FM 6-16-2

TABLES FOR ARTILLERY METEOROLOGY (VISUAL) BALLISTIC TYPE 3 AND COMPUTER MESSAGES AND LIMITED SURFACE OBSERVATIONS

HEADQUARTERS DEPARTMENT OF THE ARMY

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC 27 January 1984

TABLES FOR ARTILLERY METEOROLOGY (VISUAL) BALLISTIC TYPE 3 AND COMPUTER MESSAGES AND LIMITED SURFACE OBSERVATIONS

FM 6-16-2, 15 January 1982, is changed as follows:

1. New or changed material is indicated by a star (★).
2. Remove old pages and insert new pages as indicated below.

REMOVE	INSERT
i through iv	i through iv
1-1 and 1-2	1-1 and 1-2
3-1 and 3-2	

3. File this change in the front of the publication for reference purposes.

CHANGE 1, FM 6-16-2

27 JANUARY 1984

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CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington DC, 15 January 1982

TABLES FOR ARTILLERY METEOROLOGY (VISUAL) BALLISTIC TYPE 3 AND COMPUTER MESSAGES AND LIMITED SURFACE OBSERVATIONS

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FIGURES

FIGURES

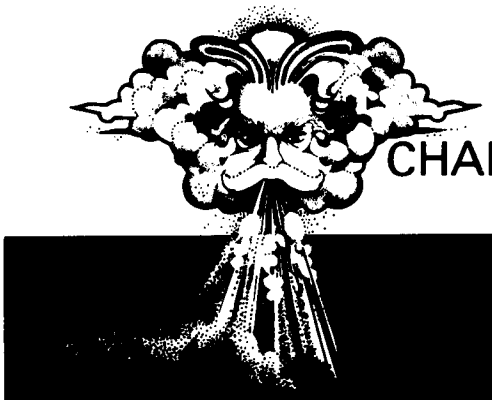
This publication implements the following STANAG(s):

NUMBER	TITLE
4061	Adoption of a Standard Ballistic Meteorological Message
4082	Adoption of a Standard Artillery Computer Meteorological Message

When used in this publication, "he," "him," "his," and "men," represent both the masculine and feminine genders unless otherwise stated.

CHARTS

TABLES



CHAPTER 1

INTRODUCTION

1-1. Purpose and Scope

a. This manual consists of tables and charts designed for use in computing visual meteorological messages for the artillery, including ballistic, computer, and radiological fallout messages. Use of this manual in the computation of messages is described in FM 6-15, *Artillery Meteorology*.

b. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to **Commandant, US Army Field Artillery School, ATTN: ATSF-CF-R, Fort Sill, Oklahoma 73503.**

FM 6-16, *Tables for Artillery Meteorology*, has been revised into a set of four field manuals. The set includes:

☐ **FM 6-16**	*Tables for Artillery Meteorology (Electronic) Ballistic Type 3 and Computer Messages.*
☐ **FM 6-16-1**	*Tables for Artillery Meteorology (Sound Ranging) Messages.*
☐ **FM 6-16-2**	*Tables for Artillery Meteorology (Visual) Ballistic Type 3 and Computer Messages and Limited Surface Observations.*
☐ **FM 6-16-3**	*Tables for Artillery Meteorology (Electronic and Visual) Type 2 Messages (to be published).*

