

Appendix. TEMPERATURE INTERCONVERSION TABLE

°K	°C	°F	°R	°K	°C	°F	°R
0.	-273.16	-459.69	0.	100.	-173.16	-279.69	180.
3.16	-270.	-454.00	5.69	103.16	-170.	-274.00	185.69
5.38	-267.78	-450.	9.69	105.38	-167.78	-270.	189.69
5.55	-267.61	-449.69	10.	105.56	-167.60	-269.69	190.
10.	-263.16	-441.69	18.00	110.	-163.16	-261.69	198.00
10.94	-262.22	-440.	19.69	110.96	-162.20	-260.	199.69
11.11	-262.05	-439.69	20.	111.11	-162.05	-259.69	200.
13.16	-260.	-436.00	23.69	113.16	-160.	-256.00	203.69
16.49	-256.67	-430.	29.69	116.49	-156.67	-250.	209.69
16.67	-256.49	-429.69	30.	116.67	-156.49	-249.69	210.
20.	-253.16	-423.69	36.00	120.	-153.16	-243.69	216.00
22.05	-251.11	-420.	39.69	122.05	-151.11	-240.	219.69
22.22	-250.94	-419.69	40.	122.22	-150.94	-239.69	220.
23.16	-250.	-418.00	41.69	123.16	-150.	-238.00	221.69
27.60	-245.56	-410.	49.69	127.60	-145.56	-230.	229.69
27.78	-245.38	-409.69	50.	127.78	-145.38	-229.69	230.
30.	-243.16	-405.69	54.00	130.	-143.16	-225.69	234.00
33.16	-240.	-400.	59.69	133.16	-140.	-220.	239.69
33.33	-239.83	-399.69	60.	133.33	-139.83	-219.69	240.
38.72	-234.44	-390.	69.69	138.72	-134.44	-210.	249.69
38.89	-234.27	-389.69	70.	138.89	-134.27	-209.69	250.
40.	-233.16	-387.69	72.00	140.	-133.16	-207.69	252.00
43.16	-230.	-382.00	77.69	143.16	-130.	-202.00	257.69
44.27	-228.89	-380.	79.69	144.27	-128.89	-200.	259.69
44.44	-228.72	-379.69	80.	144.44	-128.62	-199.69	260.
49.83	-223.33	-370.	89.69	149.83	-123.33	-190.	269.69
50.	-223.16	-369.69	90.	150.	-123.16	-189.69	270.
53.16	-220.	-364.00	95.69	153.16	-120.	-184.00	275.69
55.38	-217.78	-360.	99.69	155.38	-117.78	-180.	279.69
55.56	-217.60	-359.69	100.	155.56	-117.60	-179.69	280.
60.	-213.16	-351.69	108.00	160.	-113.16	-171.69	288.00
60.94	-212.22	-350.	109.69	160.94	-112.22	-170.	289.69
61.11	-212.05	-349.69	110.	161.11	-112.05	-169.69	290.
63.16	-210.	-346.00	113.69	163.16	-110.	-166.00	293.69
66.49	-206.67	-340.	119.69	166.49	-106.67	-160.	299.69
66.67	-206.49	-339.69	120.	166.67	-106.49	-159.69	300.
70.	-203.16	-333.69	126.00	170.	-103.16	-153.69	306.00
72.05	-201.11	-330.	129.69	172.05	-101.11	-150.	309.69
72.22	-200.94	-329.69	130.	172.22	-100.94	-149.69	310.
73.16	-200.	-328.00	131.69	173.16	-100.	-148.00	311.69
77.60	-195.56	-320.	139.69	177.60	-95.56	-140.	319.69
77.78	-195.38	-319.69	140.	177.78	-95.38	-139.69	320.
80.	-193.16	-315.69	144.00	180.	-93.16	-135.69	324.00
83.16	-190.	-310.	149.69	183.16	-90.	-130.	329.69
83.33	-189.83	-309.69	150.	183.33	-89.83	-129.69	330.
88.72	-184.44	-300.	159.69	188.72	-84.44	-120.	339.69
88.89	-184.27	-299.69	160.	188.89	-84.27	-119.69	340.
90.	-183.16	-297.69	162.00	190.	-83.16	-117.69	342.00
93.16	-180.	-292.00	167.69	193.16	-80.	-112.00	347.69
94.27	-178.89	-290.	169.69	194.27	-78.89	-110.	349.69
94.44	-178.72	-289.69	170.	194.44	-78.72	-109.69	350.
99.83	-173.33	-280.	179.69	199.83	-73.33	-100.	359.69
100.	-173.16	-279.69	180.	200.	-73.16	-99.69	360.

°K	°R
°C	°F
1	1.8
2	3.6
3	5.4
4	7.2
5	9.0
6	10.8
7	12.6
8	14.4
9	16.2
10	18.0
°R	°K
°F	°C
1	0.56
2	1.11
3	1.67
4	2.22
5	2.78
6	3.33
7	3.89
8	4.44
9	5.00
10	5.56
11	6.11
12	6.67
13	7.22
14	7.78
15	8.33
16	8.89
17	9.44
18	10.00

Appendix. TEMPERATURE INTERCONVERSION TABLE - Cont.

