

METRIC

MEASUREMENT AND CONVERSION

LENGTH - Basic unit is meter (m)

Metric Unit	Meter	Inches	Feet	Yards	Miles
Millimeter (mm)	.001	—	—	—	—
Centimeter (cm)	.01	.3937	—	—	—
Decimeter (dm)	.1	3.937	.3281	.1094	—
Meter (m)	1	39.37	3.281	1.094	—
Decameter (dkm)	10	393.7	32.81	10.94	—
Hectometer (hm)	100	3937	328.1	109.4	—
Kilometer (km)	1000	—	3281	1094	.6214

To convert

In. to Millimeters-multiply by 25.4
Millimeters to In.-multiply by .03937
Feet to Meters-multiply by .3048
Meters to Feet-multiply by 3.281

Yards to Meters-multiply by .9144
Meters to Yards-multiply by 1.094
Miles to Kilometer-multiply by 1.609
Kilometers to Miles-multiply by .6214

AREA - Basic unit is centare (ca) which is 1 square meter

Metric Unit	Meter	Square Inches	Square Feet	Square Yards	Square Miles
Sq. Millimeter (sq. mm)	.000001	—	—	—	—
Sq. Centimeter (sq. cm)	.0001	.1550	—	—	—
Sq. Decimeter (sq. dm)	.01	15.50	.1076	—	—
Centare/Sq. Meter (ca/sq. m)	1	1550	10.76	1.196	—
Area (a)	100	—	1076	119.6	—
Hectare (he)	10,000	—	—	—	2.471
Sq. Kilometer (sq. km)	1,000,000	—	—	—	247.1

To convert

Sq. in. to Sq. cm-multiply by 6.452
Sq. cm to Sq. In.-multiply by .1550
Sq. Ft. to Sq. m.-multiply by .0929
Sq. m. to Sq. Ft.-multiply by 10.76
Sq. Yds. to Sq. m.-multiply by .8361
Sq. M. to SQ. Yds.-multiply by 1.196

Acres to Hectares-multiply by .4047
Hectares to Acres-multiply by 2.471
Acres to Sq. Km-multiply by .004047
Sq km. to Acres-multiply by 247.1
Sq. Mile to Sq. Km-multiply by 2.590
Sq km. to Sq. Miles-multiply by .3861

VOLUME - Basic unit is stere(s) which is 1 cubic meter

Metric Unit	Steres	Cubic Inch	Cubic Foot	Cubic Yards
Cu Millimeter (cu mm)	.000000001	—	—	—
Cu Centimeter (cu cm)	.000001	.06102	—	—
Cu Decimeter (cu dm)	.001	61.023	—	—
Decistere (ds)	.1	6102.3	3.531	.1308
Stere/Cu Meter (s/cu m)	1	61023	35.31	1.308
Decastere (dks)	10	—	353.1	13.08

To convert

Cu. In. to Cu mm-multiply by 1639
Cu. mm to Cu. In.-multiply by .000061
Cu. In. to Cu cm-multiply by 16.39
Cu cm to Cu In.-multiply by .06102

Cu. Ft to Cu. m-multiply by .0283
Cu. m to Cu. Ft.-multiply by 35.31
Cu. Yds. to Cu. m-multiply by .7646
Cu. m to Cu. Yds.-multiply by 1.308

WEIGHT - Basic unit is gram (g)

Metric Unit	Grams	Grains	Ounce	Pounds
Milligram (mg)	.001	.01543	—	—
Centigram (cg)	.01	.1543	—	—
Decigram (dg)	.1	1.543	—	—
Gram	1	15.43	.03527	—
Decagram (dkg)	10	154.3	.3527	—
Hectogram (hg)	100	1543	3.527	.22046
Kilogram (kg)	1000	—	35.27	2.2046
Quintal (q)	100,000	—	3527	220.46
Metric Ton (MT)	1,000,000	—	—	2204.6

To convert

Grains to Centigrams-multiply by 6.48
Centigrams to Grains-multiply by .1543
Ounces to grams-multiply by 28.35
Tons (2000#) to Metric Tons-multiply by .9078
Metric Tons to Tons (2000#)-multiply by 1.1023

Grams to Ounces-multiply by .03527
Pounds to Kilograms-multiply by .4536
Kilograms to Pounds-multiply by 2.2046



