

Chemistry Quiz on Topic 1

Main Topics

- Dimensional Analysis – See notes below and *Metric Conversion Worksheet (II and III)* and Section 2.6 in the textbook on Page 28.
 - Memorize chart of **SI Prefixes** to do dimensional analysis – these are the problems with the metric conversions.
- Scientific Notation – See Notes, *Worksheet: Practice with Scientific Notation* and Section 2.1 in the textbook on Page 15.
- Significant Figures - See Notes and HW, the *Counting Significant Figures Box and Dot Method* worksheet, and Sections 2.4 and 2.5 in the textbook on pages 22 and 23.

Dimensional Analysis – Changing from one unit to another via conversion factors (based on the equivalence statements between the units)

- Used to solve problems (way to solve them)
 - Ex. 25,451 cm -----> km

$$1 \text{ km} = 10^5 \text{ cm}$$

$$\begin{array}{cc} \text{km} & \text{cm} \\ 10^3 & 10^{-2} = 10^5 \end{array}$$

Need

- 1. Conversion factor – relationship between 2 units**
- 2. Given information**

$$25,451 \text{ cm} \times \frac{1 \text{ km}}{10^5 \text{ cm}} = 25,451 \times 10^{-5} \text{ km}$$

$$2.5451 \times 10^{-1} \text{ km}$$

Not in Scientific Notation

Final Answer, In Scientific Notation

Scientific Notation – Expresses a number as *a product of a number between 1 and 10 and the appropriate power of 10.*

Metric System

- International System of Measure (SI System)
- It is universal.
- Based off of 10.
- (Wants us to) use system to convert

Significant Figures – The numbers recorded in a measurement (all of the certain numbers plus the first uncertain number).

Ex. 1400 has two significant figures