°K	°C	°F	°R	°K	°C	°F	°R
200.	-73.16	-99.69	360.	300.	26.84	80.31	540.
203.16	-70.	-94.00	365.69	303.16	30.	86.00	545.69
205.38	-67.78	-90.	369.69	305.38	32.22	90.	549.69
205.56	-67.60	-89.99	370.	305.56	32.40	90.31	550.
210.	-63.16	-81.69	378.00	310.	36.84	98.31	558.00
210.94	-62.22	-80.	379.69	310.94	37.78	100.	559.69
211.11	-62.05	-79.69	380.	311.11	37.95	100.31	560.
213.16	-60.	-76.00	383.69	313.16	40.	104.00	563.69
216.41	-56.67	-70.	389.69	316.41	43.33	110.	569.69
216.67	-56.49	-69.69	390.	316.67	43.51	110.31	570.
220.	-53.16	-63.69	396.00	320.	46.84	116.31	576.00
222.05	-51.11	-60.	399.69	322.05	48.89	120.	579.69
222.22	-50.94	-59.69	400.	322.22	49.06	120.31	580.
223.16	-50.	-58.00	401.69	323.16	50.	122.00	581.69
227.60	-45.56	-50.	409.69	327.60	54.44	130.	589.69
227.78	-45.38	-49.69	410.	327.78	54.62	130.31	590.
230.	-43.16	-45.69	414.00	330.	56.84	134.31	594.00
233.16	-40.	-40.	419.69	333.16	60.	140.	599.69
233.33	-39.83	-39.69	420.	333.33	60.17	140.31	600.
238.72	-34.44	-30.	429.69	338.72	65.56	150.	609.69
238.89	-34.27	-29.69	430.	338.89	65.73	150.31	610.
240.	-33.16	-27.69	432.00	340.	66.84	152.31	612.00
243.16	-30.	-22.00	437.69	343.16	70.	158.00	617.69
244.27	-28.89	-20.	439.69	344.27	71.11	160.	619.69
244.44	-28.72	-19.69	440.	344.44	71.28	160.31	620.
249.83	-23.33	-10.	449.69	349.83	76.67	170.	629.69
250.	-23.16	-9.69	450.	350.	76.84	170.31	630.
253.16	-20.	-4.00	455.69	353.16	80.	176.00	635.69
255.38	-17.78	0.	459.69	355.38	82.22	180.	639.69
255.56	-17.60	+ .31	460.	355.56	82.40	180.31	640.
260.	-13.16	+8.31	468.00	360.	86.84	188.31	648.00
260.94	-12.22	10.	469.69	360.94	87.78	190.	649.69
261.11	-12.05	10.31	470.	361.11	87.95	190.31	650.
263.16	-10.	14.00	473.69	363.16	90.	194.00	653.69
266.49	-6.67	20.	479.69	366.49	93.33	200.	659.69
266.67	-6.49	20.31	480.	366.67	93.51	200.31	660.
270.	-3.16	26.31	486.00	370.	96.84	206.31	666.00
272.05	-1.11	30.	489.69	372.05	98.89	210.	669.69
272.22	- .94	30.31	490.	372.22	99.06	210.31	670.
273.16	0.	32.00	491.69	373.16	100.	212.00	671.69
277.60	+4.44	40.	499.69	377.60	104.44	220.	679.69
277.78	4.62	40.31	500.	377.78	104.62	220.31	680.
280.	6.84	44.31	504.00	380.	106.84	224.31	684.00
283.16	10.	50.	509.69	383.16	110.	230.	689.69
283.33	10.17	50.31	510.	383.33	110.17	230.31	690.
288.72	15.56	60.	519.69	388.72	115.56	240.	699.69
288.89	15.73	60.31	520.	388.89	115.73	240.31	700.
290.	16.84	62.31	522.00	390.	116.84	242.31	702.00
293.16	20.	68.00	527.69	393.16	120.	248.00	707.69
294.27	21.11	70.	529.69	394.27	121.11	250.	709.69
294.44	21.28	70.31	530.	394.44	121.28	250.31	710.
299.83	26.67	80.	539.69	399.83	126.67	260.	719.69
300.	26.84	80.31	540.	400.	126.84	260.31	720.

°K	°R
°C	°F
1	1.8
2	3.6
3	5.4
4	7.2
5	9.0
6	10.8
7	12.6
8	14.4
9	16.2
10	18.0
°R	°K
°F	°C
1	0.56
2	1.11
3	1.67
4	2.22
5	2.78
6	3.33
7	3.89
8	4.44
9	5.00
10	5.56
11	6.11
12	6.67
13	7.22
14	7.78
15	8.33
16	8.89
17	9.44
18	10.00

Appendix. TEMPERATURE INTERCONVERSION TABLE - Cont.

