

Name _____

Period _____

Naming Alkanes – Worksheet #1

Name the following branched alkanes:

1.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
2.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}_3 \\ \\ \text{CH}_2-\text{CH}_3 \end{array}$	
3.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_2-\text{CH}_3 \\ \\ \text{CH}_2-\text{CH}_3 \end{array}$	
4.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}-\text{CH}_2-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_2-\text{CH}_3 \end{array}$	
5.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_2-\text{CH}_2-\text{CH}_3 \end{array}$	
6.	$\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2 \\ \\ \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{C}-\text{CH}_2-\text{CH}_3 \\ \\ \text{CH}_3 \end{array}$	
7.	$\begin{array}{c} \text{CH}_2-\text{CH}_2-\text{CH}_3 \\ \\ \text{H}_2\text{C}-\text{CH}-\text{CH}_2-\text{CH}-\text{CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_2-\text{CH}_2-\text{CH}_3 \end{array}$	

(over)

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 ? Draw & rename it!

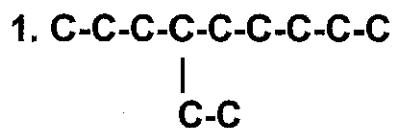
11. 3-ethyl-pentane

12. 2-methyl-3-ethyl-heptane

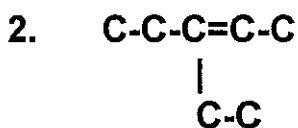
NAMING HYDROCARBONS

Name _____

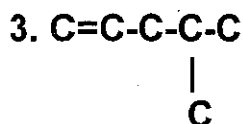
Name the following compounds:



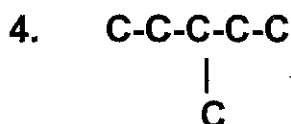
1 _____



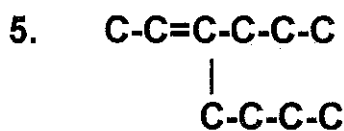
2 _____



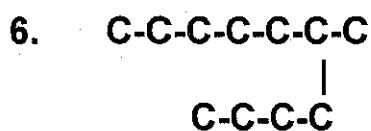
3 _____



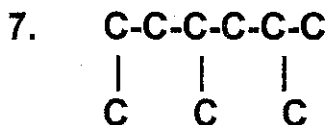
4 _____



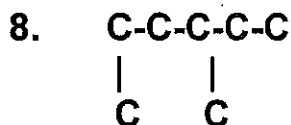
5 _____



6 _____



7 _____



8 _____

DRAW THE FOLLOWING FROM THEIR NAMES

9. 2,3-DIMETHYL-3-OCTENE

10. 4-METHYL-1,3-HEXADIENE

11. 3,3-DIETHYLPENTANE

12. 3,3-DIMETHYL-1-BUTYNE

13. 3-ETHYL-2-METHYL-1,3-HEPTADIENE

14. 3-METHYL-1-BUTYNE (INCLUDE H'S)

15. 4-PROPYL-2,4-DECADIENE

16. 1,3-BUTADIENE (INCLUDE H'S)

17. Draw all the isomers that have the formula C_5H_{12} .

18. Draw all the isomers that have the formula C_5H_{10} . (This will include double bonds and rings)

19. Draw all the isomers that have the formula C_7H_{16} .

20. Draw all the isomers that have the formula C_8H_{18} .