

Table 1.11 Metric Conversion Factors

Quantity	To Convert From...	To...	Multiply By...
Length	mile	km	1.609 344*
	yard	m	0.9144*
	foot	m	0.3048*
	foot	mm	304.8*
	inch	mm	25.4*
Area	square mile	km ²	2.589 998
	acre	m ²	4046.873
	acre	ha	0.404 687 3
	square yard	m ²	0.836 127 4*
	square foot	m ²	0.092 903 04*
square inch	mm ²	645.16*	
Volume	acre foot	m ³	1233.489
	cubic yard	m ³	0.764 554 9
	cubic foot	m ³	0.028 316 85
	cubic foot	cm ³	28 316.85
	cubic foot	L	28.316 85
	100 board feet	m ³	0.235 973 7
	gallon	L	3.785 412
	cubic inch	cm ³	16.387 06
	cubic inch	mm ³	16 387.06
Mass	pound	kg	0.453 592 4
	ton (2,000 pounds)	kg	907.184 7
	kip	t	0.453 592 4
Mass/ Unit Length	pound/foot	kg/m	1.488 164
Mass/Unit Area	pound/foot ²	kg/m ²	4.882 428
Mass Density	pound/foot ³	kg/m ³	16.018 46
Force	pound	N	4.448 222
	kip	kN	4.448 222
Force/ Unit Length	pound/foot	N/m	14.593 90
	kip/foot	kN/m	14.593 90
Pressure, Stress	pound/foot ²	Pa	47.880 26
	kip/foot ²	kPa	47.880 26
	pound/inch ²	kPa	6.894 757
	kip/inch ²	MPa	6.894 757
	pound/inch ²	N/mm ²	0.006 895
	kip/inch ²	N/mm ²	6.894 757
Moment, Torque	foot-pound	N•m	1.355 818
	foot-kip	kN•m	1.355 818
Moment of Mass	pound-foot	kg•m	0.138 255 0
Moment of Inertia	pound-foot ²	kg•m ²	0.042 140 11
Second Moment of Inertia	inch ⁴	mm ⁴	416 231.4
Section Modulus	inch ³	mm ³	16 387.06
Temperature	°F	°C	(°F-32)5/9
Plane Angle	degree	rad	0.017 453 29

Note: Asterisk denotes exact number.