1-2. Time Zones, Global Octants, and Regions

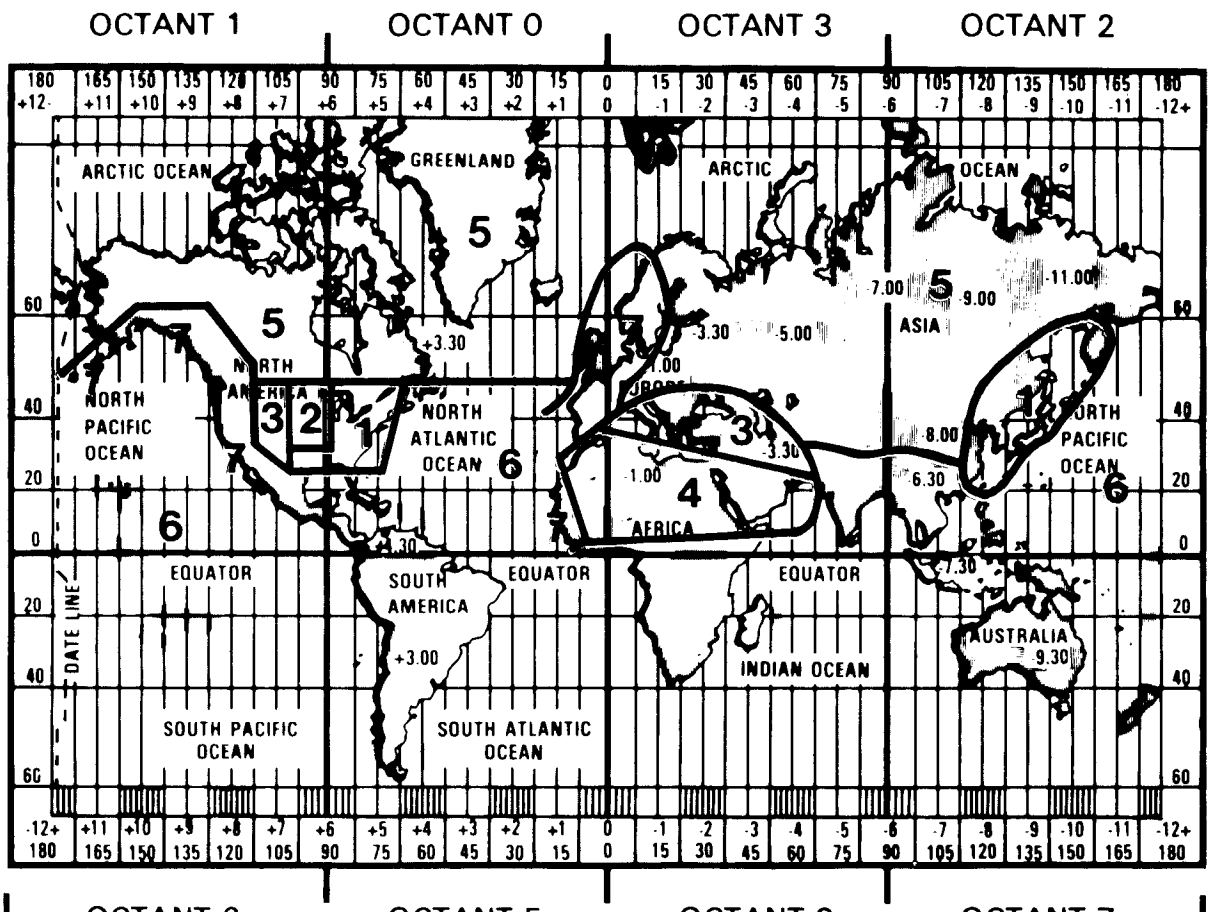
Figure 1-1 divides the world into time zones, global octants, and regions used in the heading of meteorological messages.

1-3. Priorities

The following are the priorities for taking visual observations:

a. Departure tables (chapter 2, section II).

b. Extrapolation method (chapter 3).



Time is calculated from the meridian of Greenwich. The middle of the zero time zone passes through Greenwich with its east and west limits 7°30′ on each side. Each 15 degree zone east and west of the initial zone represents one hour of time. The number of hours that must be added to or subtracted from local standard time to give Greenwich time is indicated for each zone.

1. Political boundaries in the various countries have caused modifications of the time zones. The vertical lines and clear sections are used to show to which zones these divisions belong. Where a half hour difference is legal, horizontal lines are used. Where no zone system has yet been adopted, the area is represented by small dots. Where no legal time has been establishsd, the larger dots are used. Variations from zone time are given in hours and minutes.

2. The seven climatic regions of the Northern Hemisphere are indicated and identified by the large black numbers 1 through 7.