English To Metric Conversion Table

Inches Dec.	mm	Inches Dec.	mm	Inches Frac.	Dec.	mm	Inches Frac.	Dec.	mm
0.01	0.2540	0.51	12.9540	1/61	0.015625	0.3969	33/64	0.515625	13.0969
0.02	0.5080	0.52	13.2080						
0.03	0.7620	0.53	13.4620	1/32	0.031250	0.7938	17/32	0.531250	13.4938
0.04	1.0160	0.54	13.7160	3/64	0.046875	1.1906	35/64	0.546875	13.8906
0.05	1.2700	0.55	13.9700						
0.06	1.5240	0.56	14.2240	1/16	0.062500	1.5875	9/16	0.562500	14.2875
0.07	1.7780	0.57	14.4780	5/64	0.078125	1.9844	37/64	0.578125	14.6841
0.08	2.0320	0.58	14.7320						
0.09	2.2860	0.59	14.9860	3/32	0.093750	2.3812	19/32	0.593750	15.0812
0.10	2.5400	0.60	15.2400	7/64	0.109375	2.7781	39/64	0.609375	15.4781
0.11	2.7940	0.61	15.4940						
0.12	3.0480	0.62	15.7480	1/8	0.125000	3.1750	5/8	0.625000	15.8750
0.13	3.3020	0.63	16.0020						
0.14	3.5560	0.64	16.2560	9/64	0.140625	3.5719	41/64	0.640625	16.2719
0.15	3.8100	0.65	16.5100	5/32	0.156250	3.9688	21/32	0.656250	16.6688
0.16	4.0640	0.66	16.7640						
0.17	4.3180	0.67	17.0180	11/64	0.171875	4.3656	43/64	0.671875	17.0656
0.18	4.5720	0.68	17.2720	3/16	0.187500	4.7625	11/16	0.687500	17.4625
0.19	4.8260	0.69	17.5260						
0.20	5.0800	0.70	17.7800	13/64	0.203125	5.1594	45/64	0.703125	17.8594
0.21	5.3340	0.71	18.0340	7/32	0.218750	5.5562	23/32	0.718750	18.2562
0.22	5.5880	0.72	18.2880						
0.23	5.8420	0.73	18.5420	15/64	0.234375	5.9531	47/64	0.734375	18.6531
0.24	6.0960	0.74	18.7960						
0.25	6.3500	0.75	19.0500	1/4	0.250000	6.3500	3/4	0.750000	19.0500
0.26	6.6040	0.76	19.3040	17/64	0.265625	6.7469	49/64	0.765625	19.4469
0.27	6.8580	0.77	19.5580						
0.28	7.1120	0.78	19.8120	9/32	0.281250	7.1438	25/32	0.781250	19.8437
0.29	7.3660	0.79	20.0660	19/64	0.296875	7.5406	51/64	0.796875	20.2406
0.30	7.6200	0.80	20.3200						
0.31	7.8740	0.81	20.5740	5/16	0.312500	7.9375	13/16	0.812500	20.6375
0.32	7.8280	0.82	20.8280						
0.33	8.3820	0.83	21.0820	21/64	0.328125	8.3344	53/64	0.828125	21.0344
0.34	8.6360	0.84	21.3360	11/32	0.343750	8.7312	27/32	0.843750	21.4312
0.35	8.8900	0.85	21.5900						
0.36	9.1440	0.86	21.8440	23/64	0.359375	9.1281	55/64	0.859375	21.8281
0.37	9.3960	0.87	22.0980	3/8	0.375000	9.5250	7/8	0.875000	22.2250
0.38	9.6520	0.88	22.3520						
0.39	9.9060	0.89	22.6060	25/64	0.390625	9.9219	57/64	0.890625	22.6219
0.40	10.1600	0.90	22.8600						
0.41	10.4140	0.91	23.1140	13/32	0.406250	10.3188	29/32	0.906250	23.0188
0.42	10.6680	0.92	23.3680	27/64	0.421875	10.7156	59/64	0.921875	23.4156
0.43	10.9220	0.93	23.6220						
0.44	11.1760	0.94	23.8760	7/16	0.430000	11.1125	15/16	0.937500	23.8125
0.45	11.4300	0.95	24.1300						
0.46	11.6840	0.96	24.3840	29/64	0.453125	11.5094	61/64	0.953125	24.2094
0.47	11.9380	0.97	24.6380	15/32	0.468750	11.9062	31/32	0.968750	24.6062
0.48	12.1920	0.98	24.8920						
0.49	12.4460	0.99	25.1460	31/64	0.484375	12.3031	63/64	0.984375	25.0031
0.50	12.7000	1.00	25.4000	1/2	0.500000	12.7000	1	1.000000	25.4000

For converting decimal-inches
in "thousandths", move decimal
point in both columns to left.

