

# Alkanes

Name: Solutions

A. Name the following alkanes:

1. $\text{CH}_3\text{-CH}(\text{CH}_3)\text{-CH}_2\text{-CH}_3$	2-methyl butane
2. $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}(\text{CH}_3)\text{-CH}(\text{CH}_3)\text{-CH}_3$	2,3-dimethylhexane
3. $\text{CH}_3\text{-CH}(\text{CH}_3)\text{-C}(\text{CH}_3)(\text{C}_2\text{H}_5)\text{-CH}_2\text{-CH}_3$	3-ethyl-2,3-dimethylpentane
4. $\text{CH}_3\text{-CH}_2\text{-CH}(\text{C}_2\text{H}_5)\text{-CH}_2\text{-CH}_3$	3-ethylpentane
5. $\text{CH}_3\text{-CH}(\text{CH}_3)\text{-CH}(\text{C}_2\text{H}_5)\text{-CH}_2\text{-CH}_3$	3-ethyl-2-methylpentane
6. $\text{CH}_3\text{-CH}_2\text{-CH}(\text{CH}_3)\text{-C}(\text{CH}_3)(\text{CH}_3)\text{-CH}_3$	2,2,3-trimethylpentane
7. $\text{CH}_3\text{-CH}(\text{CH}_3)\text{-CH}(\text{CH}_3)\text{-CH}(\text{CH}_3)\text{-CH}_3$	2,3,4-trimethylpentane
8. $\text{CH}_3\text{-CH}_2\text{-C}(\text{C}_2\text{H}_5)(\text{CH}_3)\text{-CH}_2\text{-CH}_2\text{-CH}_3$	3-ethyl-3-methylhexane
9. $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}(\text{C}_3\text{H}_7)\text{-CH}_2\text{-CH}_2\text{-CH}_3$	4-propylheptane
10. $\text{CH}_3\text{-CH}(\text{CH}_3)\text{-CH}_2\text{-CH}(\text{CH}_3)\text{-CH}_3$	2,4-dimethylpentane

B. Draw the structural formula in any format you wish:

1. 2,3-dimethylhexane	See Next Page ↓
2. 3-ethyl-4-methylheptane	
3. 2,3,5-trimethylhexane	
4. 2,2,3-trimethylbutane	
5. 3-ethyl-4-propylheptane	
6. 3-ethyl-2,5-dimethylhexane	
7. 2-methyl-4-propylheptane	
8. 3-ethyl-2-methyl-4-propyloctane	
9. 2,2-dimethylpropane	
10. 4,4-dipropylheptane	

C. Properly rename the following:

1. 1,2-dimethylbutane	3-methylpentane
2. 1,4,4-methylpentane	2,2-dimethylhexane
3. 2,3,3-trimethylbutane	2,2,3-trimethylbutane
4. 1,4-diethylbutane	nonane
5. 1,1,2,2-tetramethylethane	2,3-dimethylbutane