3. Global octant is indicated by bold N-S, E-W lines and octant identification.

Figure 1-1. *Time Zones, Global Octants, and Climatic Regions.*

CHAPTER 2

METEOROLOGICAL TABLES AND CHARTS

SECTION I. GENERAL TABLES AND CHARTS FOR METEOROLOGICAL MESSAGES

2-1. Description of Tables and Charts

The tables and charts in this chapter are presented in sections I and II as follows:

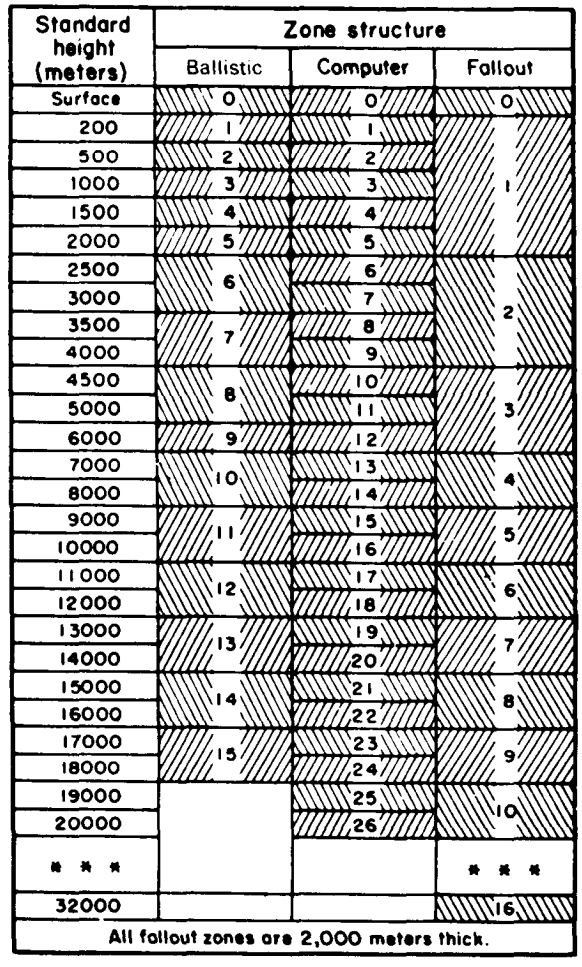
a. Section I, General Tables and Charts for Meteorological Messages. These tables and charts are used in computing data for visual ballistic and computer meteorological messages.

b. Section II, Tables for Type 3 Ballistic Messages for Surface-to-Surface Trajectories. These tables include the weighting factors and the weighted quantities for density, winds, and temperatures pertaining to all artillery weapons firing at terrestrial targets.

2-2. Zone Structure of Atmosphere

For convenience in computing, reporting, and applying corrections, the standard atmosphere is further identified by dividing it into zones for standard heights. The zones for the various meteorological messages are illustrated in figure 2-1.

Figure 2-1. *Zone structure for standard heights.*



2-3. Horizontal Distance Tables

a. Horizontal distance tables (table 2-1) are computed for the standard heights of the zone structure as shown in figure 2-1 and for a curved Earth surface according to the following formula:

$$D = \frac{R \cos\theta}{H + R}\left[\sqrt{(H+R)^2 - R^2\cos^2\theta} - R \sin\theta\right]$$

b. In this formula, D is the arc distance of the Earth's surface in meters and is the elevation angle to a balloon at a standard height H. R is the average radius of the Earth, 6,367,650 meters.

