



# 311 Conversion Factors

## Master Converter

Some excellent software for converting from nearly any unit of measure to another can be purchased for US\$15.00 from Savard Software. [Download](#) it from this site or link to Savard's own site for this and other interesting applications. If you decide to use the program, please follow the instructions included with it for sending payment.

## 311 Conversion Factors

If you only need a few factors for future reference, look in the alphabetical table below for what you need.

A			M		
To convert from	To	Multiply by	To convert from	To	Multiply by
Acres	Sq.Ft.	43560	Meters	Miles (statute)	0.0062137119
	Sq.Kilometers	0.0040468564		Millimeters	1000
	Sq. Meters	4046.8564		Yards	1.0936133
	Sq. Yards	4840	Meters/hr.	Feet/hr.	3.2808399
Atmospheres	Pounds/sq.inch	14.6960		Feet/min.	0.054680665
avdp.	Avoirdupois			Miles (statute)/hr.	0.00062137119
B			Meters/min.	Cm/sec.	1.666666
				Feet/min.	3.2808399
				Feet/sec.	0.054680665
				Kilometers/hr.	0.06
				Miles (statute)/hr	0.037282272
To convert from	To	Multiply by			

Barrels (petroleum US)	Cu.Feet	5.614583
	Gallons (US)	42
	Liters	158.98284
Board Feet	Cu.cm	2359.7372
	Cu.ft.	0.833333
	Cu.inches	144
B.t.u.	Kw-hours (Int.)	0.00292827
B.t.u./hr	Foot-pounds/hr	777.649
	Horsepower	0.000392752
	Kilowatts	0.000292875

**C**

To convert from	To	Multiply by
Cable Lengths	Fathoms	120
	Feet	720
	Meters	219.456
Centimeters	Feet	0.032808399
	Inches	0.39370079
	Meters	0.01
	Millimeters	10
	Mils	393.70079
	Picas (Printers)	2.3710630
	Points (Printers)	28.452756
Cm. of Hg (0°C)	Atmospheres	0.013157895
	Bars	0.0133322
	Ft.H <sub>2</sub> O (4°C)	0.446050
	Pounds/sq.ft.	27.8450
	Pounds/sq.in.	0.193368
Centimeters/sec	Kilometers/hr	0.036
	Miles/hr.	0.022369363
	Miles/min	0.00037282272
Cords	Cord-feet	8
	Cu.ft.	128
	Cu.meters	3.6245734
Cubic centimeters	Board feet	0.00042377600
	Cu.feet	3.5314667 x 10 <sup>-5</sup>
	Cu.inches	0.061023744
	Gallons (Brit)	0.0002199694

Microns	Centimeters	0.0001
	Millimeters	0.001
Miles (naut. Brit.)	Feet	6080
	Meters	1853.184
	Miles (statute)	1.151515
Miles (naut. Int.)	Feet	6076.1155
	Kilometers	1.852
Miles (statute)	Feet	5280
	Inches	63360
	Kilometers	1.609344
	Meters	1609.334
	Yards	1760
Miles/hr.	Feet/min.	88
	Kilometers/hr.	1.609344
Millibars	Atmospheres	0.00986923
	Pounds/sq. inch	0.0145038
	Pounds/sq.ft.	2.088543
Milligrams	Carats (1877)	0.004871
	Ounces (avdp.)	3.5273962 x 10 <sup>-5</sup>
Milliliters	Cu. cm	1.000028
	Cu. inches	0.06102545
	Liters	0.001
	Ounces (Brit. Fl.)	0.03519609
	Ounces (U.S. Fl.)	0.03381497
	Pints (Brit.)	0.001759804
	Pints (U.S. Liq.)	0.002113436
Millimeters	Centimeters	0.1
	Feet	0.0032808399
	Inches	0.039370079
	Meters	0.001
	Microns	1000
	Mils	39.370079
Millimeters of Hg (0°C)	Pounds/sq.in.	0.0193368
Millivolts	Volts	0.001
Minutes (angular)	Degrees	0.0166666
	Quadrants	0.000185185
	Radians	0.00029088821
	Seconds (angular)	60

