

Naming Alkanes – Worksheet #1

KEY

Name the following branched alkanes:

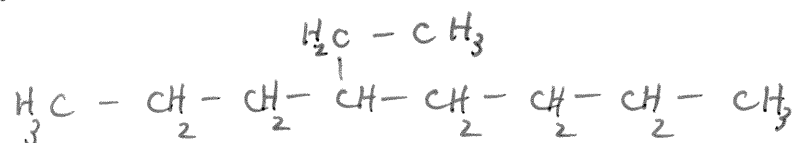
1.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	<i>2-methyl propane</i>
2.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_3 \\ \\ \text{CH}_2-\text{CH}_3 \end{array}$	<i>2-methyl butane</i>
3.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_2-\text{CH}_3 \\ \\ \text{CH}_2-\text{CH}_3 \end{array}$	<i>4-ethyl heptane</i>
4.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}-\text{CH}_2-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_2-\text{CH}_3 \end{array}$	<i>3-ethyl-4-methyl heptane</i>
5.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_2-\text{CH}_2-\text{CH}_3 \end{array}$	<i>5-ethyl-3-methyl octane</i>
6.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2 \\ \\ \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{C}-\text{CH}_2-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	<i>5-ethyl-5-methyl decane</i>
7.	$\begin{array}{c} \text{H}_2\text{C}-\text{CH}-\text{CH}_2-\text{CH}-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_2-\text{CH}_2-\text{CH}_3 \end{array}$	<i>4-ethyl-6-methyl nonane</i>

KEY

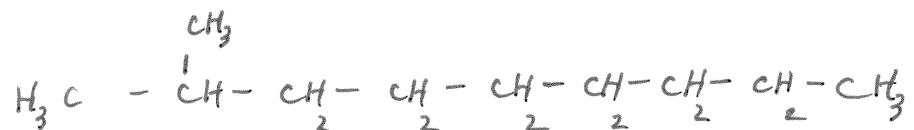
Draw structural formulas for the following molecules. Remember the following:

- Carbons on the end of a chain are attached to three hydrogens
- Carbons in the middle of a chain are attached to two hydrogens
- Carbons that have one branch attached are also attached to one hydrogen
- Carbons that have two branches attached are not attached to any hydrogens.

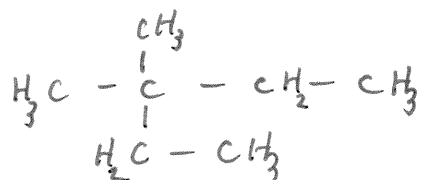
8. 4-ethyl-octane



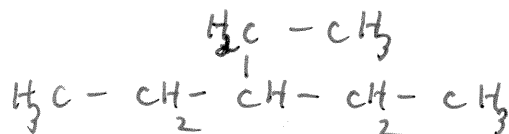
9. 2-methyl-nonane



10. ~~2-methyl-2-ethyl-butane~~ 3,3-dimethyl pentane



11. 3-ethyl-pentane



12. 2-methyl-3-ethyl-heptane