Table 2-1. *Horizontal Distance (Meters), 200 Meters (Ballistic Zone 1) (Computer Zone 1)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	3, 795	3, 673	3, 559	3, 452	3, 351	3, 256	3, 166	3, 081	3, 000	2, 924
4	2, 851	2, 782	2, 716	2, 652	2, 592	2, 535	2, 480	2, 427	2, 376	2, 328
5	2, 281	2, 236	2, 193	2, 152	2, 112	2, 074	2, 036	2, 001	1, 966	1, 932
6	1, 900	1, 869	1, 839	1, 809	1, 781	1, 753	1, 726	1, 701	1, 675	1, 651
7	1, 627	1, 604	1, 582	1, 560	1, 538	1, 518	1, 498	1, 478	1, 459	1, 440
8	1, 422	1, 404	1, 387	1, 370	1, 353	1, 337	1, 321	1, 306	1, 291	1, 276
9	1, 262	1, 248	1, 234	1, 221	1, 207	1, 194	1, 182	1, 169	1, 157	1, 145
10	1, 134	1, 122	1, 111	1, 100	1, 089	1, 079	1, 068	1, 058	1, 048	1, 038
11	1, 028	1, 019	1, 010	1, 000	991	983	974	965	957	948
12	941	933	925	917	909	902	894	887	880	873
13	866	859	852	846	839	833	826	820	814	808
14	802	796	790	784	779	773	768	762	757	751
15	746	741	736	731	726	721	716	711	707	702
16	697	693	688	684	679	675	671	666	662	658
17	654	650	646	642	638	634	630	627	623	619
18	615	612	608	605	601	598	594	591	587	584
19	581	577	574	571	568	565	562	558	555	552
20	549	546	544	541	538	535	532	529	526	524
21	521	518	516	513	510	508	505	503	500	497
22	495	492	490	488	485	483	480	478	476	473
23	471	469	467	464	462	460	458	456	453	451
24	449	447	445	443	441	439	437	435	433	431
25	429	427	425	423	421	419	417	416	414	412
26	410	408	406	405	403	401	399	398	396	394
27	392	391	389	387	386	384	383	381	379	378
28	376	375	373	371	370	368	367	365	364	362
29	361	359	358	356	355	353	352	351	349	348
30	346	345	344	342	341	340	338	337	335	334
31	333	332	330	329	328	326	325	324	323	321
32	320	319	318	316	315	314	313	312	310	309
33	308	307	306	304	303	302	301	300	299	298
34	296	295	294	293	292	291	290	289	288	287
35	286	285	284	282	281	280	279	278	277	276
36	275	274	273	272	271	270	269	268	267	266
37	265	264	263	263	262	261	260	259	258	257
38	256	255	254	253	252	251	251	250	249	248
39	247	246	245	244	243	243	242	241	240	239
40	238	237	237	236	235	234	233	233	232	231
41	230	229	228	228	227	226	225	224	224	223
42	222	221	221	220	219	218	217	217	216	215
43	214	214	213	212	211	211	210	209	209	208
44	207	206	206	205	204	204	203	202	201	201
45	200	199	199	198	197	197	196	195	194	194
46	193	192	192	191	190	190	189	188	188	187

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 200 Meters (Ballistic Zone 1) (Computer Zone 1)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	186	186	185	185	184	183	183	182	181	181
48	180	179	179	178	178	177	176	176	175	174
49	174	173	173	172	171	171	170	170	169	168
50	168	167	167	166	165	165	164	164	163	163
51	162	161	161	160	160	159	159	158	157	157
52	156	156	155	155	154	153	153	152	152	151
53	151	150	150	149	149	148	147	147	146	146
54	145	145	144	144	143	143	142	142	141	141
55	140	140	139	138	138	137	137	136	136	135
56	135	134	134	133	133	132	132	131	131	130
57	130	129	129	128	128	127	127	126	126	125
58	125	124	124	124	123	123	122	122	121	121
59	120	120	119	119	118	118	117	117	116	116
60	115	115	115	114	114	113	113	112	112	111
61	111	110	110	109	109	109	108	108	107	107
62	106	106	105	105	105	104	104	103	103	102
63	102	101	101	101	100	100	99	99	98	98
64	98	97	97	96	96	95	95	95	94	94
65	93	93	92	92	92	91	91	90	90	89
66	89	89	88	88	87	87	87	86	86	85
67	85	84	84	84	83	83	82	82	82	81
68	81	80	80	80	79	79	78	78	78	77
69	77	76	76	76	75	75	74	74	74	73
70	73	72	72	72	71	71	70	70	70	69
71	69	68	68	68	67	67	67	66	66	65
72	65	65	64	64	63	63	63	62	62	62
73	61	61	60	60	60	59	59	58	58	58
74	57	57	57	56	56	55	55	55	54	54
75	54	53	53	52	52	52	51	51	51	50
76	50	49	49	49	48	48	48	47	47	47
77	46	46	45	45	45	44	44	44	43	43
78	43	42	42	41	41	41	40	40	40	39
79	39	39	38	38	37	37	37	36	36	36
80	35	35	35	34	34	33	33	33	32	32
81	32	31	31	31	30	30	30	29	29	28
82	28	28	27	27	27	26	26	26	25	25
83	25	24	24	23	23	23	22	22	22	21
84	21	21	20	20	20	19	19	19	18	18
85	17	17	17	16	16	16	15	15	15	14
86	14	14	13	13	13	12	12	12	11	11
87	10	10	10	9	9	9	8	8	8	7
88	7	7	6	6	6	5	5	5	4	4
89	3	3	3	2	2	2	1	1	1	---------

