

Naming Alkanes - Worksheet #1

Name the following branched alkanes:

$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_3 \\ \\ \text{CH}_2-\text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_2-\text{CH}_3 \\ \\ \text{CH}_2-\text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}-\text{CH}_2-\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_2-\text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_2-\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_2-\text{CH}_2-\text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{C}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{C}-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{C}-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{C}-\text{CH}_2-\text{CH}_3 \\ \quad \\ \text{CH}_2-\text{CH}_3 \quad \text{CH}_2-\text{CH}_3 \end{array}$	
$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2 \\ \\ \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{C}-\text{CH}_2-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	

$\begin{array}{c} \text{CH}_2-\text{CH}_2-\text{CH}_3 \\ \\ \text{H}_2\text{C}-\text{CH}-\text{CH}_2-\text{CH}-\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_2-\text{CH}_2-\text{CH}_3 \end{array}$	
$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{CH}_2 \quad \text{CH}_2 \\ \quad \\ \text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}_2 \end{array}$	
$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3-\text{CH}-\text{C}-\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_3 \\ \quad \quad \\ \text{CH}_2 \quad \text{CH}_2 \quad \text{CH}_2 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_2-\text{C}-\text{CH}-\text{CH}_3 \\ \quad \quad \\ \text{CH}_2 \quad \text{CH}_2 \quad \text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}-\text{CH}_2-\text{CH}-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}-\text{C}-\text{CH}-\text{CH}_2 \\ \quad \quad \quad \\ \text{CH}_2 \quad \text{CH}_2 \quad \text{CH}_2 \quad \text{CH}_2 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	
$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_2-\text{CH}-\text{C}-\text{CH} \\ \quad \quad \quad \\ \text{CH}_2 \quad \text{CH}_2 \quad \text{CH}_2 \quad \text{CH}_2 \\ \quad \quad \quad \\ \text{CH}_2 \quad \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	

Naming Alkanes - Worksheet #2

Draw the structural formula and line angle formula 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

4-ethyl-octane

2,3,4,5,6,7-hexamethyl-octane

4-ethyl-octane

2-methyl-nonane

2-methyl-nonane

3,3-dimethyl-pentane

3-ethyl-pentane

2-ethyl-2methyl-butane

3-ethyl-2methyl-heptane

3-ethyl-pentane

2,2,3-trimethyl-butane

2-ethyl-2-methyl-heptane

3-ethyl-2,2-dimethyl-hexane