



Metric-Imperial Conversion Quick Reference For Makers, Engineers, and Creators

Length/Distance Conversions

Metric	Imperial	Imperial	Metric
1 mm	0.039 inches	1 inch	25.4 mm
1 cm	0.393 inches	1 foot	30.48 cm
1 m	3.281 feet	1 yard	0.914 m
1 km	0.621 miles	1 mile	1.609 km

Weight/Mass Conversions

Metric	Imperial	Imperial	Metric
1 g	0.035 oz	1 oz	28.35 g
100 g	3.527 oz	1 lb	453.592 g
1 kg	2.205 lbs	1 stone	6.35 kg
1 tonne	1.102 US tons	1 US ton	907.185 kg

Volume Conversions

Metric	Imperial (US)	Imperial (US)	Metric
1 mL	0.034 fl oz	1 tsp	4.929 mL



Metric	Imperial (US)	Imperial (US)	Metric
100 mL	3.381 fl oz	1 tbsp	14.787 mL
1 L	1.057 quarts	1 cup	236.588 mL
1 L	0.264 gallons	1 pint	473.176 mL

Temperature Conversions

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°C to °F: Multiply by 9/5, then add 32

°F to °C: Subtract 32, then multiply by 5/9

Common Reference Points:

- 0°C = 32°F (Water freezes)
- 20°C = 68°F (Room temperature)
- 100°C = 212°F (Water boils)

Area Conversions

Metric	Imperial	Imperial	Metric
1 cm²	0.155 in²	1 in²	6.452 cm²
1 m²	10.764 ft²	1 ft²	0.093 m²
1 hectare	2.471 acres	1 acre	0.405 hectares

Maker-Specific Conversions

Measurement	Conversion
3D Printing	100 microns = 0.1 mm
CNC Machining	1 thou = 0.001 inch = 25.4 microns
Woodworking	1 board foot = 144 in³ = 2.36 L



Measurement	Conversion
Electronics	1 AWG = 0.3249 mm diameter

Quick Conversion Tips

1. Rule of Thumb:

- 1 meter $\approx$ 1 yard + 10%
- 1 liter $\approx$ 1 quart + 5%
- 1 kg $\approx$ 2.2 pounds

2. Fractional Inches to Decimal:

- 1/16" = 0.0625
- 1/8" = 0.125
- 1/4" = 0.25
- 1/2" = 0.5

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