°K	°C	°F	°R	°K	°C	°F	°R
400.	126.84	260.31	720.	500.	226.84	440.31	900.
403.16	130.	266.00	725.69	503.16	230.	446.00	905.69
405.38	132.22	270.	729.69	505.38	232.22	450.	909.69
405.56	132.40	270.31	730.	505.56	232.40	450.31	910.
410.	136.84	278.31	738.00	510.	236.84	458.31	918.00
410.94	137.78	280.	739.69	510.94	237.78	460.	919.69
411.11	137.95	280.31	740.	511.11	237.95	460.31	920.
413.16	140.	284.00	743.69	513.16	240.	464.00	923.69
416.41	143.33	290.	749.69	516.41	243.33	470.	929.69
416.67	143.51	290.31	750.	516.67	243.51	470.31	930.
420.	146.84	296.31	756.00	520.	246.84	476.31	936.00
422.05	148.89	300.	759.69	522.05	248.89	480.	939.69
422.22	149.06	300.31	760.	522.22	249.06	480.31	940.
423.16	150.	302.00	761.69	523.16	250.	482.00	941.69
427.60	154.44	310.	769.69	527.60	254.44	490.	949.69
427.78	154.62	310.31	770.	527.78	254.62	490.31	950.
430.	156.84	314.31	774.00	530.	256.84	494.31	954.00
433.16	160.	320.	779.69	533.16	260.	500.	959.69
433.33	160.17	320.31	780.	533.33	260.17	500.31	960.
438.72	165.56	330.	789.69	538.72	265.56	510.	969.69
438.89	165.73	330.31	790.	538.89	265.73	510.31	970.
440.	166.84	332.31	792.00	540.	266.84	512.31	972.00
443.16	170.	338.00	797.69	543.16	270.	518.00	977.69
444.27	171.11	340.	799.69	544.27	271.11	520.	979.69
444.44	171.28	340.31	800.	544.44	271.28	520.31	980.
449.83	176.66	350.	809.69	549.83	276.66	530.	989.69
450.	176.84	350.31	810.	550.	276.84	530.31	990.
453.16	180.	356.00	815.69	553.16	280.	536.00	995.69
455.38	182.22	360.	819.69	555.38	282.22	540.	999.69
455.56	182.40	360.31	820.	555.56	282.40	540.31	1000.
460.	186.84	368.31	828.00	560.	286.84	548.31	1008.00
460.94	187.78	370.	829.69	560.94	287.78	550.	1009.69
461.11	187.95	370.31	830.	561.11	287.95	550.31	1010.
463.16	190.	374.00	833.69	563.16	290.	554.00	1013.69
466.49	193.33	380.	839.69	566.49	293.33	560.	1019.69
466.67	193.51	380.31	840.	566.67	293.51	560.31	1020.
470.	196.84	386.31	846.00	570.	296.84	566.31	1026.00
472.05	198.89	390.	849.69	572.05	298.89	570.	1029.69
472.22	199.06	390.31	850.	572.22	299.06	570.31	1030.
473.16	200.	392.00	851.69	573.16	300.	572.00	1031.69
477.60	204.44	400.	859.69	577.60	304.44	580.	1039.69
477.78	204.62	400.31	860.	577.78	304.62	580.31	1040.
480.	206.84	404.31	864.00	580.	306.84	584.31	1044.00
483.16	210.	410.	869.69	583.16	310.	590.	1049.69
483.33	210.17	410.31	870.	583.33	310.17	590.31	1050.
488.72	215.56	420.	879.69	588.72	315.56	600.	1059.69
488.89	215.73	420.31	880.	588.89	315.73	600.31	1060.
490.	216.84	422.31	882.00	590.	316.84	602.31	1062.00
493.16	220.	428.00	887.69	593.16	320.	608.00	1067.69
494.27	221.11	430.	889.69	594.27	321.11	610.	1069.69
494.44	221.28	430.31	890.	594.44	321.28	610.31	1070.
499.83	226.67	440.	899.69	599.83	326.67	620.	1079.69
500.	226.84	440.31	900.	600.	326.84	620.31	1080.

°K	°R
°C	°F
1	1.8
2	3.6
3	5.4
4	7.2
5	9.0
6	10.8
7	12.6
8	14.4
9	16.2
10	18.0
°R	°K
°F	°C
1	0.56
2	1.11
3	1.67
4	2.22
5	2.78
6	3.33
7	3.89
8	4.44
9	5.00
10	5.56
11	6.11
12	6.67
13	7.22
14	7.78
15	8.33
16	8.89
17	9.44
18	10.00

Appendix. TEMPERATURE INTERCONVERSION TABLE - Cont.

