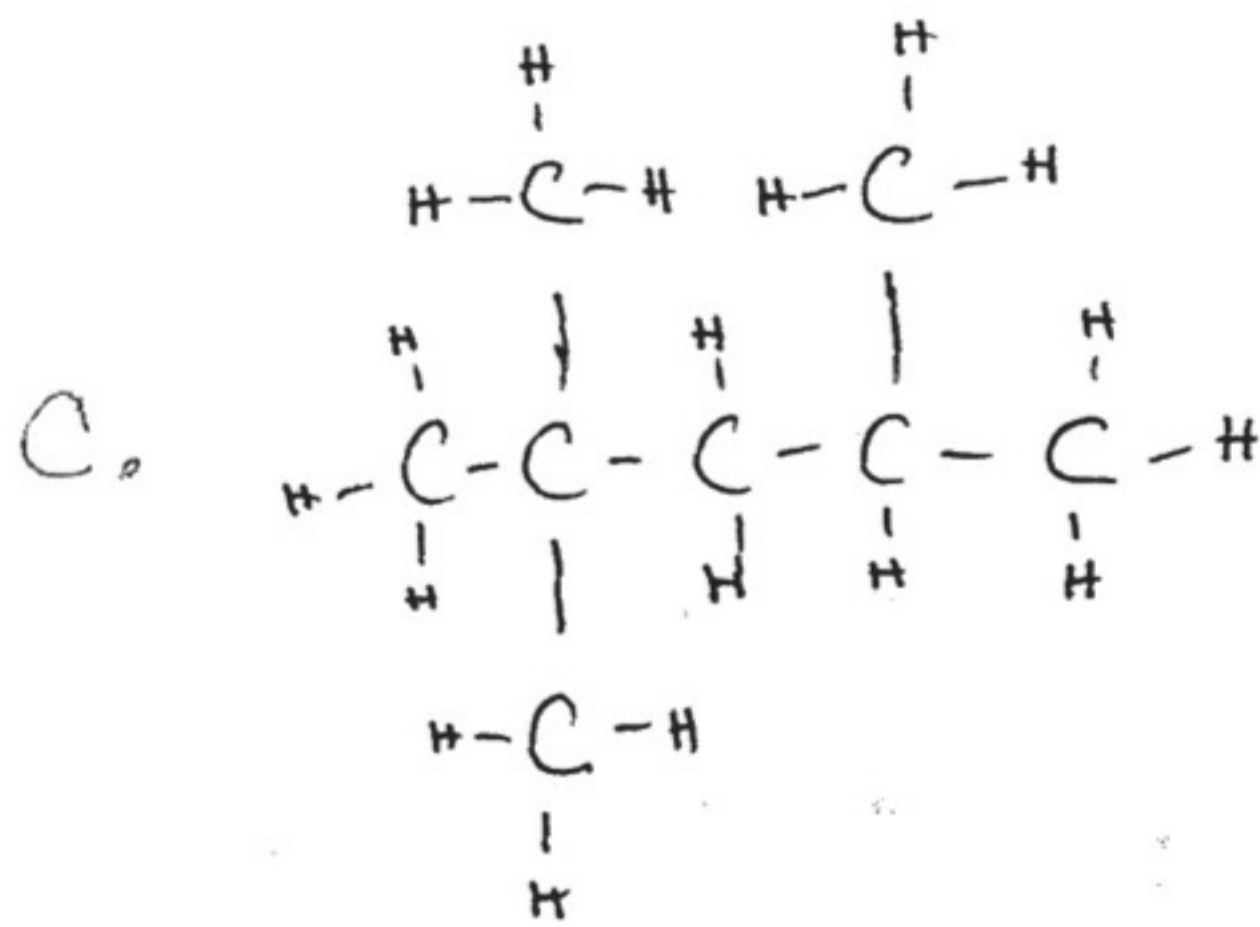
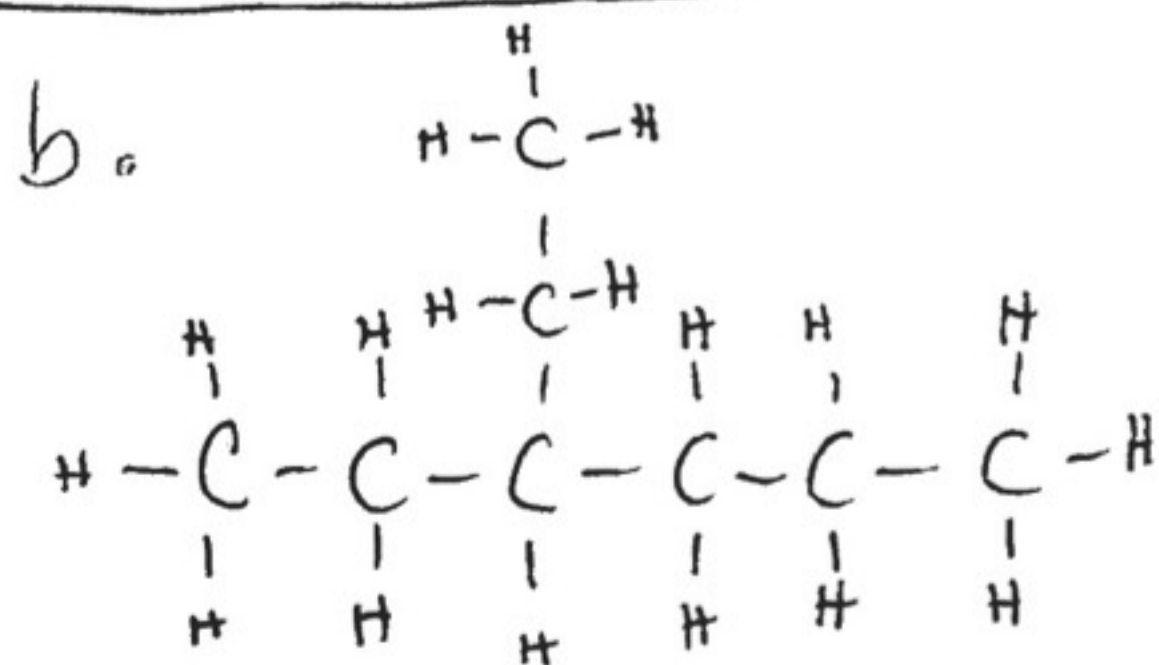
