

## Imperial Measurement

Imperial measurement is a system of measurement based on British units. In Canada, we officially changed to the metric system in 1971 but we continue to use both systems for different purposes. Imperial units are used in most trades and we also generally use imperial units for measuring things such as height and weight (although in medicine, they do use metric units) and we often use imperial measures when cooking.

Common Imperial units of measure and their short forms:

Length/height – inches (in. or “), feet (ft. or ‘), yards (yd), miles (mi.)

Volume – fluid ounces (fl. oz.), pints (pt), quarts (qt), gallons

Weight – ounces (oz), pounds (lbs), tons

Temperature - °Fahrenheit (°F)

Conversion tables are an essential tool when converting between the two systems of measurement, although some conversions are used so often that committing them to memory becomes important.

The following conversion tables are useful when converting between metric and imperial measures.

### **Metric to Imperial:**

Metric		Imperial
1 mm		0.03937 in.
1 cm	10 mm	0.3937 in.
1 m	100 cm	1.0936 yd.
1 km	1000 m	0.6214 mile

Metric		Imperial
1 L	1000 cm <sup>3</sup>	2.11 pt
1 L	1000 mL	2.11 pt

Note: 1 mL = 1 cm<sup>3</sup>

Metric		Imperial
1 kg	1000 g	2.2 lbs.
1 metric tonne (1 t)	1000 kg	2200 lbs. (1.1 US ton)

**Imperial to Metric:**

Imperial		Metric
1 in.		2.54 cm
1 ft	12 in.	30.48 cm
1 yd	3 ft	0.9144 m
1 mile	1760 yd	1.6093 km

Imperial		Metric
1 fluid ounce		29.574 mL
1 pint	16 fluid ounces	473 mL
1 quart	2 pints	0.946 L
1 gallon	4 quarts	3.785 L

Imperial		Metric
1 ounce (1 oz.)		28.35 g
1 pound (1 lb.)	16 ounces	0.454 kg
1 ton (US)	2000 pounds	0.907 t (metric tonnes)

Practice:

1. Convert each imperial measure to the metric measure indicated.

a. 10 ft, in metres

b. 150 miles, in km

c. 156 lb, in kg

d. 7 pints, in litres

e. 10 feet, in metres

f.  $1 \text{ ft}^2$ , in square metres

g.  $2 \text{ ft}^3$ , in cubic centimetres

2. Convert each metric measure to the imperial measure indicated.

a. 3 m, in yards

b. 60 cm, in inches

c. 1.3 metric tonnes, in US tons

d. 4 L, in quarts

e. 600 g, in pounds

f. 450 mL, in pints

g. 3 cubic metres, in cubic inches