

Alkenes and Alkynes

Foldable Instructions

* Cut Here

1) Identify the number of carbons.

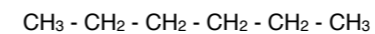
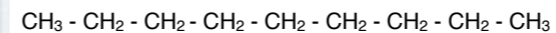
2) Use the appropriate IUPAC prefix with the ending _____.

1) Draw the number of _____ identified by the IUPAC prefix. Attach them each by a _____ bond.

2) _____ each carbon using a _____.

EXAMPLES

Name:



EXAMPLES

Draw:

pentane

octane

- Alkanes are characterized by a _____ carbon-carbon bond.
- Alkanes are _____ and contained no double or triple bonds.
- Alkanes always end with ' _____ '.

Foldable Instructions

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Blanks
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1) Identify the number of carbons.

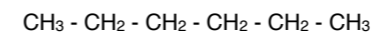
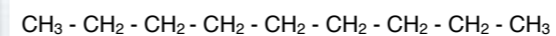
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EXAMPLES

Name:



EXAMPLES

Draw:

pentane

octane

- Alkanes are characterized by a _____ carbon-carbon bond.
- Alkanes are _____ and contained no double or triple bonds.
- Alkanes always end with ' _____ '.

Alkenes

- * These are straight open chains of hydrogen and carbon made up of at least one carbon-carbon double bonds.
- * Alkenes are considered to be unsaturated.

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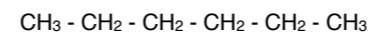
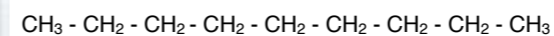
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EXAMPLES

Name:



EXAMPLES

Draw:

pentane

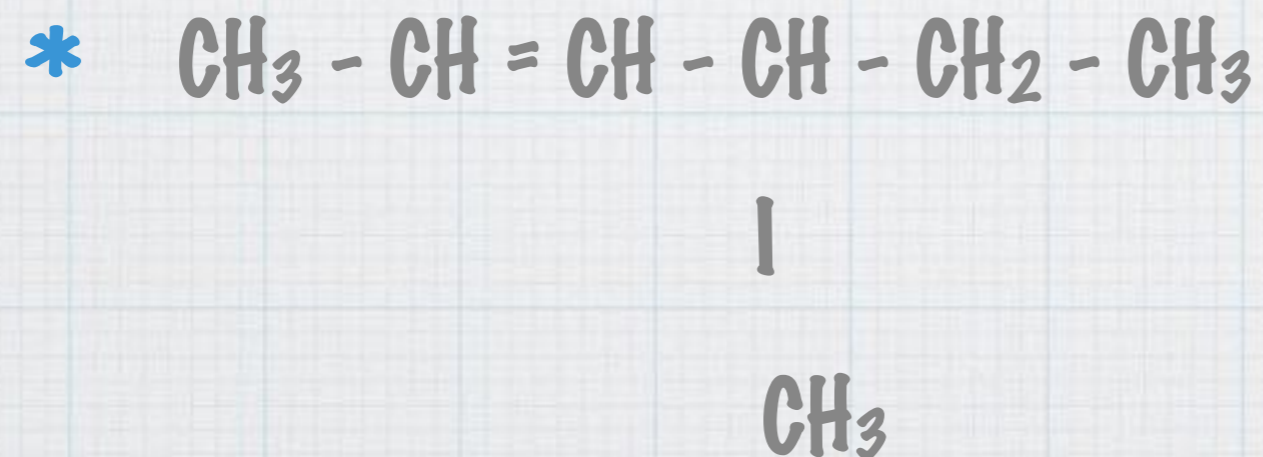
octane

- Alkanes are characterized by a _____ carbon-carbon bond.
- Alkanes are _____ and contained no double or triple bonds.
- Alkanes always end with ' _____ '.

Naming Alkenes

- * Identify the number of carbons.
- * Use the appropriate IUPAC prefix with the ending ENE.
- * Use a number to identify the location of the double bond directly in front of ENE separated by dashes. (ex: pent-2-ene)
- * Name any additional side chains with the same numbering system.