	Gallons (US liq.)	0.00026417205
	Ounces (Brit.Fl.)	0.03519510
Cubic feet	Board feet	12
	Cords (wood)	0.0078125
	Cu.centimeters	28316.847
	Cu.meters	0.028316847
	Gallons (Brit.liq.)	6.2288
	Gallons (US.liq.)	7.4805195
Cu.ft. H <sub>2</sub> O (39.2 <sup>0</sup> F)	Pounds of H <sub>2</sub> O	62.4262
Cubic inches	Cu.cm	16.387064
	Cu.feet	0.00057870370
Cubic inches	Gallons (US liq.)	0.0043290043
	Liters	0.01638661
	Milliliters	16.38661
	Ounces (Brit Fl.)	0.5767444
	Ounces (US FL)	0.55411255
	Quarts (US liq.)	0.017316017
Cubic meters	Cu. feet	35.314667
	Cu. inches	61023.74
	Cu. yards	1.3079506
Cu. yards	Cu.cm	764554.86
	Cu.ft	27
	Cu.inches	46.656
	Cu. meters	0.76455486
	Gallons (Brit.)	168.1787
	Liters	764.5335
Cubits	Centimeters	45.72
	Feet	1.5
	Inches	18

### D

To convert from	To	Multiply by
Degrees	Minutes	60
	Quadrants	0.0111111
	Radians	0.017453293
	Seconds	3600
Drams (US Fl)	Cu. cm	3.6967162
	Cu. inches	0.22558594

### O

To convert from	To	Multiply by
Ounces (avdp)	Grams	28.349523
Ounces (Brit. Fl.)	Cu. cm	28.41305
	Cu. inches	1.733870
	Gallons (Brit.)	0.00625
	Milliliters	28.41225
	Ounces (U.S. Fl.)	0.9607594
Ounces (U.S. Fl.)	Cu. cm	29.573730
	Cu. inches	1.8046875
	Gallons (U.S. liq.)	0.0078125
	Liters	0.029572702
	Ounces (Brit. Fl.)	1.040843
	Pints (U.S. liq.)	0.625
	Quarts (U.S. liq.)	0.03125
Ounces/sq. inch	Pounds/sq. ft.	9
	Pounds/sq. in.	0.0625

### P

To convert from	To	Multiply by
Pints (Brit.)	Cu. cm	568.26092
	Gallons (Brit.)	0.125
	Liters	0.5682450
	Ounces (Brit. Fl.)	20
Points (printers)	Inches	0.013837
	Picas	0.0833333
Pounds (avdp.)	Grams	453.59237
	Kilograms	0.45359237
	Ounces (avdp.)	16
	Tons (long)	0.00044642857
	Tons (metric)	0.00045359237
	Tons (short)	0.0005
Pounds/cu. ft.	Grams/cu. cm	0.016018463
	Kg/cu. meter	16.018463
Pounds/sq. inch	Atmospheres	0.0680460
	Bars	0.0689476
	Cm of Hg (0 <sup>0</sup> C)	5.17149

	Ounces (US Fl.)	0.125
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## F

To convert from	To	Multiply by
Fathoms	Feet	6
	Meters	1.8288
	Miles (naut. Int.)	0.00098747300
	Miles (statute)	0.001136363
Feet	Centimeters	30.48
	Inches	12
	Meters	0.3048
	Miles (statute)	0.000189393
	Yards	0.33333
Feet/minute	Cm/sec	0.508
	Kilometers/hour	0.018288
	Miles/hr.	0.01136363
Foot-candles	Lumens/sq.ft.	1
	Lumens/sq.meter	10.763910
Foot-pounds	B.t.u (mean)	0.00128408
Foot-pounds/hr.	Horsepower	$5.050505 \times 10^{-7}$
	Kilowatts	$3.76616 \times 10^{-7}$
	Watts	0.000376616
Furlongs	Feet	660
	Meters	201.168

## G

To convert from	To	Multiply by
Gallons (Brit.)	Cu. Centimeters	4546.087
	Cu.Ft.	0.1605436
	Gallons (US Liq.)	1.200949
	Liters	4.545960
	Oz. (Brit Fl.)	160
	Lb. of H <sup>2</sup> O (62°F)	10

## H

	Cm of H <sub>2</sub> O (4°C)	70.3089
	In. of Hg (32°F)	2.03602
	In. of H <sub>2</sub> O (39.2°F)	27.6807

## Q

To convert from	To	Multiply by
Quarts (Brit.)	Cu. cm	1136.522
	Cu. inches	69.35482
	Gallons (Brit.)	0.25
	Gallons (U.S. liq.)	0.3002373
	Liters	1.136490
Quarts (U.S. liq.)	Gallons (U.S. liq.)	0.25
	Liters	0.9463264
	Ounces (U.S. Fl.)	32
	Pints (U.S. liq.)	2
	Quarts (Brit.)	0.8326747

## R

To convert from	To	Multiply by
Radians	Degrees	57.295779
	Minutes	3437.7468
	Revolutions	0.15915494
	Seconds	206264.81
Revolutions	Degrees	360

## S

To convert from	To	Multiply by
Sq. feet	Acres	$2.295684 \times 10^{-5}$
	Sq. inches	144
	Sq. meters	0.09290304
	Sq. miles	$3.5870064 \times 10^{-8}$
	Sq. yards	0.111111
Sq. inches	Sq. cm	6.5416