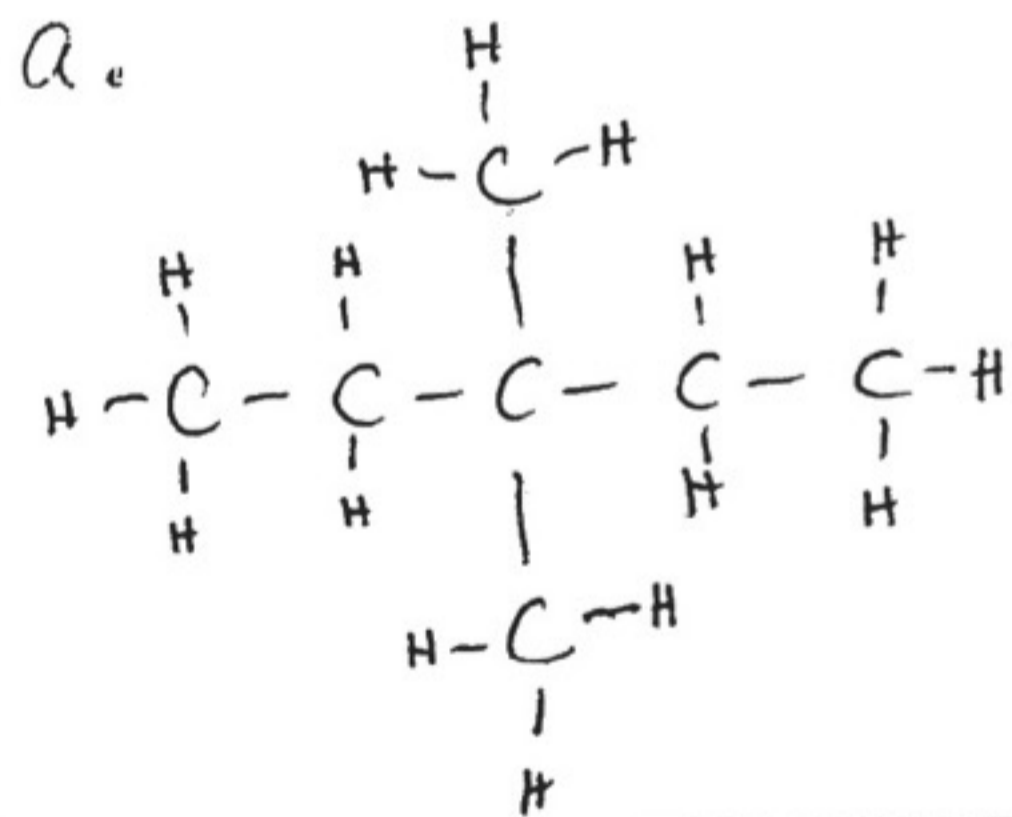
c. 2,2,4,4-tetramethylpentane