Metric to English Conversion Table

mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
0.01	.00039	0.41	.01614	0.81	.03189	21	.82677	61	2.40157
0.02	.00079	0.42	.01654	0.82	.03228	22	.86614	62	2.44094
0.03	.00118	0.43	.01693	0.83	.03268	23	.09551	63	2.48031
0.04	.00157	0.44	.01732	0.84	.03307	24	.94488	64	2.51968
0.05	.00197	0.45	.01772	0.85	.03346	25	.98425	65	2.55905
0.06	.00236	0.46	.01811	0.86	.03386	26	1.02362	66	2.59842
0.07	.00276	0.47	.01850	0.87	.03425	27	1.06299	67	2.63779
0.08	.00315	0.48	.01890	0.88	.03465	28	1.10236	68	2.67716
0.09	.00354	0.49	.01929	0.89	.03504	29	1.14173	69	2.71653
0.10	.00394	0.50	.01969	0.90	.03543	30	1.18110	70	2.75590
0.11	.00433	0.51	.02008	0.91	.03583	31	1.22047	71	2.79527
0.12	.00472	0.52	.02047	0.92	.03622	32	1.25984	72	2.83464
0.13	.00512	0.53	.02087	0.93	.03661	33	1.29921	73	2.87401
0.14	.00551	0.54	.02126	0.94	.03701	34	1.33858	74	2.91338
0.15	.00591	0.55	.02165	0.95	.03740	35	1.37795	75	2.95275
0.16	.00630	0.56	.02205	0.96	.03780	36	1.41732	76	2.99212
0.17	.00669	0.57	.02244	0.97	.03819	37	1.45669	77	3.03149
0.18	.00709	0.58	.02283	0.98	.03858	38	1.49606	78	3.07086
0.19	.00748	0.59	.02323	0.99	.03898	39	1.53543	79	3.11023
0.20	.00787	0.60	.02362	1.00	.03937	40	1.57480	80	3.14960
0.21	.00827	0.61	.02402	1	.03937	41	1.61417	81	3.18897
0.22	.00866	0.62	.02441	2	.07874	42	1.65354	82	3.22834
0.23	.00906	0.63	.02480	3	.11811	43	1.69291	83	3.26771
0.24	.00945	0.64	.02520	4	.15748	44	1.73228	84	3.30708
0.25	.00984	0.65	.02559	5	.19685	45	1.77165	85	3.34645
0.26	.01024	0.66	.02598	6	.23622	46	1.81102	86	3.38582
0.27	.01063	0.67	.02638	7	.27559	47	1.85039	87	3.42519
0.28	.01102	0.68	.02677	8	.31496	48	1.88976	88	3.46456
0.29	.01142	0.69	.02717	9	.35433	49	1.92913	89	3.50393
0.30	.01181	0.70	.02756	10	.39370	50	1.96850	90	3.54330
0.31	.01220	0.71	.02795	11	.43307	51	2.00787	91	3.58267
0.32	.01260	0.72	.02835	12	.47244	52	2.04724	92	3.62204
0.33	.01299	0.73	.02874	13	.51181	53	2.08661	93	3.66141
0.34	.01339	0.74	.02913	14	.55118	54	2.12598	94	3.70078
0.35	.01378	0.75	.02953	15	.59055	55	2.16535	95	3.74015
0.36	.01417	0.76	.02992	16	.62992	56	2.20472	96	3.77952
0.37	.01457	0.77	.03032	17	.66929	57	2.24409	97	3.81889
0.38	.01496	0.78	.03071	18	.70866	58	2.28346	98	3.85826
0.39	.01535	0.79	.03110	19	.74803	59	2.32283	99	3.89763
0.40	.01575	0.80	.03150	20	.78740	60	2.36220	100	3.93700

For converting millimeters in "thousandths" move decimal point in both columns to left.