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 500 Meters (Ballistic Zone 2) (Computer Zone 2)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	9, 407	9, 111	8, 833	8, 571	8, 324	8, 090	7, 869	7, 660	7, 461	7, 273
4	7, 093	6, 922	6, 759	6, 604	6, 455	6, 313	6, 177	6, 046	5, 921	5, 801
5	5, 686	5, 575	5, 468	5, 365	5, 266	5, 170	5, 078	4, 989	4, 903	4, 820
6	4, 740	4, 662	4, 587	4, 514	4, 443	4, 375	4, 308	4, 244	4, 181	4, 120
7	4, 061	4, 004	3, 948	3, 894	3, 841	3, 789	3, 739	3, 690	3, 642	3, 596
8	3, 550	3, 506	3, 463	3, 421	3, 380	3, 339	3, 300	3, 262	3, 224	3, 188
9	3, 152	3, 117	3, 082	3, 049	3, 016	2, 983	2, 952	2, 921	2, 891	2, 861
10	2, 832	2, 803	2, 775	2, 748	2, 721	2, 694	2, 669	2, 643	2, 618	2, 594
11	2, 569	2, 546	2, 522	2, 500	2, 477	2, 455	2, 433	2, 412	2, 391	2, 370
12	2, 350	2, 330	2, 310	2, 291	2, 272	2, 253	2, 235	2, 217	2, 199	2, 181
13	2, 164	2, 147	2, 130	2, 113	2, 097	2, 081	2, 065	2, 050	2, 034	2, 019
14	2, 004	1, 989	1, 975	1, 960	1, 946	1, 932	1, 918	1, 905	1, 891	1, 878
15	1, 865	1, 852	1, 839	1, 827	1, 814	1, 802	1, 790	1, 778	1, 766	1, 754
16	1, 743	1, 731	1, 720	1, 709	1, 698	1, 687	1, 676	1, 666	1, 655	1, 645
17	1, 635	1, 624	1, 614	1, 605	1, 595	1, 585	1, 575	1, 566	1, 557	1, 547
18	1, 538	1, 529	1, 520	1, 511	1, 502	1, 494	1, 485	1, 477	1, 468	1, 460
19	1, 452	1, 443	1, 435	1, 427	1, 419	1, 411	1, 404	1, 396	1, 388	1, 381
20	1, 373	1, 366	1, 358	1, 351	1, 344	1, 337	1, 330	1, 323	1, 316	1, 309
21	1, 302	1, 295	1, 289	1, 282	1, 275	1, 269	1, 262	1, 256	1, 250	1, 243
22	1, 237	1, 231	1, 225	1, 219	1, 213	1, 207	1, 201	1, 195	1, 189	1, 183
23	1, 178	1, 172	1, 166	1, 161	1, 155	1, 150	1, 144	1, 139	1, 133	1, 128
24	1, 123	1, 117	1, 112	1, 107	1, 102	1, 097	1, 092	1, 087	1, 082	1, 077
25	1, 072	1, 067	1, 062	1, 057	1, 053	1. 048	1, 043	1, 039	1, 034	1, 029
26	1, 025	1, 020	1, 016	1, 011	1, 007	1, 003	998	994	990	985
27	981	977	973	969	964	960	956	952	948	944
28	940	936	932	928	925	921	917	913	909	906
29	902	898	894	891	887	884	880	876	873	869
30	866	862	859	855	852	849	845	842	839	835
31	832	829	825	822	819	816	813	809	806	803
32	800	797	794	791	788	785	782	779	776	773
33	770	767	764	761	758	755	752	750	747	744
34	741	738	736	733	730	727	725	722	719	717
35	714	711	709	706	703	701	698	696	693	691
36	688	686	683	681	678	676	673	671	668	666
37	663	661	659	656	654	652	649	647	645	642
38	640	638	635	633	631	628	626	624	622	620
39	617	615	613	611	609	606	604	602	600	598
40	596	594	592	590	587	585	583	581	579	577
41	575	573	571	569	567	565	563	561	559	557
42	555	553	551	549	548	546	544	542	540	538
43	536	534	532	531	529	527	525	523	521	520
44	518	516	514	512	511	509	507	505	503	502
45	500	498	496	495	493	491	490	488	486	484
46	483	481	479	478	476	474	473	471	469	468