°K	°C	°F	°R	°K	°C	°F	°R
600.	326.84	620.31	1080.	700.	426.84	800.31	1260.
603.16	330.	626.00	1085.69	703.16	430.	806.00	1265.69
605.38	332.22	630.	1089.69	705.38	432.22	810.	1269.69
605.56	332.40	630.31	1090.	705.56	432.40	810.31	1270.
610.	336.84	638.31	1098.00	710.	436.84	818.31	1278.00
610.94	337.78	640.	1099.69	710.94	437.78	820.	1279.69
611.11	337.95	640.31	1100.	711.11	437.95	820.31	1280.
613.16	340.	644.00	1103.69	713.16	440.	824.00	1283.69
616.41	343.33	650.	1109.69	716.41	443.33	830.	1289.69
616.67	343.51	650.31	1110.	716.67	443.51	830.31	1290.
620.	346.84	656.31	1116.00	720.	446.84	836.31	1296.00
622.05	348.89	660.	1119.69	722.05	448.89	840.	1299.69
622.22	349.06	660.31	1120.	722.22	449.06	840.31	1300.
623.16	350.	662.00	1121.69	723.16	450.	842.00	1301.69
627.60	354.44	670.	1129.69	727.60	454.44	850.	1309.69
627.78	354.62	670.31	1130.	727.78	454.62	850.31	1310.
630.	356.84	674.31	1134.00	730.	456.84	854.31	1314.00
633.16	360.	680.	1139.69	733.16	460.	860.	1319.69
633.33	360.17	680.31	1140.	733.33	460.17	860.31	1320.
638.72	365.56	690.	1149.69	738.72	465.56	870.	1329.69
638.89	365.73	690.31	1150.	738.89	465.73	870.31	1330.
640.	366.84	692.31	1152.00	740.	466.84	872.31	1332.00
643.16	370.	698.00	1157.69	743.16	470.	878.00	1337.69
644.27	371.11	700.	1159.69	744.27	471.11	880.	1339.69
644.44	371.28	700.31	1160.	744.44	471.28	880.31	1340.
649.83	376.66	710.	1169.69	749.83	476.66	890.	1349.69
650.	376.84	710.31	1170.	750.	476.84	890.31	1350.
653.16	380.	716.00	1175.69	753.16	480.	896.00	1355.69
655.38	382.22	720.	1179.69	755.38	482.22	900.	1359.69
655.56	382.40	720.31	1180.	755.56	482.40	900.31	1360.
660.	386.84	728.31	1188.00	760.	486.84	908.31	1368.00
660.94	387.78	730.	1189.69	760.94	487.78	910.	1369.69
661.11	387.95	730.31	1190.	761.11	487.95	910.31	1370.
663.16	390.	734.00	1193.69	763.16	490.	914.00	1373.69
666.49	393.33	740.	1199.69	766.49	493.33	920.	1379.69
666.67	393.51	740.31	1200.	766.67	493.51	920.31	1380.
670.	396.84	746.31	1206.00	770.	496.84	926.31	1386.00
672.05	398.89	750.	1209.69	772.05	498.89	930.	1389.69
672.22	399.06	750.31	1210.	772.22	499.06	930.31	1390.
673.16	400.	752.00	1211.69	773.16	500.	932.00	1391.69
677.60	404.44	760.	1219.69	777.60	504.44	940.	1399.69
677.78	404.62	760.31	1220.	777.78	504.62	940.31	1400.
680.	406.84	764.31	1224.00	780.	506.84	944.31	1404.00
683.16	410.	770.	1229.69	783.16	510.	950.	1409.69
683.33	410.17	770.31	1230.	783.33	510.17	950.31	1410.
688.72	415.56	780.	1239.69	788.72	515.56	960.	1419.69
688.89	415.73	780.31	1240.	788.89	515.73	960.31	1420.
690.	416.84	782.31	1242.00	790.	516.84	962.31	1422.00
693.16	420.	788.00	1247.69	793.16	520.	968.00	1427.69
694.27	421.11	790.	1249.69	794.27	521.11	970.	1429.69
694.44	421.28	790.31	1250.	794.44	521.28	970.31	1430.
699.83	426.67	800.	1259.69	799.83	526.67	980.	1439.69
700.	426.84	800.31	1260.	800.	526.84	980.31	1440.

°K	°R
°C	°F
1	1.8
2	3.6
3	5.4
4	7.2
5	9.0
6	10.8
7	12.6
8	14.4
9	16.2
10	18.0
°R	°K
°F	°C
1	0.56
2	1.11
3	1.67
4	2.22
5	2.78
6	3.33
7	3.89
8	4.44
9	5.00
10	5.56
11	6.11
12	6.67
13	7.22
14	7.78
15	8.33
16	8.89
17	9.44
18	10.00

Appendix. TEMPERATURE INTERCONVERSION TABLE - Cont.

