

# Scientific Notation and Significant Figures



## Writing Numbers in Scientific Notation

1. Move the decimal point to the **right** or the **left** in order obtain only **one leading digit**.
2. If the decimal is moved to the **right**, then **subtract** from the **power of 10** the number of times you moved the decimal.
3. If the decimal is moved to the **left**, then **add** to the **power of 10** the number of times you moved the decimal.

**Example:**  $1,530 = 1.53 \times 10^3$  or  $.00153 = 1.53 \times 10^{-3}$

## Significant Figures

Using significant figures (sig figs) allows scientists the ability to round off calculations without compromising the integrity of their research.

Remember a calculation is only as good as the measurements, a measurement only as good as the tool and a tool is only as good as the person using it.

## Recognizing Significant Figures

1. All non-zero digits are significant.
2. All zeroes between sig figs are significant.
3. Leading zeroes are never significant.
4. Trailing zeroes are significant if there is a written decimal point.

## Temperature Conversions

$$^{\circ}\text{F} = 1.8^{\circ}\text{C} + 32$$

$$^{\circ}\text{C} = \frac{^{\circ}\text{F} - 32}{1.8}$$

$$\text{K} = ^{\circ}\text{C} + 273$$

***"Self-discipline is the ability to make yourself do what you should do, when you should do it, whether you feel like it or not."***  
***--Elbert Hubbard***