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 500 Meters (Ballistic Zone 2) (Computer Zone 2)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	466	465	463	461	460	458	457	455	453	452
48	450	449	447	445	444	442	441	439	438	436
49	435	433	432	430	429	427	425	424	422	421
50	420	418	417	415	414	412	411	409	408	406
51	405	403	402	401	399	398	396	395	393	392
52	391	389	388	386	385	384	382	381	379	378
53	377	375	374	373	371	370	369	367	366	365
54	363	362	361	359	358	357	355	354	353	351
55	350	349	347	346	345	344	342	341	340	338
56	337	336	335	333	332	331	330	328	327	326
57	325	323	322	321	320	319	317	316	315	314
58	312	311	310	309	308	306	305	304	303	302
59	300	299	298	297	296	294	293	292	291	290
60	289	287	286	285	284	283	282	281	279	278
61	277	276	275	274	273	271	270	269	268	267
62	266	265	264	262	261	260	259	258	257	256
63	255	254	253	251	250	249	248	247	246	245
64	244	243	242	241	240	238	237	236	235	234
65	233	232	231	230	229	228	227	226	225	224
66	223	222	221	219	218	217	216	215	214	213
67	212	211	210	209	208	207	206	205	204	203
68	202	201	200	199	198	197	196	195	194	193
69	192	191	190	189	188	187	186	185	184	183
70	182	181	180	179	178	177	176	175	174	173
71	172	171	170	169	168	167	166	165	164	163
72	162	161	161	160	159	158	157	156	155	154
73	153	152	151	150	149	148	147	146	145	144
74	143	142	141	141	140	139	138	137	136	135
75	134	133	132	131	130	129	128	127	127	126
76	125	124	123	122	121	120	119	118	117	116
77	115	115	114	113	112	111	110	109	108	107
78	106	105	104	104	103	102	101	100	99	98
79	97	96	95	94	94	93	92	91	90	89
80	88	87	86	85	85	84	83	82	81	80
81	79	78	77	77	76	75	74	73	72	71
82	70	69	68	68	67	66	65	64	63	62
83	61	61	60	59	58	57	56	55	54	53
84	53	52	51	50	49	48	47	46	45	45
85	44	43	42	41	40	39	38	38	37	36
86	35	34	33	32	31	31	30	29	28	27
87	26	25	24	24	23	22	21	20	19	18
88	17	17	16	15	14	13	12	11	10	10
89	9	8	7	6	5	4	3	3	2	1

