



Name: _____

Date: _____

Chemistry**Naming Organic Compounds WS 1 (Alkanes, Alkenes & Alkynes)**

1. Complete the following chart for each alkane:

Name & Molecular Formula	Complete Structural Formula	Line Formula
1. ethane C_2H_6		
2.	$ \begin{array}{cccc} H & H & H & H \\ & & & \\ H-C & -C & -C & -C-H \\ & & & \\ H & H & H & H \end{array} $	
3.		
4. hexane C_6H_{14}		
5.	$ \begin{array}{cccc} H & CH_3 & H & H \\ & & & \\ H-C & -C & -C & -C-H \\ & & & \\ H & H & H & H \end{array} $	
6.		
7. 2-methylheptane C_8H_{18}		
8.	$ \begin{array}{cccccccc} H & CH_2CH_3 & H & H & CH_3 & H & H \\ & & & & & & \\ H-C & -C & -C & -C & -C & -C & -C-H \\ & & & & & & \\ H & H & H & H & H & H & H \end{array} $	
9. 4,4-dipropyldecane $C_{16}H_{36}$		

II. Complete the following chart for each alkene or alkyne:

Name & Molecular Formula	Complete Structural Formula	Line Formula
10. ethene C ₂ H ₄		
11.	$ \begin{array}{ccccccc} & \text{H} & & \text{H} & & \text{H} & & \text{H} \\ & & & & & & & \\ \text{H} & - & \text{C} & = & \text{C} & - & \text{C} & - & \text{C} & - & \text{H} \\ & & & & & & & & & & \\ & \text{H} & & & & & \text{H} & & \text{H} & & \end{array} $	
12. propyne C ₃ H ₄		
13.	$ \begin{array}{ccccccccccc} & \text{H} & & \text{H} & & & & \text{H} & & & & \text{H} & & \text{H} \\ & & & & & & & & & & & & & \\ \text{H} & - & \text{C} & - & \text{C} & = & \text{C} & - & \text{C} & = & \text{C} & - & \text{C} & - & \text{H} \\ & & & & & & & & & & & & & \\ & \text{H} & & & & & & \text{H} & & & & \text{H} & & \text{H} \end{array} $	
14. 2-pentyne C ₅ H ₈		
15.	$ \begin{array}{ccccccc} & \text{H} & & \text{CH}_3 & & \text{H} & & \text{H} \\ & & & & & & & \\ \text{H} & - & \text{C} & - & \text{C} & = & \text{C} & - & \text{C} & - & \text{C} & - & \text{H} \\ & & & & & & & & & & & & \\ & \text{H} & & & & & \text{H} & & \text{H} & & \text{H} & & \end{array} $	
16. 2,4-dioctene C ₈ H ₁₄		
17.	$ \begin{array}{ccccccc} & & & \text{H} & & & & \\ & & & & & & & \\ \text{H} & - & \text{C} & \equiv & \text{C} & - & \text{C} & - & \text{C} & \equiv & \text{C} & - & \text{H} \\ & & & & & & & & & & & & \\ & & & & & & \text{H} & & & & & & \end{array} $	
18. 4-methyl-2-pentene C ₆ H ₁₂		