Total # Carbons	# C in Main Chain	IUPAC Name	Structure
1	1	Methane	CH4
2	2	Ethane	<
3	3	Propane	\sim
4	4	Butane	\sim
	3	2-Methylpropane	\perp
5	5	Pentane	$\sim\sim$
	4	2-Methylbutane	\checkmark
	3	2,2-Dimethylpropane	\rightarrow
6	6	Hexane	$\sim\sim\sim$
	5	2-Methylpentane	\sim
		3-Methylpentane	$\frown \frown$
	4	2,2-Dimethylbutane	
		2,3-Dimethylbutane	1

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
7	7	Heptane	
	6	2-Methylhexane	
		3-Methylhexane	
	5	2,2-Dimethylpentane	\sim
		3,3-Dimethylpentane	
		2,3-Dimethylpentane	
		3-Ethylpentane	\sum
	4	2,2,3-Trimethylbutane	$\left \begin{array}{c} \\ \end{array} \right $

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
8	8	Octane	
	7	2-Methylheptane	
		3-Methylheptane	
		4-Methylheptane	
	6	2,2-Dimethylhexane	
		3,3-Dimethylhexane	
		2,3-Dimethylhexane	
		2,4-Dimethylhexane	
		2,5-Dimethylhexane	
		3,4-Dimethylhexane	
		3-Ethylhexane	

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
8 (cont)	5	2,2,3-Trimethylpentane	$ \frown \downarrow $
		2,3,3-Trimethylpentane	
		2,2,4-Trimethylpentane	
		2,3,4-Trimethylpentane	
		3-Ethyl-2-methylpentane	$\sum_{i=1}^{l}$
		3-Ethyl-3-methylpentane	\sim
	4	2,2,3,3-Tetramethylbutane	\downarrow

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
9	9	Nonane	
	8	2-Methyloctane	
		3-Methyloctane	
		4-Methyloctane	
	7	2,2-Dimethylheptane	
		3,3-Dimethylheptane	
		4,4-Dimethylheptane	
		2,3-Dimethylheptane	
		2,4-Dimethylheptane	
		2,5-Dimethylheptane	
		2,6-Dimethylheptane	

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
9 (cont)	$7 \ (cont)$	3,4-Dimethylheptane	
		3,5-Dimethylheptane	
		3-Ethylheptane	$\overline{}$
		4-Ethylheptane	
	6	2,2,3-Trimethylhexane	
		2,2,4-Trimethylhexane	
		2,2,5-Trimethylhexane	$\searrow \checkmark \checkmark$
		2,3,3-Trimethylhexane	
		2,3,4-Trimethylhexane	
		2,3,5-Trimethylhexane	

CHE 101 Simple Alkanes (Not Including Cycloalkanes)

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
9 (cont)	6 (cont)	2,4,4-Trimethylhexane	
		3,3,4-Trimethylhexane	
		3-Ethyl-2-methylhexane	
		3-Ethyl-3-methylhexane	
		3-Ethyl-4-methylhexane	
		4-Ethyl-2-methylhexane	
	5	2,2,3,4-Tetramethylpentane	
		2,3,3,4-Tetramethylpentane	
		2,2,4,4-Tetramethylpentane	

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
9 (cont)	$5 \ (\mathrm{cont})$	2,2,3,3-Tetramethylpentane	$ \land \downarrow \land $
		3-Ethyl-2,2-dimethylpentane	
		3-Ethyl-2,3-dimethylpentane	
		3-Ethyl-2,4-dimethylpentane	

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
10	10	Decane	
	9	2-Methylnonane	
		3-Methylnonane	
		4-Methylnonane	
		5-Methylnonane	
	8	2,2-Dimethyloctane	
		3,3-Dimethyloctane	
		4,4-Dimethyloctane	
		2,3-Dimethyloctane	
		2,4-Dimethyloctane	
		2,5-Dimethyloctane	
		2,6-Dimethyloctane	

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
10(cont)	8(cont)	2,7-Dimethyloctane	
		3,4-Dimethyloctane	
		3,5-Dimethyloctane	
		3,6-Dimethyloctane	
		4,5-Dimethyloctane	
		3-Ethyloctane	
		4-Ethyloctane	
	7	2,2,3-Trimethylheptane	
		2,2,4-Trimethylheptane	
		2,2,5-Trimethylheptane	

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
10 (cont)	$7 \ (cont)$	2,2,6-Trimethylheptane	
		2,3,3-Trimethylheptane	
		3,3,4-Trimethylheptane	
		3,3,5-Trimethylheptane	
		2,5,5-Trimethylheptane	
		2,4,4-Trimethylheptane	
		3,4,4-Trimethylheptane	
		3,4,5-Trimethylheptane	
		2,3,4-Trimethylheptane	
		2,3,5-Trimethylheptane	

CHE 101 Simple Alkanes (Not Including Cycloalkanes)

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
10 (cont)	7 (cont)	2,3,6-Trimethylheptane	
		2,4,6-Trimethylheptane	
		2,4,5-Trimethylheptane	
		5-Ethyl-2-methylheptane	
		3-Ethyl-2-methylheptane	
		3-Ethyl-3-methylheptane	
		3-Ethyl-4-methylheptane	
		3-Ethyl-5-methylheptane	
		4-Ethyl-2-methylheptane	

Total # Carbons	# C in Main Chain	IUPAC Name	Structure
10 (cont)	7 (7ont)	4-Ethyl-3-methylheptane	
		4-Ethyl-4-methylheptane	
		*4-(Methylethyl)heptane	
		4-Propylheptane	
	6	2,2,3,3-Tetramethylhexane	
		2,2,4,4-Tetramethylhexane	
		2,2,5,5-Tetramethylhexane	$\downarrow \frown \downarrow$
		2,2,3,4-Tetramethylhexane	
		2,2,3,5-Tetramethylhexane	$\begin{array}{c} \\ \\ \end{array}$

10 (cont)	$6 \ (cont)$	2,2,4,5-Tetramethylhexane	
		2,3,3,4-Tetramethylhexane	
		2,3,3,5-Tetramethylhexane	
		2,3,4,4-Tetramethylhexane	
		2,3,4,5-Tetramethylhexane	
		3-Ethyl-2,2-dimethylhexane	
		4-Ethyl-3,3-dimethylhexane	
		4-Ethyl-2,2-dimethylhexane	
		3-Ethyl-2,3-dimethylhexane	

10 (cont)	6 (cont)	3-Ethyl-2,4-dimethylhexane	
		3-Ethyl-2,5-dimethylhexane	
		3-Ethyl-3,4-dimethylhexane	
		4-Ethyl-2,3-dimethylhexane	
		4-Ethyl-2,4-dimethylhexane	
		3,4-Diethylhexane	
		3,3-Diethylhexane	
		*2-methyl-3- (methylethyl)hexane	