°K	°C	°F	°R	°K	°C	°F	°R
800.	526.84	980.31	1440.	900.	626.84	1160.31	1620
803.16	530.	986.00	1445.69	903.16	630.	1166.00	1625.69
805.38	532.22	990.	1449.69	905.38	632.22	1170.	1629.69
805.56	532.40	990.31	1450.	905.56	632.40	1170.31	1630.
810.	526.84	998.31	1458.00	910.	636.84	1178.31	1638.00
810.94	537.78	1000.	1459.69	910.94	637.78	1180.	1639.69
811.11	537.95	1000.31	1460.	911.11	637.95	1180.31	1640.
813.16	540.	1004.00	1463.69	913.16	640.	1184.00	1643.69
816.41	543.33	1010.	1469.69	916.41	643.33	1190.	1649.69
816.67	543.51	1010.31	1470.	916.67	643.51	1190.31	1650.
820.	546.84	1016.31	1476.00	920.	646.84	1196.31	1656.00
822.05	548.89	1020.	1479.69	922.05	648.89	1200.	1659.69
822.22	549.06	1020.31	1480.	922.22	649.06	1200.31	1660.
823.16	550.	1022.00	1481.69	923.16	650.	1202.00	1661.69
827.60	554.44	1030.	1489.69	927.60	654.44	1210.	1669.69
827.78	554.62	1030.31	1490.	927.78	654.62	1210.31	1670.
830.	556.84	1034.31	1494.00	930.	656.84	1214.31	1674.00
833.16	560.	1040.	1499.69	933.16	660.	1220.	1679.69
833.33	560.17	1040.31	1500.	933.33	660.17	1220.31	1680.
838.72	565.56	1050.	1509.69	938.72	665.56	1230.	1689.69
838.89	565.73	1050.31	1510.	938.89	665.73	1230.31	1690.
840.	566.84	1052.31	1512.00	940.	666.84	1232.31	1692.00
843.16	570.	1058.00	1517.69	943.16	670.	1238.00	1697.69
844.27	571.11	1060.	1519.69	944.27	671.11	1240.	1699.69
844.44	571.28	1060.31	1520.	944.44	671.28	1240.31	1700.
849.83	576.66	1070.	1529.69	949.83	676.66	1250.	1709.69
850.	576.84	1070.31	1530.	950.	676.84	1250.31	1710.
853.16	580.	1076.00	1535.69	953.16	680.	1256.00	1715.69
855.38	582.22	1080.	1539.69	955.38	682.22	1260.	1719.69
855.56	582.40	1080.31	1540.	955.56	682.40	1260.31	1720.
860.	586.84	1088.31	1548.00	960.	686.84	1262.31	1722.00
860.94	587.78	1090.	1549.69	960.94	687.78	1270.	1729.69
861.11	587.95	1090.31	1550.	961.11	687.95	1270.31	1730.
863.16	590.	1094.00	1553.69	963.16	690.	1274.00	1733.69
866.48	593.33	1100.	1559.69	966.48	693.33	1280.	1739.69
866.67	593.51	1100.31	1560.	966.67	693.51	1280.31	1740.
870.	596.84	1106.31	1566.00	970.	696.84	1286.31	1746.00
872.05	598.89	1110.	1569.69	972.05	698.89	1290.	1749.69
872.22	599.06	1110.31	1570.	972.22	699.06	1290.31	1750.
873.16	600.	1112.00	1571.69	973.16	700.	1292.00	1751.69
877.60	604.44	1120.	1579.69	977.60	704.44	1300.	1759.69
877.78	604.62	1120.31	1580.	977.78	704.62	1300.31	1760.
880.	606.84	1124.31	1584.00	980.	706.84	1304.31	1764.00
883.16	610.	1130.	1589.69	983.16	710.	1310.	1769.69
883.33	610.17	1130.31	1590.	983.33	710.17	1310.31	1770.
888.72	615.56	1140.	1599.69	988.72	715.56	1320.	1779.69
888.89	615.73	1140.31	1600.	988.89	715.73	1320.31	1780.
890.	616.84	1142.31	1602.00	990.	716.84	1322.31	1782.00
893.16	620.	1148.00	1607.69	993.16	720.	1328.00	1787.69
894.27	621.11	1150.	1609.69	994.27	721.11	1330.	1789.69
894.44	621.28	1150.31	1610.	994.44	721.28	1330.31	1790.
899.83	626.67	1160.	1619.69	999.83	726.67	1340.	1799.69
900.	626.84	1160.31	1620.	1000.	726.84	1340.31	1800.

°K	°R
°C	°F
1	1.8
2	3.6
3	5.4
4	7.2
5	9.0
6	10.8
7	12.6
8	14.4
9	16.2
10	18.0
°R	°K
°F	°C
1	0.56
2	1.11
3	1.67
4	2.22
5	2.78
6	3.33
7	3.89
8	4.44
9	5.00
10	5.56
11	6.11
12	6.67
13	7.22
14	7.78
15	8.33
16	8.89
17	9.44
18	10.00

Appendix - Cont.

CONVERSION FACTORS FOR UNITS OF LENGTH

Multiply by appropriate entry to obtain →	cm	mm	μ	m μ	Å
1 Centimeter (cm)	1	10	10^4	10^7	10^8
1 Millimeter (mm)	10^{-1}	1	10^3	10^6	10^7
1 Micron (μ)	10^{-4}	10^{-3}	1	10^3	10^4
1 Millimicron (m μ)	10^{-7}	10^{-6}	10^{-3}	1	10
1 Angstrom Unit (Å)	10^{-8}	10^{-7}	10^{-4}	10^{-1}	1

CONVERSION FACTORS FOR UNITS OF LENGTH - Cont.

Multiply by appropriate entry to obtain →	cm	m	in	ft	yd
1 cm	1	0.01	0.3937	0.032808333	0.010936111
1 m	100.	1	39.37	3.2808333	1.0936111
1 in	2.5400051	0.025400051	1	0.083333333	0.027777778
1 ft	30.480061	0.30480061	12.	1	0.33333333
1 yd	91.440183	0.91440183	36.	3.	1

CONVERSION FACTORS FOR UNITS OF AREA

Multiply by appropriate entry to obtain →	cm ²	m ²	sq in	sq ft	sq yd
1 cm ²	1	10^{-4}	0.15499969	1.0763867×10^{-3}	1.1959853×10^{-4}
1 m ²	10^4	1	1549.9969	10.763867	1.1959853
1 sq in	6.4516258	6.4516258×10^{-4}	1	6.9444444×10^{-3}	7.7160494×10^{-4}
1 sq ft	929.03412	0.092903412	144.	1	0.11111111
1 sq yd	8361.3070	0.83613070	1296.	9.	1

CONVERSION FACTORS FOR UNITS OF VOLUME

Multiply by appropriate entry to obtain ↓ 1 cm ³	ml	liter	gal
		0.9999720	0.9999720 x 10 ⁻³
1 cu in	16.38670	1.638670 x 10 ⁻²	4.3290043 x 10 ⁻³
1 cu ft	28316.22	28.31622	7.4805195
1 ml	1	0.001	2.641779 x 10 ⁻⁴
1 liter	1000.	1	0.2641779
1 gal	3785.329	3.785329	1

CONVERSION FACTORS FOR UNITS OF VOLUME - Cont.

