

## Lecture 4 – Alkane nomenclature

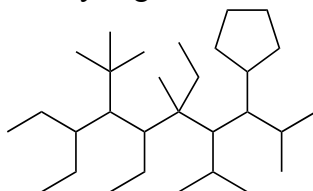
Alkane	Name	Skeletal Structure	Alkyl Group	Name & Abbrev.
CH <sub>4</sub>	<i>n</i> -Methane	.	-CH <sub>3</sub>	<b>Methyl (Me)</b>
CH <sub>3</sub> CH <sub>3</sub>	<i>n</i> -Ethane			<b>Ethyl (Et)</b>
CH <sub>3</sub> CH <sub>2</sub> CH <sub>3</sub>	<i>n</i> -Propane			<b>Propyl (Pr)</b>
				<b>Isopropyl (i-Pr)</b>
CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>	<i>n</i> -Butane			<b>Butyl (Bu)</b>
				<i>sec</i> -Butyl (s-Bu)
CH <sub>3</sub> CH(CH <sub>3</sub> )CH <sub>3</sub>	Isobutane or 2-methylpropane			Isobutyl ( <i>i</i> -Bu)
				<i>tert</i> -Butyl

# Carbons	Prefix	# Carbons	Prefix
1	Meth-	7	Sept-
2	Eth-	8	Oct-
3	Prop-	9	Non-
4	But-	10	Dec-
5	Pent-	11	Undec-
6	Hex-	12	Dodec-

**Lecture 4 & 5 In-Class Problems**

Draw the structure of **4-Ethyl-2,2-dimethylhexane**

Name the following compound (How many degrees of unsaturation does this compound have?)



Draw the least and most stable conformations of 2,3-dichlorobutane (Newman projections down the C2-C3 bond).

Draw both chair conformations of *cis*- and *trans*-1,4-dimethylcyclohexane. Indicate the least and most stable conformation for each. Explain how to account for the stability.