Examples



Examples



hept-3-ene



4-methylhex-2-ene

Foldable Instructions

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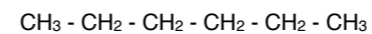
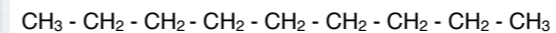
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EXAMPLES

Name:



EXAMPLES

Draw:

pentane

octane

- Alkanes are characterized by a _____ carbon-carbon bond.
- Alkanes are _____ and contained no double or triple bonds.
- Alkanes always end with ' _____ '.

Drawing Alkenes

- * Draw the number of carbons identified by the IUPAC prefix. Attach them each by a single bond.
- * Draw the double bond as identified.
- * Add any additional side chains.
- * Saturate each carbon using a hydrogen.

Examples

but-2-ene

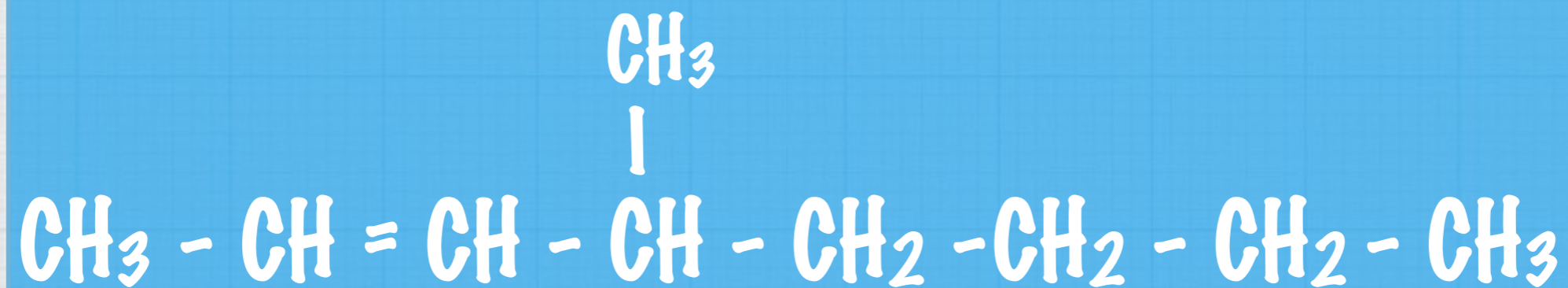
4-ethyloct-2-ene

Examples

but-2-ene



4-ethyloct-2-ene



Alkynes

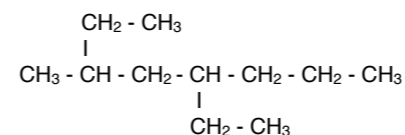
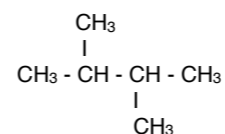
Foldable Instructions

* Fill in the
Blanks
Here

- 1) Identify the longest continuous chain.
- 2) Use ANE ending.
- 3) Name the side chains according to number of carbons with an YL ending. Place them in alphabetical order.
- 4) Use di(2), tri(3), tetra(4) to identify more than one of the same type of side chain.
- 5) Number side chains using the lowest numbering system.

EXAMPLES

Name:



- 1) Start by drawing the base chain using the prefix in front of 'ane'
- 2) Add any side chains based on the location indicated by the number preceding it.
- 3) For each side chain, draw the number of carbons identified in by the prefix in front of the YL ending.
- 4) Saturate each carbon with the appropriate number of hydrogens.

EXAMPLES

Draw:

2-methylhexane

3, 4 - dimethylheptane

- These are alkanes that contain branches or _____.
- _____: Compounds with the same molecular _____ but a different _____ formula.

Branched Alkynes

- * These are straight open chains of hydrogen and carbon made up of at least one carbon-carbon triple bonds.
- * Alkynes are considered to be unsaturated.