Multiply by appropriate entry to obtain ↓ 1 cm ³	cm ³	cu in	cu ft
		1	0.061023378
1 cu in	16.387162	1	5.7870370 x 10 ⁻⁴
1 cu ft	28317.017	1728.	1
1 ml	1.000028	0.06102509	3.531544 x 10 ⁻⁵
1 liter	1000.028	61.02509	0.03531544
1 gal	3785.4345	231.	0.13368056

CONVERSION FACTORS FOR UNITS OF MASS

Multiply by appropriate entry to obtain ↓ 1 g	g	kg	lb	metric ton	ton
	1	10^{-3}	2.2046223×10^{-3}	10^{-6}	1.1023112×10^{-6}
1 kg	10^3	1	2.2046223	10^{-3}	1.1023112×10^{-3}
1 lb	453.59243	0.45359243	1	4.5359243×10^{-4}	0.0005
1 metric ton	10^6	10^3	2204.6223	1	1.1023112
1 ton	907184.86	907.18486	2000.	0.90718486	1

CONVERSION FACTORS FOR UNITS OF DENSITY

Multiply by appropriate entry to obtain ↓ 1 g/cm ³	g/cm ³	g/ml	lb/cu in	lb/cu ft	lb/gal
	1	1.000028	0.036127504	62.428327	8.3454535
1 g/ml	0.9999720	1	0.03612649	62.42658	8.345220
1 lb/cu in	27.679742	27.68052	1	1728.	231.
1 lb/cu ft	0.016018369	0.01601882	5.7870370×10^{-4}	1	0.13368056
1 lb/gal	0.11982572	0.1198291	4.3290043×10^{-3}	7.4805195	1

CONVERSION FACTORS FOR UNITS OF PRESSURE

Multiply by appropriate entry to obtain \rightarrow	dyne/cm ²	bar	atm	kg(wt)/cm ²	mm Hg	in Hg	lb(wt)/sq in
1 dyne/cm ²	1	10^{-6}	0.9869233×10^{-6}	1.0197162×10^{-6}	7.500617×10^{-4}	2.952993×10^{-5}	1.4503830×10^{-5}
1 bar	10^6	1	0.9869233	1.0197162	750.0617	29.52993	14.503830
1 atm	1013250.	1.013250	1	1.0332275	760.	29.92120	14.696006
1 kg(wt)/cm ²	980665.	0.980665	0.9678411	1	735.5592	28.95897	14.223398
1 mm Hg	1333.2237	1.3332237×10^{-3}	1.3157895×10^{-3}	1.3595098×10^{-3}	1	0.03937	0.019336850
1 in Hg	33863.95	0.03386395	0.03342112	0.03453162	25.40005	1	0.4911570
1 lb(wt)/sq in	68947.31	0.06894731	0.06804570	0.07030669	51.71473	2.036009	1

CONVERSION FACTORS FOR UNITS OF ENERGY

Multiply by appropriate entry to obtain \rightarrow	g mass (energy equiv)	abs. joule	int. joule	cal	I. T. cal	BTU	int. kilowatt -hr
1 g mass (energy equiv)	1	8.98656 x 10 ¹³	8.98508 x 10 ¹³	2.14784 x 10 ¹³	2.14644 x 10 ¹³	8.51775 x 10 ¹⁰	2.49586 x 10 ⁷
1 abs. joule	1.112772 x 10 ⁻¹⁴	1	0.999835	0.239006	0.238849	0.947831 x 10 ⁻³	2.77732 x 10 ⁻⁷
1 int. joule	1.112956 x 10 ⁻¹⁴	1.000165	1	0.239045	0.238889	0.947988 x 10 ⁻³	2.777778 x 10 ⁻⁷
1 cal	4.65584 x 10 ⁻¹⁴	4.1840	4.1833	1	0.999346	3.96573 x 10 ⁻³	1.162030 x 10 ⁻⁶
1 I. T. cal	4.65888 x 10 ⁻¹⁴	4.18674	4.18605	1.000654	1	3.96832 x 10 ⁻³	1.162791 x 10 ⁻⁶
1 BTU	1.174019 x 10 ⁻¹¹	1055.040	1054.866	252.161	251.996	1	2.93018 x 10 ⁻⁴
1 int. kilowatt-hr	4.00664 x 10 ⁻⁸	3,600,594.	3,600,000.	860,563.	860,000.	3412.76	1
1 horsepower-hr	2.98727 x 10 ⁻⁸	2,684,525.	2,684,082.	641,617.	641,197.	2544.48	0.745578
1 ft-lb(wt)	1.508720 x 10 ⁻¹⁴	1.355821	1.355597	0.324049	0.323837	1.285089 x 10 ⁻³	3.76555 x 10 ⁻⁷
1 cu ft - lb(wt)/sq in	2.17256 x 10 ⁻¹²	195.2382	195.2060	46.6630	46.6325	0.1850529	5.42239 x 10 ⁻⁵
1 liter-atm	1.127548 x 10 ⁻¹²	101.3278	101.3111	24.2179	24.2021	0.0960417	2.81420 x 10 ⁻⁵

CONVERSION FACTORS FOR UNITS OF ENERGY - Cont.

