|  |  |  |
| --- | --- | --- |
|  | **Alkenes and Alkynes** | Name: Date: |
|  |
| **Alkenes** |

* Hydrocarbons containing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonds.
* General Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* They are unsaturated – the double bond is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for other atoms to bond to the carbon atom.

|  |  |  |
| --- | --- | --- |
| **# of C Atoms** | **Prefix** | **Alkene** |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |

**Steps to Naming Alkenes:**

1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ must contain the double bond. (*even if it is not the longest chain*)

|  |  |
| --- | --- |
| **Screen shot 2012-01-02 at 1.12.20 PM.png** | *The longest continuous chain of carbon atoms including the double bond contains \_\_\_\_\_ carbon atoms* |

1. The parent chain carbon atoms are numbered….. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Screen shot 2012-01-02 at 1.12.20 PM.png** | *The double bond follows carbon #\_\_\_\_\_\_\_.**The parent chain is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.* |

1. The position of the double bond is indicated in the name by stating the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the carbon atom in the parent chain that the double bond follows.

****

Name the branches!

1. Name the compound.

**Practice #1.**

|  |  |
| --- | --- |
| 1. Parent Chain.
2. Number the parent chain.
3. Name the branches.
4. Name the compound

  | Screen shot 2012-01-02 at 1.13.19 PM.png |

**Practice #2.**

|  |  |
| --- | --- |
| 1. Parent Chain.
2. Number the parent chain.
3. Name the branches.
4. Name the compound

  | Screen shot 2012-01-02 at 1.13.56 PM.png |

|  |
| --- |
| **Alkynes** |

* Hydrocarbons containing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonds.
* General Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* They are unsaturated – the double bond is a reactive site for other atoms to bond to the carbon atom.

**Steps to Naming Alkynes:**

* The same rules for naming an alkene apply; however the ending is “\_\_\_\_\_\_\_\_\_\_\_” instead of “\_\_\_\_\_\_\_\_\_\_\_\_.”

|  |  |  |
| --- | --- | --- |
| **# of C Atoms** | **Prefix** | **Alkyne** |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |

**Practice #1.**

|  |  |
| --- | --- |
| 1. Parent Chain.
2. Number the parent chain.
3. Name the branches.
4. Name the compound

  | Screen shot 2012-01-02 at 1.16.55 PM.png |

**Practice #2.**

|  |  |
| --- | --- |
| 1. Parent Chain.
2. Number the parent chain.
3. Name the branches.
4. Name the compound

  | Screen shot 2012-01-02 at 1.24.05 PM.png |