



## 2 main systems of Measurement

Metric  
"Canada"

Imperial  
"United States"

Meters	←	length	→	inches, feet, miles
grams	←	weight	→	ounces, pounds, tons
Celsius	←	Temperature	→	Fahrenheit
litres	←	Volume	→	ounces, cups, pints, quarts, gallons

★ When doing calculations with units (Perimeter, Area, Volume) you MUST have the same units for all quantities

### Metric Prefixes

- Kilo (k) = 1000 eg. 1 Kilogram = 1000 grams
- Hecto (h) = 100 eg. 1 hectolitre = 100 L
- Deca (da) = 10 eg. 1 decametre = 10 m

---

- Deci (d) =  $\frac{1}{10}$  or 0.1 eg. 1 decimeter = 0.1 m
- Centi (c) =  $\frac{1}{100}$  or 0.01 eg. 1 centimetre = 0.01 m
- Milli (m) =  $\frac{1}{1000}$  or 0.001 eg. 1 millimetre = 0.001 m

### Unit Conversions

★ Set up proportions as needed to cancel and change units to your desired units

example: mph into ~~km/s~~

$$60 \frac{\cancel{\text{miles}}}{\cancel{\text{hour}}} \times \frac{1.61 \cancel{\text{km}}}{1 \cancel{\text{mile}}} \times \frac{1000 \cancel{\text{m}}}{1 \cancel{\text{km}}} \times \frac{1 \cancel{\text{hour}}}{60 \cancel{\text{min}}} \times \frac{1 \cancel{\text{min}}}{60 \cancel{\text{sec}}}$$

$$= \frac{60 \times 1.61 \times 1000}{60 \times 60} = \frac{1610}{60} = \frac{161}{6} = \underline{\underline{26.7 \text{ m/s}}}$$