Multiply by appropriate entry to obtain → ↓ 1 g mass(energy equiv)	ft-lb(wt)	cu ft- lb(wt)/sq in.	liter-atm	horsepower -hr
	6. 62814 $\times 10^{13}$	4. 60287 $\times 10^{11}$	8. 86880 $\times 10^{11}$	3. 34754 $\times 10^7$
1 abs. joule	0. 737561	5. 12195 $\times 10^{-3}$	9. 86896 $\times 10^{-3}$	3. 72505 $\times 10^{-7}$
1 int. joule	0. 737682	5. 12279 $\times 10^{-3}$	9. 87058 $\times 10^{-3}$	3. 72567 $\times 10^{-7}$
1 cal	3. 08595	2. 14302 $\times 10^{-2}$	4. 12917 $\times 10^{-2}$	1. 558562 $\times 10^{-6}$
1 I. T. cal	3. 08797	2. 14443 $\times 10^{-2}$	4. 13187 $\times 10^{-2}$	1. 559582 $\times 10^{-6}$
1 BTU	778. 156	5. 40386	10. 41215	3. 93008 $\times 10^{-4}$
1 int. kilowatt-hr	2, 655, 656.	18442. 06	35534. 1	1. 341241
1 horsepower-hr	1, 980, 000.	13750.	26493. 5	1
1 ft-lb(wt)	1	6. 94444 $\times 10^{-3}$	1. 338054 $\times 10^{-2}$	5. 05051 $\times 10^{-7}$
1 cu ft - lb(wt)/sq in	144.	1	1. 926797	7. 27273 $\times 10^{-5}$
1 liter-atm	74. 7354	5. 18996	1	3. 77452 $\times 10^{-5}$

CONVERSION FACTORS FOR UNITS OF MOLECULAR ENERGY

Multiply by appropriate entry to obtain \longrightarrow 1 erg/molecule	erg/molecule	abs. joule/mole	int. joule/mole	cal./mole	abs. electron-volt/molecule	int. electron-volt/molecule	wave no. (cm ⁻¹)
1	1	6.02283×10^{16}	6.02184×10^{16}	1.439491×10^{16}	6.24222×10^{11}	6.24017×10^{11}	5.03581×10^{15}
1 abs. joule/mole	1.660349×10^{-17}	1	0.999835	0.239006	1.036427×10^{-5}	1.036086×10^{-5}	8.36121×10^{-2}
1 int. joule/mole	1.660623×10^{-17}	1.000165	1	0.239046	1.036599×10^{-5}	1.036257×10^{-5}	8.36259×10^{-2}
1 cal/mole	6.94690×10^{-17}	4.18400	4.1833	1	4.33641×10^{-5}	4.33498×10^{-5}	0.349833
1 abs. electron-volt/molecule	1.601992×10^{-12}	96485.3	96469.4	23060.5	1	0.999670	8067.34
1 int. electron-volt/molecule	1.602521×10^{-12}	96517.1	96501.2	23068.1	1.000330	1	8070.00
1 wave no. (cm ⁻¹)	1.985776×10^{-16}	11.95999	11.95802	2.85851	1.239567×10^{-4}	1.239158×10^{-4}	1

CONVERSION FACTORS FOR UNITS OF SPECIFIC ENERGY

Multiply by appropriate entry to obtain →	abs. joule/g	int. joule/g	cal/g	I. T. cal/g	BTU/lb
	1 abs. joule/g	1	0.999835	0.239006	0.238849
1 int. joule/g	1.000165	1	0.239045	0.238889	0.430000
1 cal/g	4.1840	4.1833	1	0.999346	1.798823
1 I. T. cal/g	4.18674	4.18605	1.000654	1	1.8
1 BTU/lb	2.32597	2.32558	0.555919	0.555556	1

CONVERSION FACTORS FOR UNITS OF SPECIFIC ENERGY PER DEGREE

Multiply by appropriate entry to obtain →	abs. joule/ g deg C	int. joule/ g deg C	cal/ g deg C	I. T. cal/ g deg C	BTU/ lb deg F
	1 abs. joule/g deg C	1	0.999835	0.239006	0.238849
1 int. joule/g deg C	1.000165	1	0.239045	0.238889	0.238889
1 cal/g deg C	4.1840	4.1833	1	0.999346	0.999346
1 I. T. cal/g deg C	4.18674	4.18605	1.000654	1	1
1 BTU/lb deg F	4.18674	4.18605	1.000654	1	1