Decimal Equivalents

1/64..... 015625	33/64 515625
1/32 03125	17/32 53125
3/64..... 046875	35/64 546875
1/16 0625	9/16 5625
5/64 078125	37/64 578125
3/32 09375	19/32 59375
7/64 109375	39/64 609375
1/8..... 125	5/8..... 625
9/64..... 140625	41/64 640625
5/32 15625	21/32 65625
11/64..... 171875	43/64 671875
3/16 1875	11/16 6875
13/64 203125	45/64..... 703125
7/3221875	23/32 71875
15/64 234375	47/64..... 734375
1/4..... 25	3/4..... 75
17/64 265625	49/64 765625
9/32 28125	25/32 78125
19/64 296875	51/64 796875
5/16 3125	13/16 8125
21/64..... 328125	53/64 828125
11/32 34375	27/32 84375
23/64..... 359375	55/64..... 859375
3/8..... 375	7/8..... 875
25/64..... 390625	57/64 890625
13/32 40625	29/32 90625
27/64..... 421875	59/64..... 921875
7/16 4375	15/16 9375
29/64..... 453125	61/64 953125
15/32 46875	31/32 96875
31/64..... 484375	63/64 984375
1/2..... 5	1..... 1.

CONVERTING INCHES INTO DECIMALS OF A FOOT

Inches	Decimal of a Ft.	Inches	Decimal of a Ft.	Inches	Decimal of a Ft.
0"	1/16 .005208	4" .33333	1/16 .338542	8" .66666	1/16 .671875
	1/8 .010416		1/8 .343750		1/8 .677083
	3/16 .015625		3/16 .348958		3/16 .682292
	1/4 .020833		1/4 .354166		1/4 .687500
	5/16 .026042		5/16 .359375		5/16 .692708
	3/8 .031250		3/8 .364583		3/8 .697916
	7/16 .036458		7/16 .369792		7/16 .703125
	1/2 .041666		1/2 .375000		1/2 .708333
	.046875		.380208		9/16 .713542
	.052083		.385416		5/8 .718750
	.057292		.390625		11/16 .723958
	.062500		.395833		3/4 .729166
	.067708		.401042		13/16 .734375
	.072916		.406250		7/8 .739583
	.078125		.411458		15/16 .744792
1" .083333	1/16 .088542	5" .416666	1/16 .421875	9" .750	1/16 .755208
	1/8 .093750		1/8 .427083		1/8 .760416
	3/16 .098958		3/16 .432292		3/16 .765625
	1/4 .104166		1/4 .437500		1/4 .770833
	.109375		.442708		5/16 .776042
	.114583		.447916		3/8 .781250
	.119792		.453125		7/16 .786458
	.125000		.458333		1/2 .791666
	.130208		.463542		9/16 .796875
	.135416		.468750		5/8 .802083
	.140625		.473958		11/16 .807292
	.145833		.479166		3/4 .812500
	.151042		.484375		13/16 .817708
	.156250		.489583		7/8 .822916
	.161458		.494792		15/16 .828125
2" .166666	1/16 .171875	6" .50	1/16 .505208	10" .833333	1/16 .838542
	1/8 .177083		1/8 .510416		1/8 .843750
	3/16 .182292		3/16 .515625		3/16 .848958
	1/4 .187500		1/4 .520833		1/4 .854166
	.192708		.526042		5/16 .859375
	.197916		.531250		3/8 .864583
	.203125		.536458		7/16 .869792
	.208333		.541666		1/2 .875000
	.213542		.546875		9/16 .880208
	.218750		.552083		5/8 .885416
	.223958		.557292		11/16 .890625
	.229166		.562500		3/4 .895833
	.234375		.567708		13/16 .901042
	.239583		.572916		7/8 .906250
	.244792		.578125		15/16 .911458
3" .250	1/16 .255208	7" .583333	1/16 .588542	11" .916666	1/16 .921875
	1/8 .260416		1/8 .593750		1/8 .927083
	3/16 .265625		3/16 .598958		3/16 .932292
	1/4 .270833		1/4 .604166		1/4 .937500
	.276042		.609375		5/16 .942708
	.281250		.614583		3/8 .947916
	.286458		.619792		7/16 .953125
	.291666		.625000		1/2 .958333
	.296875		.630208		9/16 .963542
	.302083		.635416		5/8 .968750
	.307292		.640625		11/16 .973958
	.312500		.645833		3/4 .979166
	.317708		.651042		13/16 .984375
	.322916		.656250		7/8 .989593
	.328125		.661458		15/16 .994792

