



The earliest measurements were based on parts of the human body, such as the arm, hand, foot or finger. These were accurate enough when people made products by hand, one at a time. But industrialization and the growth of international trade made it necessary to standardize units of measurement.

In the American colonies, the first system of weights and measures used was that of the English. However, when Britain defined the Imperial System of Measurement in 1824, America had already become independent. This explains a number of differences in the two systems. For example, in the US, a pint is 16 fluid

ounces, compared to the imperial 20 ounces. Dry weights greater than a pound are different as well.

In the late 18th century, the metre was introduced as the standard unit of length in France. Two centuries later, the Système International d'Unités (SI), or International System of Units, has become the modern metric system, and the metre is now defined as the distance travelled by light in 1/299,792,458th of a second.

In the UK, metrification is taking place slowly. Americans still use the US Customary System of Units almost exclusively, but the metric system is increasingly used in science, the military and for global trade.

WEIGHTS AND MEASURES*

Length

1 inch		= 2.54 cm
1 foot	= 12 inches	= 30.48 cm
1 yard	= 3 feet	= 91.44 cm
1 mile	= 1,760 yards	= 1.61 km
1 nautical mile	= 1.852 metres	

1 millimetre	= 0.04 inch
1 centimetre	= 0.39 inch
1 metre	= 39.37 inches / 3.28 feet / 1.09 yards
1 kilometre	= 0.62 mile

Area

1 square inch	= 6.45 cm ²
1 square foot	= 0.09 m ²
1 square yard	= 0.84 m ²
1 square mile	= 2.59 km ²
1 acre	= 4,840 square yards = 0.40 ha

1 cm ²	= 0.15 square inch
1 m ²	= 10.76 square feet
1 km ²	= 0.39 square mile
1 hectare	= 2.47 acres

Volume (liquids)

1 fluid ounce (UK)	= 28.41 ml
1 fluid ounce (US)	= 29.57 ml
1 pint (UK)	= 20 fluid ounces (UK) = 0.57 l
1 pint (US)	= 16 fluid ounces (US) = 0.47 l
1 quart (US)	= 2 pints (US) = 0.95 l
1 gallon (UK)	= 4.55 l
1 gallon (US)	= 4 quarts = 3.79 l

1 millilitre	= 0.04 fluid ounces (UK), 0.03 fluid ounces (US)
1 litre	= 1.76 pints (UK) / 1.06 quarts (US)

Mass

1 ounce	= 28.35 g
1 pound	= 16 ounces = 0.45 kg
1 stone (UK)	= 14 pounds = 6.35 kg
1 hundredweight (UK)	= 112 pounds = 50.80 kg
1 hundredweight (US)	= 100 pounds = 45.36 kg
1 ton (UK)	= 2,240 pounds = 1,016.05 kg
1 ton (US)	= 2,000 pounds = 907.19 kg

1 gram	= 0.03 ounce
1 kilogram	= 2.21 pounds

*Note: In English, a decimal point is used instead of a comma. Measurements are given to an accuracy of maximum two decimal places.