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 1,000 Meters (Ballistic Zone 3) (Computer Zone 3)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	18, 562	17, 992	17, 456	16, 949	16, 471	16, 018	15, 589	15, 182	14, 795	14, 427
4	14, 076	13, 742	13, 423	13, 118	12, 826	12, 547	12, 280	12, 023	11, 777	11, 541
5	11, 313	11, 095	10, 884	10, 681	10, 486	10, 297	10, 115	9, 939	9, 769	9, 605
6	9, 446	9, 292	9, 143	8, 999	8, 859	8, 723	8, 591	8, 463	8, 339	8, 218
7	8, 101	7, 987	7, 876	7, 768	7, 663	7, 560	7, 461	7, 364	7, 269	7, 176
8	7, 086	6, 998	6, 912	6, 829	6, 747	6, 667	6, 589	6, 512	6, 438	6, 365
9	6, 293	6, 223	6, 155	6, 088	6, 022	5, 958	5, 895	5, 834	5, 773	5, 714
10	5, 656	5, 599	5, 543	5, 489	5, 435	5, 382	5, 331	5, 280	5, 230	5, 181
11	5, 133	5, 086	5, 040	4, 994	4, 949	4, 905	4, 862	4, 819	4, 777	4, 736
12	4, 696	4, 656	4, 617	4, 578	4, 540	4, 503	4, 466	4, 430	4, 394	4, 359
13	4, 324	4, 290	4, 257	4, 224	4, 191	4, 159	4, 127	4, 096	4, 065	4, 035
14	4, 005	3, 976	3, 947	3, 918	3, 890	3, 862	3, 834	3, 807	3, 780	3, 754
15	3, 727	3, 702	3, 676	3, 651	3, 626	3, 602	3, 577	3, 554	3, 530	3, 507
16	3, 484	3, 461	3, 438	3, 416	3, 394	3, 372	3, 351	3, 330	3, 309	3, 288
17	3, 268	3, 247	3, 227	3, 208	3, 188	3, 169	3, 149	3, 131	3, 112	3, 093
18	3, 075	3, 057	3, 039	3, 021	3, 004	2, 986	2, 969	2, 952	2, 935	2, 918
19	2, 902	2, 885	2, 869	2, 853	2, 837	2, 822	2, 806	2, 791	2, 775	2, 760
20	2, 745	2, 731	2, 716	2, 701	2, 687	2, 673	2, 659	2, 645	2, 631	2, 617
21	2, 603	2, 590	2, 576	2, 563	2, 550	2, 537	2, 524	2, 511	2, 499	2, 486
22	2, 474	2, 461	2, 449	2, 437	2, 425	2, 413	2, 401	2, 389	2, 377	2, 366
23	2, 354	2, 343	2, 332	2, 321	2, 310	2, 299	2, 288	2, 277	2, 266	2, 255
24	2, 245	2, 234	2, 224	2, 214	2, 203	2, 193	2, 183	2, 173	2, 163	2, 153
25	2, 143	2, 134	2, 124	2, 114	2, 105	2, 095	2, 086	2, 077	2, 068	2, 058
26	2, 049	2, 040	2, 031	2, 022	2, 014	2, 005	1, 996	1, 987	1, 979	1, 970
27	1, 962	1, 953	1, 945	1, 937	1, 928	1, 920	1, 912	1, 904	1, 896	1, 888
28	1, 880	1, 872	1, 864	1, 856	1, 849	1, 841	1, 833	1, 826	1, 818	1, 811
29	1, 803	1, 796	1, 789	1, 781	1, 774	1, 767	1, 760	1, 752	1, 745	1, 738
30	1, 731	1, 724	1, 718	1, 711	1, 704	1, 697	1, 690	1, 684	1, 677	1, 670
31	1, 664	1, 657	1, 651	1, 644	1, 638	1, 631	1, 625	1, 619	1, 612	1, 606
32	1, 600	1, 594	1, 587	1, 581	1, 575	1, 569	1, 563	1, 557	1, 551	1, 545
33	1, 539	1, 533	1, 528	1, 522	1, 516	1, 510	1, 505	1, 499	1, 493	1, 488
34	1, 482	1, 477	1, 471	1, 465	1, 460	1, 455	1, 449	1, 444	1, 438	1, 433
35	1, 428	1, 422	1, 417	1, 412	1, 407	1, 402	1, 396	1, 391	1, 386	1, 381
36	1, 376	1, 371	1, 366	1, 361	1, 356	1, 351	1, 346	1, 341	1, 336	1, 331
37	1, 327	1, 322	1, 317	1, 312	1, 308	1, 303	1, 298	1, 293	1, 289	1, 284
38	1, 280	1, 275	1, 270	1, 266	1, 261	1, 257	1, 252	1, 248	1, 243	1, 239
39	1, 235	1, 230	1, 226	1, 221	1, 217	1, 213	1, 208	1, 204	1, 200	1, 196
40	1, 191	1, 187	1, 183	1, 179	1, 175	1, 171	1, 166	1, 162	1, 158	1, 154
41	1, 150	1, 146	1, 142	1, 138	1, 134	1, 130	1, 126	1, 122	1, 118	1, 114
42	1, 110	1, 106	1, 103	1, 099	1, 095	1, 091	1, 087	1, 083	1, 080	1, 076
43	1, 072	1, 068	1, 065	1, 061	1, 057	1, 054	1, 050	1, 046	1, 043	1, 039
44	1, 035	1, 032	1, 028	1, 024	1, 021	1, 017	1, 014	1, 010	1, 007	1, 003
45	1, 000	996	993	989	986	982	979	976	972	969
46	965	962	959	955	952	949	945	942	939	936