Draw complete structural formulas for the following compounds.

a. 3,3-dimethylpentane

c. 2,2,4-trimethylpentane

b. 3-ethylhexane



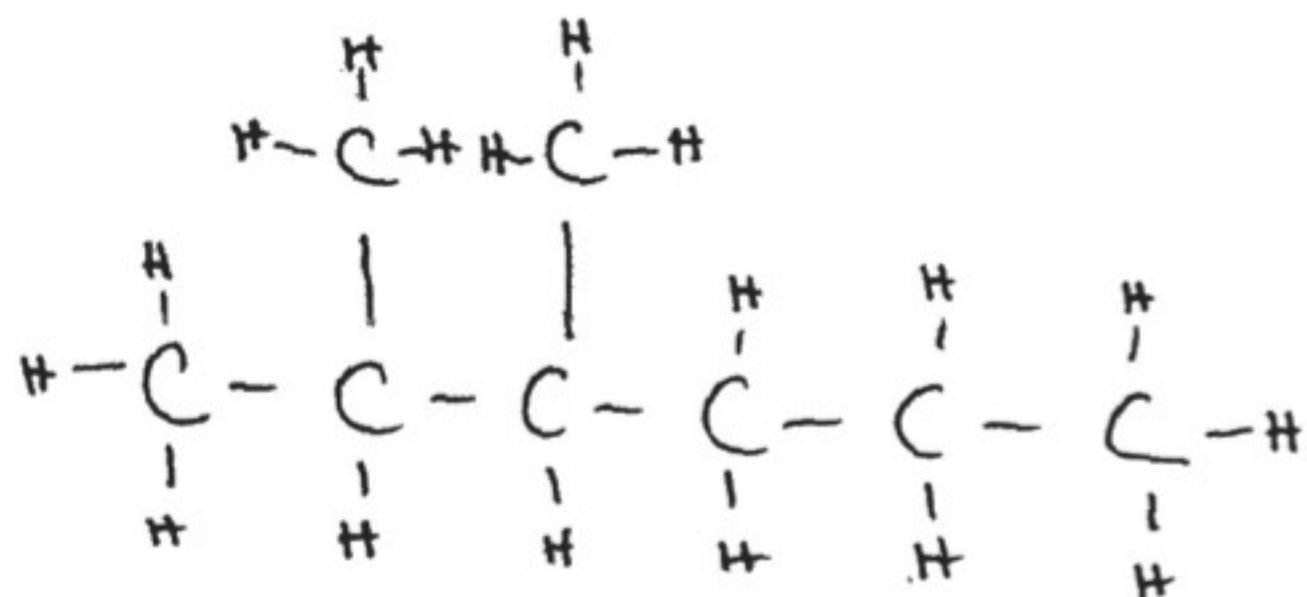
3

Draw a structural formula for each of the following compounds.

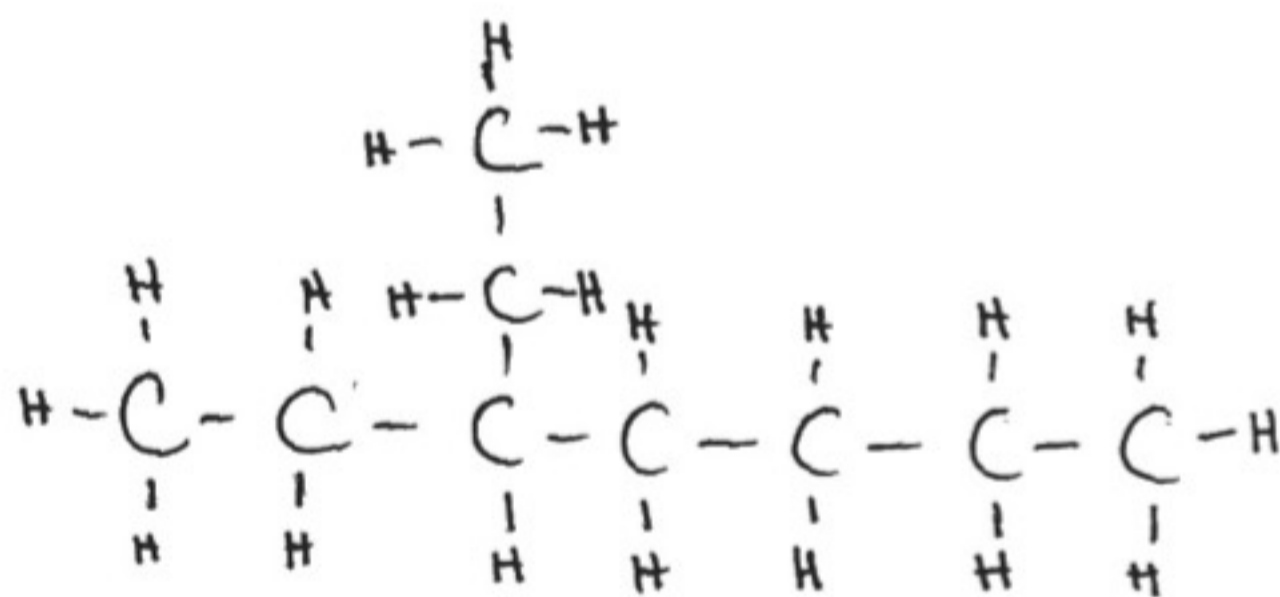
a. 2,3-dimethylhexane c. 3-ethyl-2,4-dimethyloctane

b. 3-ethylheptane

a.



b.



c.