Foldable Instructions

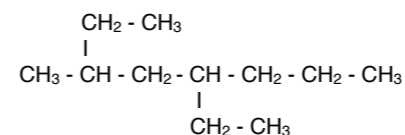
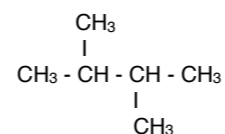
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EXAMPLES

Name:



EXAMPLES

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3, 4 - dimethylheptane

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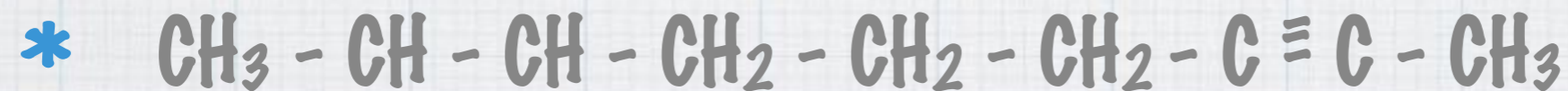
Naming Branched Alkynes

- * Identify the number of carbons.
- * Use the appropriate IUPAC prefix with the ending YNE.
- * Use a number to identify the location of the triple bond directly in front of YNE separated by dashes. (ex: pent-2-yne)
- * Name any additional side chains with the same numbering system.

Examples



pent-2-ene



|

CH_3

8-methylnon-2-ene

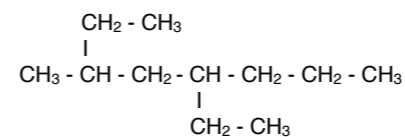
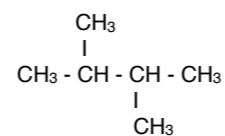
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EXAMPLES

Draw:

2-methylhexane

3, 4 - dimethylheptane

- These are alkanes that contain branches or _____.
- _____: Compounds with the same molecular _____ but a different _____ formula.

Drawing Branched Alkynes

- * Draw the number of carbons identified by the IUPAC prefix. Attach them each by a single bond.
- * Draw the triple bond as identified.
- * Add any additional side chains.
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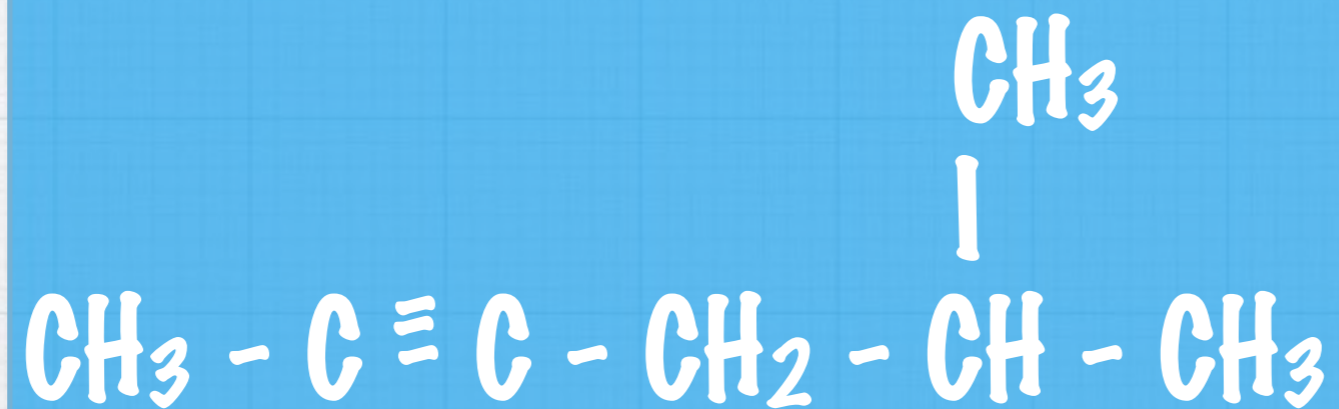
Examples

5-methylhex-2-yne

non-4-yne

Examples

5-methylhex-2-yne



non-4-yne

