**Unit 1: Dimensional Analysis** Notes Date: \_\_\_\_\_\_\_\_

1. **Dimensional Analysis-** is a problem-solving method that uses the idea that any number or expression can be multiplied by one without changing its value **\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_** is used to convert one unit of measurement to another unit of measurement using **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.
2. **Useful Conversions Factor:** These Conversion Factors are \_\_\_\_\_\_\_\_\_\_ and unchanging relationships.



**III. There are 5 Steps to do Dimensional Analysis?**

1. Start with what value is \_\_\_\_\_\_\_\_, proceed to the unknown.

2. Draw the \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ or fence (count the “jumps”).

3. Insert the \_\_\_\_\_\_\_\_\_ Factor.

4. \_\_\_\_\_\_\_ the units.

5. Do the \_\_\_\_\_\_\_\_, include units in answer.

**IV. How do you set up a problem?**

Using conversion factors and the following set up we can jump from unit tounit in a breeze!

|  |  |
| --- | --- |
| **Box #1****Write the value that \_\_\_\_\_\_\_ to be converted** | **Box # 3****One side of the** **\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_** |
| **Box #2****Write a \_\_\_\_ in the denominator** | **Box # 4****One side of the Conversion factor****(\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_ \_\_\_\_\_\_ \_\_\_\_)** |

**V. Examples**
**Example A: How many Slices there are in 7 Pizzas?**Given:\_\_\_\_\_\_\_\_\_\_\_\_

Want:\_\_\_\_\_\_\_\_\_\_\_\_

Conversion:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Example B: How old are you in days?**Given:\_\_\_\_\_\_\_\_\_\_\_\_

Want:\_\_\_\_\_\_\_\_\_\_\_\_

Conversion:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
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|  |  |

**Example C: There are 2.54 cm in one inch. How many inches are in 17.3 cm?**

Given:\_\_\_\_\_\_\_\_\_\_\_\_

Want:\_\_\_\_\_\_\_\_\_\_\_\_

Conversion:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
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