

**Conversion Factors**

**LINEAR MEASURE**

	Millimeter mm	Centimeter cm	Meter m	Inch in	Foot ft	Yard yd	Mile mi
Millimeter (mm)	1	0.1	0.001	0.03937	0.0032808	0.0010936	0.0 <sub>6</sub> 214
Centimeter (cm)	10	1	0.01	0.3937	0.032808	0.010936	0.0 <sub>3</sub> 6214
Meter (m)	1,000	100	1	39.37	3.28083	1.0936	0.0 <sub>3</sub> 6214
Inch (in)	25.4	2.54	0.0254	1	0.0833	0.02778	0.0 <sub>4</sub> 1578
Foot (ft)	304.8	30.48	0.3048	12	1	0.3333	0.0 <sub>1</sub> 894
Yard (yd)	914.4	91.44	0.9144	36	3	1	0.0 <sub>3</sub> 5682
Mile (mi)	1,609,347	160,934.7	1,609.35	63,360	5,280	1,760	1

**SQUARE MEASURE**

	Square Millimeter mm <sup>2</sup>	Square Centimeter cm <sup>2</sup>	Square Meter m <sup>2</sup>	Square Inch in <sup>2</sup>	Square Foot ft <sup>2</sup>	Square Yard yd <sup>2</sup>
Square millimeter (mm <sup>2</sup> )	1	0.01	0.0 <sub>1</sub>	0.00155	0.0 <sub>4</sub> 10764	0.0 <sub>3</sub> 119599
Square centimeter (cm <sup>2</sup> )	100	1	0.0001	0.154999	0.0010764	0.0 <sub>3</sub> 119599
Square meter (m <sup>2</sup> )	1,000,000	10,000	1	1,549.99	10.7639	1.19599
Square inch (in <sup>2</sup> )	645.2	6.452	0.0 <sub>2</sub> 6452	1	0.006944	0.0 <sub>3</sub> 7616
Square foot (ft <sup>2</sup> )	92,900	929	0.0929	144	1	0.11111
Square yard (yd <sup>2</sup> )	836,100	8,361	0.8361	1,296	9	1

**CUBE MEASURE**

	Cubic Centimeter cm <sup>3</sup>	Cubic Meter m <sup>3</sup>	Cubic Inch in <sup>3</sup>	Cubic Foot ft <sup>3</sup>	Cubic Yard yd <sup>3</sup>
Cubic centimeter (cm <sup>3</sup> )	1	0.0 <sub>1</sub>	0.06102	0.0 <sub>4</sub> 3531	0.0 <sub>3</sub> 1308
Cubic meter (m <sup>3</sup> )	1,000,000	1	61,023	35.31	1.308
Cubic inch (in <sup>3</sup> )	16.39	0.0 <sub>1</sub> 639	1	0.0 <sub>3</sub> 5787	0.0 <sub>4</sub> 2143
Cubic foot (ft <sup>3</sup> )	28,317	0.028317	1,728	1	0.03704
Cubic yard (yd <sup>3</sup> )	764,500	0.7645	46,660	27	1

**WEIGHT**

	Kilogram kg	Ounce oz	Pound lb	Net ton (2,000 lbs) nt	Gross ton (2,240 lbs) gt	Metric ton (1,000 kg) t
Kilogram (kg)	1	35.274	2.20462	0.001102	0.0 <sub>3</sub> 9842	0.001
Ounce (oz)	0.02835	1	0.0625	0.0 <sub>3</sub> 125	0.0 <sub>4</sub> 2790	0.0 <sub>4</sub> 2835
Pound (lb)	0.45359	16	1	0.0005	0.0 <sub>3</sub> 4464	0.0 <sub>3</sub> 4536
Net ton (nt)	907.185	32,000	2,000	1	0.89286	0.90719
Gross ton (gt)	1,016.05	35,840	2,240	1.12	1	1.01605
Metric ton (t)	1,000	35,274	2,204.62	1.10231	0.98421	1

Note:  
The small subnumeral following a zero indicates that the zero is to be repeated that number of time, thus 0.0<sub>4</sub> = 0.0004.

