

# Weights & Measures

## CONVERSIONS

### LENGTH

#### Centimeters & Inches

1 cm = .394 in  
 1 in = 2.54 cm

#### Centimeters & Millimeters

1 cm = 10 mm  
 1 mm = .1 cm

#### Centimeters & Picas

1 cm = 2.362 picas  
 1 picas = .4233 cm

#### Centimeters & Points

1 cm = 28.3464 points  
 1 points = .0353 cm

#### Millimeters & Inches

1 mm = .0394 in  
 1 in = 25.4 mm

#### Millimeters & Micrometers (Microns)

1 mm = 1,000  $\mu$   
 1  $\mu$  = .001 mm

#### Meters & Chains (G)

1 m = .04971 ch  
 1 ch = 20.117 m

#### Meters & Fathoms

1 m = .547 fm  
 1 fm = 1.83 m

#### Meters & Feet

1 m = 3.281 ft  
 1 ft = .305 m

#### Meters & Yards

1 m = 1.094 yd  
 1 yd = .914 m

#### Meters & Furlongs

1 m = .005 fur  
 1 fur = 201.17 m

#### Chains (G)\* & Feet

1 ch = 66 ft  
 1 ft = .015 ch

#### Chains (G)\* & Rods

1 ch = 4 rd  
 1 rd = .25 ch

#### Chains (G)\* & Yards

1 ch = 22 yd  
 1 yd = .045 ch

#### Fathoms & Feet

1 fa = 6 ft  
 1 ft = .167 fa

#### Kilometers & Feet

1 km = 3280.84 ft  
 1 ft = (3.048 x 10<sup>-4</sup>) km

#### Kilometers & Yards

1 km = 1093.6 yd  
 1 yd = .00091 km

#### Kilometers & Statute Miles

1 km = .621 mi  
 1 mi = 1.609 km

#### Kilometers & Nautical Miles

1 km = 540 n mi  
 1 n mi = 1.852 km

#### Nautical Miles & Statute Miles

1 n mi = 1.15 s mi  
 1 s mi = 869 n mi

### WEIGHT

#### Grains (gr) & Grams (g)

1 gr = .065 g  
 1 g = 15.432 gr

#### Drams (avdp) & Ounces (avdp)

1 dr (avdp) = .0625 oz (avdp)  
 1 oz (avdp) = 16 dr (avdp)

#### Pennyweight & Grams

1 dwt = 1.5552 g  
 1 g = .643 dwt

#### Grams & Ounces (US)

1 g = .035 oz  
 1 oz = 28.349 g

#### Ounces (troy) & Grains

1 oz tr = 480 gr  
 1 gr = .00208 oz tr

#### Ounces (troy) & Grams

1 oz tr = 31.103 g  
 1 g = .032 oz tr

#### Ounces (troy) & Ounces (avdp)

1 oz tr = 1.097 oz (avdp)  
 1 oz (avdp) = .911 oz tr

#### Ounces (avdp) & Pounds (avdp)

1 oz (avdp) = .0625 lb (avdp)  
 1 lb (avdp) = 16 oz (avdp)

#### Milligrams & Grains

1 mg = .015 gr  
 1 gr = 64.799 mg

#### Grains & Carats

1 gr = .32399 c  
 1 c = 3.0865 gr

#### Grams & Carats (metric)

1 g = 5 c (metric)  
 1 c (metric) = .2 g

#### Milligrams & Carats (metric)

1 mg = .005 c (metric)  
 1 c (metric) = 200 mg

#### Pounds & Kilograms

1 lb = .454 kg  
 1 kg = 2.205 lb

#### Tons (long) & Pounds (avdp)

1 lt = 2,240 lbs (avdp)  
 1 lb (avdp) = .000446 lt

#### Tons (short) & Pounds (avdp)

1 sht = 2,000 lbs (avdp)  
 1 lb (avdp) = .0005 sht

#### Tonnes (metric) & Pounds (avdp)

1 t = 2204.62 lbs (avdp)  
 1 lb (avdp) = .0004536 t

### AREA

#### Sq. Centimeters & Sq. In.

1 cm<sup>2</sup> = .155 in<sup>2</sup>  
 1 in<sup>2</sup> = 6.452 cm<sup>2</sup>

#### Sq. Meters & Sq. Chains (G)\*

1 m<sup>2</sup> = .0025 ch<sup>2</sup>  
 1 ch<sup>2</sup> = 404.686 m<sup>2</sup>

#### Sq. Rods & Sq. Chains (G)\*

1 rd<sup>2</sup> = .0625 ch<sup>2</sup> (G)  
 1 ch<sup>2</sup> = 16 rd<sup>2</sup>

#### Sq. Chains & Acres

1 ch<sup>2</sup> (G) = .1 A  
 1 A = 10 ch<sup>2</sup>(G)

#### Sq. Chains (G)\* & Sq. Feet

1 ch<sup>2</sup> (G) = 4,356 ft<sup>2</sup>  
 1 ft<sup>2</sup> = .00023 ch<sup>2</sup> (G)

#### Hectares & Sq. Miles

1 ha = .0039 mi<sup>2</sup>  
 1 mi<sup>2</sup> = 258.999 ha

#### Hectares & Acres

1 ha = 2.471 A  
 1 A = .405 ha

#### Acres & Sq. Miles

1 A = .00156 mi<sup>2</sup>  
 1 mi<sup>2</sup> = 640 A

#### Sq. Kilometers & Sq. Miles

1 km<sup>2</sup> = .386 mi<sup>2</sup>  
 1 mi<sup>2</sup> = 2.590 km<sup>2</sup>

