

Unit Conversion

- The mathematical process of expressing the amount of a quantity using a different unit
- The original and converted values both express the same amount
- The amount of the quantity does not change..equivalence is preserved
- A *conversion factor* is functions to transfer equivalence

Unit Conversion

- The mathematical process of changing the value and unit of a physical quantity into a different value and unit that expresses equivalence.
- Unit conversion expresses the amount of a physical quantity using a different number and unit which is equivalent to the original.
- The original and converted values and units express the same amount and are equivalent.
- In the process of unit conversion, the amount of the physical quantity does not change..equivalence is preserved.
- One or more conversion factors are used during the process of unit conversion.
- A conversion factor is a ratio between two units that express the equivalence between them. It tells how much of one unit is equal to another unit.

Method of Unit Conversion

1. Write down the given quantity. Be certain to include the units.
2. Using parenthesis, multiply the given quantity by one or more conversion factors, one after another.
 - For each conversion factor, arrange the units in the numerator and denominator such that “unwanted” units will cancel. Show the cancelled units by using slashes.
 - Be certain to write the correct power of ten with its unit in the conversion factor ratio. Use the table of prefixes as a guide. Think about how big or small one unit is compared to the other. This will help you decide where to place the power of ten; either in the numerator or denominator.
3. Multiply and divide the values in the conversion formula. Be certain to pay attention to how you enter the values in your calculator. Be certain to use the EE, EXP, $\times 10^n$ buttons, not the \wedge button when entering powers of ten!
4. Write the answer of the calculation expressing it using scientific notation. Box the answer!