**WEIGHT PER LINEAR UNIT**

	<b>Gram per centimeter g/cm</b>	<b>Kilogram per meter kg/m</b>	<b>Pound per inch lb/in</b>	<b>Pound per foot lb/ft</b>	<b>Pound per yard lb/yd</b>
Gram per centimeter (g/cm)	1	0.1	0.5056	0.0672	0.20159
Kilogram per meter (kg/m)	10	1	0.056	0.67197	2.0159
Pound per inch (lb/in)	178.5	17.8579	1	12	36
Pound per foot (lb/ft)	148,816	1.48816	0.08333	1	3
Pound per yard (lb/yd)	4.96054	0.49605	0.02778	0.3333	1

**WEIGHT PER UNIT AREA**

	<b>Kilogram per square centimeter kg/cm<sup>2</sup></b>	<b>Kilogram per square meter kg/m<sup>2</sup></b>	<b>Metric ton per square meter t/m<sup>2</sup></b>
Kilogram per square centimeter (kg/cm <sup>2</sup> )	1	10,000	10
Kilogram per square meter (kg/m <sup>2</sup> )	0.0001	1	0.001
Metric ton per square meter (t/m <sup>2</sup> )	0.1	1,000	1
Pound per square inch (lb/in <sup>2</sup> )	0.0703067	703.06686	0.7031
Pound per square foot (lb/ft <sup>2</sup> )	0.0004882	4.8824087	0.004882

**WEIGHT PER UNIT VOLUME**

	<b>Kilogram per cubic centimeter kg/cm<sup>3</sup></b>	<b>Kilogram per cubic meter kg/m<sup>3</sup></b>	<b>Metric ton per cubic meter t/m<sup>3</sup></b>
Kilogram per cubic centimeter (kg/cm <sup>3</sup> )	1	1,000,000	1,000
Kilogram per cubic meter (kg/m <sup>3</sup> )	0.000001	1	0.001
Metric ton per cubic meter (t/m <sup>3</sup> )	0.001	1,000	1
Pound per cubic inch (lb/in <sup>3</sup> )	0.02768	27,680.4	27.6804
Pound per cubic foot (lb/ft <sup>3</sup> )	0.000016	16.0196	0.01602

**ENERGY**

	<b>B.t.u.</b>	<b>Calories</b>	<b>Ft-lb</b>	<b>Kg-m</b>	<b>Hp-hr</b>	<b>Kw-hr</b>	<b>Joules</b>
B.t.u. (mean)	1	0.252	778	107.563	0.0 <sub>3</sub> 3929	0.0 <sub>3</sub> 2931	1,054.8
Calories (mean)	3.968	1	3,091.36	426.84	0.001559	0.001163	4,185
Ft-lb	0.001285	0.0 <sub>3</sub> 3239	1	0.1383	0.0 <sub>6</sub> 505	0.0 <sub>6</sub> 3767	1.355
Ft-ton	2.571	0.6478	2,000	276.511	0.00101	0.0 <sub>3</sub> 7535	2,712.59
Kg-m	0.009297	0.002343	7.23301	--	0.0 <sub>3</sub> 3653	0.0 <sub>3</sub> 2725	9.806
Hp-hr	2,544.99	641.327	1,980,000	273,747	1	0.746	2,685,600
Kw-hr	3,411.57	859.702	2,654,200	366,959	1.34041	1	3,600,000
Joules (absolute)	0.0 <sub>3</sub> 9477	0.0 <sub>3</sub> 2389	0.73735	0.101937	0.0 <sub>6</sub> 3725	0.0 <sub>6</sub> 2778	1
Lb C	14,544	3,665	11,315,000	1,564,396	5.714	4.263	153,470,000
Lb H <sub>2</sub> O	970.4	244.537	754,971	104,379	0.38127	0.284424	1,023,966

Note:

The small subnumeral following a zero indicates that the zero is to be repeated that number of time, thus 0.0<sub>3</sub>4 = 0.0004.