#### Sq. Meters & Acres

1 m<sup>2</sup> = .000247 A  
 1 A = 4046.856 m<sup>2</sup>

#### Sq. Meters & Hectares

1 m<sup>2</sup> = .0001 ha  
 1 ha = 10,000 m<sup>2</sup>

#### Sq. Meters & Sq. Feet

1 m<sup>2</sup> = 10.764 ft<sup>2</sup>  
 1 ft<sup>2</sup> = .093 m<sup>2</sup>

#### Sq. Meters & Sq. Yards

1 m<sup>2</sup> = 1.196 yd<sup>2</sup>  
 1 yd<sup>2</sup> = .836 m<sup>2</sup>

#### Sq. Meters & Sq. Rods

1 m<sup>2</sup> = .03954 rd<sup>2</sup>  
 1 rd<sup>2</sup> = 25.293 m<sup>2</sup>

#### Sq. Yards & Sq. Feet

1 yd<sup>2</sup> = 9 ft<sup>2</sup>  
 1 ft<sup>2</sup> = .1111 yd<sup>2</sup>

avdp: "goods of weight"

\* (G): Gunter's / surveyor's chain

### LIQUID CAPACITY

#### Gallons (UK & US)

1 UK gal = 1.201 US gal  
 1 US gal = .833 UK gal

#### Quarts (UK & US)

1 UK qt = 1.201 US qt  
 1 US qt = .833 UK qt

#### Pints (UK & US)

1 UK pt = 1.201 US pt  
 1 US pt = .833 UK pt

#### Ounces (UK & US)

1 UK oz = .961 US oz  
 1 US oz = 1.041 UK oz

#### Gallons (UK) & Liters

1 UK gal = 4.546 L  
 1 L = .220 UK gal

#### Quarts (UK) & Liters

1 UK qt x 1.137 L  
 1 L x .880 UK qt

#### Pints (UK) & Liters

1 UK pt = .568 L  
 1 L = 1.760 UK pt

#### Ounces (UK) & Milliliters

1 UK oz = 28.413 ml  
 1 ml = .035 UK oz

#### Gallons (US) & Liters

1 US gal = 3.785 L  
 1 L = .264 US gal

#### US Quarts & Liters

1 US qt = .946 L  
 1 L = 1.056 US qt

#### Pints (US) & Liters

1 US pt = .473 L  
 1 L = 2.113 US pt

#### Ounces (US) & Liters

1 oz = .03 L  
 1 Liter = 33.8 US oz

#### Ounces (US) & Milliliters

1 oz = 29.574 ml  
 1 ml = .034 US oz

#### Gills & Ounces (US)

1 gi = 4 oz  
 1 oz = .25 gi

#### Gills (US) & Cu. Centimeters

1 gi = 118.29 cc  
 1 cc = .00845 gi

#### Gills (UK) & Cu. Centimeters

1 gi = 142.065 cc  
 1 cc = .00704 gi

### DRY CAPACITY

#### Cubic Centimeters & Cubic Inches

1 cm<sup>3</sup> = .061 in<sup>3</sup>  
 1 in<sup>3</sup> = 16.387 cm<sup>3</sup>

#### Cubic Inches & Cubic Feet

1 in<sup>3</sup> = .000579 ft<sup>3</sup>  
 1 ft<sup>3</sup> = 1,728 in<sup>3</sup>

#### Cubic Feet & Cubic Yards

1 ft<sup>3</sup> = .037 yd<sup>3</sup>  
 1 yd<sup>3</sup> = 27 ft<sup>3</sup>

#### Cubic Meters & Cubic Yards

1 m<sup>3</sup> = 1.308 yd<sup>3</sup>  
 1 yd<sup>3</sup> = .765 m<sup>3</sup>

#### Cubic Meters & Cubic Feet

1 m<sup>3</sup> x 35.315 ft<sup>3</sup>  
 1 ft<sup>3</sup> x .028 m<sup>3</sup>

#### Pints & Quarts

2 pt = 1 qt  
 1 qt = .5 pt

#### Quarts & Pecks

1 qt = .125 pk  
 1 pk = 8 qt

#### Pecks & Bushels (US)

1 pk = .25 bu  
 1 bu = 4 pk

#### Bushels & Barrels (US)\*

1 bu = .0305 bbl  
 1 bbl = 3.281 bu

#### Bushels (UK & US)

1 bu (US) = .969 bu (UK)  
 1 bu (UK) = 1.032 bu (US)

\* A barrel is not the same container as a steel drum, which typically holds 55 gallons (US). Barrels come in different sizes based on their contents, as defined by various statutes.  
 Oil = 42 gal  
 Beer = 31 gal (US)  
 Beer = 50 liters (Europe)  
 Dry Goods = 7,056 in<sup>3</sup>  
 Cranberries = 5,826 in<sup>3</sup>  
 Flour = 196 lbs.  
 Commeal = 200 lbs.  
 Cement = 376 lbs.  
 Lime = 280 lbs.

### KITCHEN LIQUID MEASURES

Gallons	Quarts	Pints	Cups	Ounces	Liters	Tbs.	tsp.
1	4	8	16	128	3.79		
½	2	4	8	64	1.89		
¼	1	2	4	32	.95		
	½	1	2	16	.47		
	¼	½	1	8	.24		
			½	4	.12	8	24
			¼	2	.06	4	12
			⅓	1	.03	2	6
			½	½	.015	1	3

### KITCHEN DRY MEASURES

Cups	Ounces	Tbs.	tsp	ml
1	8	16	48	237
¾	6	12	36	177
⅔	5⅓	10⅓	32	158
½	4	8	24	118
⅓	2⅔	5⅓	16	79
¼	2	4	12	59
⅕	1	2	6	30
⅙	½	1	3	15
⅛	⅓	⅓	1	5

