

Unit Conversion of Length, Mass, and Time

Unit conversion is the process of converting a measurement from one unit to another. This is crucial in science and everyday life to ensure consistency and accuracy in measurements. Here is a brief overview of unit conversions for length, mass, and time:

Length

- **Common Units:** Meter (m), Kilometer (km), Centimeter (cm), Millimeter (mm), Inch (in), Foot (ft), Mile (mi)
- **Conversion Factors:**
 - $1 \text{ km} = 1,000 \text{ m}$
 - $1 \text{ m} = 100 \text{ cm}$
 - $1 \text{ cm} = 10 \text{ mm}$
 - $1 \text{ in} = 2.54 \text{ cm}$
 - $1 \text{ ft} = 12 \text{ in}$
 - $1 \text{ mi} = 1,609.34 \text{ m}$
- **Example Conversion:**
 - Convert 5 kilometers to meters:
 - $5 \text{ km} \times 1,000 \text{ m/km} = 5,000 \text{ m}$

Mass

- **Common Units:** Kilogram (kg), Gram (g), Milligram (mg), Ton (t), Pound (lb), Ounce (oz)
- **Conversion Factors:**
 - $1 \text{ kg} = 1,000 \text{ g}$
 - $1 \text{ g} = 1,000 \text{ mg}$
 - $1 \text{ t} = 1,000 \text{ kg}$
 - $1 \text{ lb} = 0.453592 \text{ kg}$
 - $1 \text{ oz} = 28.3495 \text{ g}$
- **Example Conversion:**
 - Convert 3 kilograms to grams:
 - $3 \text{ kg} \times 1,000 \text{ g/kg} = 3,000 \text{ g}$

Time

- **Common Units:** Second (s), Minute (min), Hour (h), Day (d)
- **Conversion Factors:**
 - $1 \text{ min} = 60 \text{ s}$
 - $1 \text{ h} = 60 \text{ min}$
 - $1 \text{ d} = 24 \text{ h}$
- **Example Conversion:**
 - Convert 2 hours to seconds:
 - $2 \text{ h} \times 60 \text{ min/h} \times 60 \text{ s/min} = 7,200 \text{ s}$