CONVERSION FACTORS FOR UNITS OF VISCOSITY *

Multiply by appropriate entry to obtain \rightarrow	Centipoise	Poise	$g_F \text{ sec cm}^{-2}$	$lb_F \text{ sec in}^{-2}$	$lb_F \text{ sec ft}^{-2}$	$lb_F \text{ hr in}^{-2}$	$lb_F \text{ hr ft}^{-2}$
Centipoise	1	1×10^{-2}	1.0197×10^{-5}	1.4504×10^{-7}	2.0886×10^{-5}	4.0289×10^{-11}	5.8016×10^{-9}
Poise	$1. \times 10^2$	1	1.0197×10^{-3}	1.4504×10^{-5}	2.0886×10^{-3}	4.0289×10^{-9}	5.8016×10^{-7}
$g_F \text{ sec cm}^{-2}$	9.8067×10^4	9.8067×10^2	1	1.4224×10^{-2}	2.0482	3.9510×10^{-6}	5.6895×10^{-4}
$lb_F \text{ sec in}^{-2}$	6.8947×10^6	6.8947×10^4	7.0305×10^1	1	1.4400×10^2	2.7778×10^{-4}	4.0000×10^{-2}
$lb_F \text{ sec ft}^{-2}$	4.7880×10^4	4.7880×10^2	4.8823×10^{-1}	6.9445×10^{-3}	1	1.9290×10^{-6}	2.7778×10^{-4}
$lb_F \text{ hr in}^{-2}$	2.4821×10^{10}	2.4821×10^8	2.5310×10^5	3.6000×10^3	5.1841×10^5	1	1.4400×10^2
$lb_F \text{ hr ft}^{-2}$	1.7237×10^8	1.7237×10^6	1.7577×10^{31}	2.5001×10^1	3.6001×10^3	6.9446×10^{-3}	1
$g_M \text{ sec}^{-1} \text{ cm}^{-1}$	1×10^2	1	1.0197×10^{-3}	1.4504×10^{-5}	2.0886×10^{-3}	4.0289×10^{-9}	5.8016×10^{-7}
$lb_M \text{ sec}^{-1} \text{ in}^{-1}$	1.7858×10^4	1.7858×10^2	1.8210×10^{-1}	2.5901×10^{-3}	3.7298×10^{-1}	7.1948×10^{-7}	1.0360×10^{-4}
$lb_M \text{ sec}^{-1} \text{ ft}^{-1}$	1.4882×10^3	1.4882×10^1	1.5175×10^{-2}	2.1585×10^{-4}	3.1083×10^{-2}	5.9958×10^{-8}	8.6339×10^{-6}
$lb_M \text{ hr}^{-1} \text{ in}^{-1}$	4.9605	4.9605×10^{-2}	5.0582×10^{-5}	7.1947×10^{-7}	1.0361×10^{-4}	1.9985×10^{-10}	2.8779×10^{-8}
$lb_M \text{ hr}^{-1} \text{ ft}^{-1}$	4.1338×10^{-1}	4.1338×10^3	4.2152×10^{-6}	5.9957×10^{-8}	8.6339×10^{-6}	1.6655×10^{-11}	2.3983×10^{-9}

* The conversion factors for viscosity are based on a tabulation by Hawkins, Solberg, and Sibbitt, Power Plant Eng. 45, 62 (1941).

CONVERSION FACTORS FOR UNITS OF VISCOSITY - Cont.

Multiply by appropriate entry to obtain → Centipoise	$\text{lb}_M \text{sec}^{-1} \text{in}^{-1}$	$\text{lb}_M \text{hr}^{-1} \text{ft}^{-1}$	$\text{slug sec}^{-1} \text{in}^{-1}$	$\text{slug hr}^{-1} \text{ft}^{-1}$	$\text{g}_M \text{sec}^{-1} \text{cm}^{-1}$
	5.5998×10^{-5}	2.4191	1.7405×10^{-6}	7.5188×10^{-2}	1×10^{-2}
Poise	5.5998×10^{-3}	2.4191×10^2	1.7405×10^{-4}	7.5188	1
$\text{g}_F \text{sec cm}^{-2}$	5.4916	2.3723×10^5	1.7068×10^{-1}	7.3733×10^3	9.8067×10^2
$\text{lb}_F \text{sec in}^{-2}$	3.8609×10^2	1.6679×10^7	1.2000×10^1	5.1840×10^5	6.8947×10^4
$\text{lb}_F \text{sec ft}^{-2}$	2.6812	1.1583×10^5	8.3335×10^{-2}	3.6000×10^3	4.7880×10^2
$\text{lb}_F \text{hr in}^{-2}$	1.3899×10^6	6.0044×10^{10}	4.3199×10^4	1.8662×10^9	2.4821×10^8
$\text{lb}_F \text{hr ft}^{-2}$	9.6524×10^3	4.1698×10^8	3.0000×10^2	1.2960×10^7	1.7237×10^6
$\text{g}_M \text{sec}^{-1} \text{cm}^{-1}$	5.5998×10^{-3}	2.4191×10^2	1.7405×10^{-4}	7.5188	1
$\text{lb}_M \text{sec}^{-1} \text{in}^{-1}$	1	4.3200×10^4	3.1081×10^{-2}	1.3427×10^3	1.7858×10^2
$\text{lb}_M \text{sec}^{-1} \text{ft}^{-1}$	8.3333×10^{-2}	3.6000×10^3	2.5902×10^{-3}	1.1189×10^2	1.4882×10^1
$\text{lb}_M \text{hr}^{-1} \text{in}^{-1}$	2.7778×10^{-4}	1.2000×10^1	8.6337×10^{-6}	3.7297×10^{-1}	4.9605×10^{-2}
$\text{lb}_M \text{hr}^{-1} \text{ft}^{-1}$	2.3148×10^{-5}	1	7.1946×10^{-7}	3.1081×10^{-2}	4.1336×10^{-3}