

Significant Figures:

↳ how certain you are something is accurate

↳ measure it to be 2.54 cm - ish

$$= 2.54 \overset{\text{uncertainty}}{\pm} 0.01 \text{ cm}$$

↳ Aimed to give us some certainty about values

Ex: 3.74 : 3SF 2.9000 : 5SF 100. : 3SF 100 : 1 or 2?

Scientific Notation:

↳ Write #'s w/ only 1 value to the left of the decimal, use power of 10 to express magnitude

= 1×10^2 v.s. 1.0×10^2 there is a number in the 10's place but you don't know what the number is
 you know there is no number in the 10's place

Dimensional Analysis:

↳ Convert 2.0 dekayears \rightarrow weeks $2.0 \times 10^1 \rightarrow 20 \text{ years}$ $\frac{20 \text{ years}}{1} \cdot \frac{365.25 \text{ day}}{1 \text{ yr}} \cdot \frac{1 \text{ week}}{7 \text{ days}} \rightarrow$

$1043.57 \text{ weeks} \rightarrow 1000 \text{ weeks} \rightarrow \underline{1.0 \times 10^3 \text{ weeks}}$