To convert from	To	Multiply by
Hectares	Acres	2.4710538
	Sq. Meters	10000
	Sq. Miles	0.0038610216
Horsepower (Mech = 550 ft-lb/sec.)	B.t.u. (mean)/hr	2542.48
	Foot-pounds/hr	1980000
	Foot-pounds/sec	550
	Horsepower (electric)	0.999598
	Kilowatts	0.745700
Horsepower (electric)	B.t.u./hr.	2547.16
	Foot-pounds/min.	33013.3
	Kilowatts	0.746
	Horsepower (metric)	1.0142777

### I

To convert from	To	Multiply by
Inches	Centimeters	2.54
	Feet	0.083333
	Meters	0.254
	Mils	1000
	Picas (printers)	6.0225
	Points (printers)	72.27000
	Yards	0.027777
Inches of Hg (32°F)	Atmospheres	0.0334211
	Pounds/sq.ft.	70.7262
Inches of H <sub>2</sub> O (4°C)	Atmospheres	0.0024582
	In of Hg (32°F)	0.0735539
	Pounds/sq.inch	0.03612628
Inches/hr	Cm/hr.	2.54
	Feet/hr.	0.0833333

### K

To convert from	To	Multiply by
Kilograms	Ounces (avdp.)	35.273962

	Sq. ft.	0.0069444
Sq. Kilometers	Acres	247.10538
	Sq. meters	1 x 10 <sup>6</sup>
	Sq. miles	0.38610216
Sq. meters	Acres	0.00024710538
	Sq. feet	10.763910
	Sq. yards	1.1959900
Sq. miles	Acres	640
	Hectares	258.99881
	Sq. kilometers	2.5899881
Sq. yards	Acres	0.00020661157
	Hectares	8.3612736 x 10 <sup>-5</sup>
	Sq. feet	9
	Sq. inches	1296
	Sq. meters	0.83612736

### T

To convert from	To	Multiply by
Tons (long)	Kilograms	1016.0469
	Pounds (avdp.)	2240
	Tons (metric)	1.1060469
	Tons (short)	1.12
Tons (metric)	Kilograms	1000
	Pounds (avdp.)	2204.6226
	Tons (long)	0.98420653
	Tons (short)	1.1023113
Tons (short)	Kilograms	907.18474
	Pounds (avdp.)	2000
	Tons (long)	0.89285714
	Tons (metric)	0.90718474

### W

To convert from	To	Multiply by
Watts	B.t.u./hr.	3.41443
	Horsepower	0.00134102
	Horsepower (electric)	0.00134048

	Pounds (avdp.)	2.2046226
	Tons (long)	0.00098420653
Kg. of ice melted/hr.	Tons of refrig. (U.S. comm)	0.026336
Kilograms/sq.cm	Ft. of H <sup>2</sup> O (39.20F.)	32.8093
	Pounds/sq. inch	14.223343
Kilometers	Feet	3280.8399
	Light Years	1.05702 x10 <sup>-12</sup>
	Meters	1000
	Miles (naut. Int.)	0.53995680
	Miles (statute)	0.62137119
Kilometers/hr.	Cm/sec.	27.7777
	Feet/hr.	3280.8399
	Feet/min.	54.680665
	Miles (statute)/hr.	0.62137119
Kilowatts	B.t.u./hr.	3414.43
	Foot-pounds/min.	44253.7
	Horsepower	1.34102
	Horsepower (electric)	1.34048
Knots (Int.)	Miles (naut., Int.)/hr.	1
	Miles (statute)/hr.	1.1507794

**L**

To convert from	To	Multiply by
Leagues (statute)	Miles (naut., Int.)	2.6069287
	Miles (statute)	3
Light Years	Kilometers	9.46055 x 10 <sup>12</sup>
	Miles (statute)	5.87851 x 10 <sup>12</sup>
Liters	Cu. feet	0.03531566
	Cu. inches	61.02545
	Cu. meters	0.001000028
	Gallons (Brit.)	0.2199755
	Gallons (U.S. liq.)	0.2641794
	Pints (Brit.)	1.759804
	Quarts (Brit.)	0.8799021
	Quarts (U.S. liq.)	1.056718

	Horsepower (metric)	0.00135962
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**Y**

To convert from	To	Multiply by
Yards	Centimeters	91.44
	Cubits	2
	Fathoms	0.5
	Feet	3
	Inches	36
	Meters	0.9144
Years (calendar)	Days (mean solar)	365
	Hours (mean solar)	8760
	Minutes (mean solar)	525600
	Months (lunar)	12.360065
	Months (mean calendar)	12
	Weeks (mean calendar)	52.142857