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 1,000 Meters (Ballistic Zone 3) (Computer Zone 3)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	932	929	926	923	919	916	913	910	907	903
48	900	897	894	891	888	885	881	878	875	872
49	869	866	863	860	857	854	851	848	845	842
50	839	836	833	830	827	824	821	818	815	813
51	810	807	804	801	798	795	792	790	787	784
52	781	778	776	773	770	767	764	762	759	756
53	753	751	748	745	743	740	737	734	732	729
54	726	724	721	718	716	713	711	708	705	703
55	700	697	695	692	690	687	685	682	679	677
56	674	672	669	667	664	662	659	657	654	652
57	649	647	644	642	639	637	634	632	630	627
58	625	622	620	617	615	613	610	608	606	603
59	601	598	596	594	591	589	587	584	582	580
60	577	575	573	570	568	566	563	561	559	556
61	554	552	550	547	545	543	541	538	536	534
62	532	529	527	525	523	520	518	516	514	512
63	509	507	505	503	501	498	496	494	492	490
64	488	485	483	481	479	477	475	473	470	468
65	466	464	462	460	458	456	454	451	449	447
66	445	443	441	439	437	435	433	431	429	426
67	424	422	420	418	416	414	412	410	408	406
68	404	402	400	398	396	394	392	390	388	386
69	384	382	380	378	376	374	372	370	368	366
70	364	362	360	358	356	354	352	350	348	346
71	344	342	340	338	336	335	333	331	329	327
72	325	323	321	319	317	315	313	311	310	308
73	306	304	302	300	298	296	294	292	290	289
74	287	285	283	281	279	277	275	274	272	270
75	268	266	264	262	260	259	257	255	253	251
76	249	247	246	244	242	240	238	236	235	233
77	231	229	227	225	223	222	220	218	216	214
78	213	211	209	207	205	203	202	200	198	196
79	194	193	191	189	187	185	184	182	180	178
80	176	175	173	171	169	167	166	164	162	160
81	158	157	155	153	151	149	148	146	144	142
82	141	139	137	135	133	132	130	128	126	125
83	123	121	119	117	116	114	112	110	109	107
84	105	103	102	100	98	96	95	93	91	89
85	87	86	84	82	80	79	77	75	73	72
86	70	68	66	65	63	61	59	58	56	54
87	52	51	49	47	45	44	42	40	38	37
88	35	33	31	30	28	26	24	23	21	19
89	17	16	14	12	10	9	7	5	3	2

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 1,500 Meters (Ballistic Zone 4) (Computer Zone 4)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	27, 483	26, 660	25, 882	25, 147	25, 452	23, 792	23, 166	22, 572	22, 006	21, 467
4	20, 953	20, 462	19, 994	19, 546	19, 117	18, 706	18, 312	17, 933	17, 570	17, 221
5	16, 885	16, 562	16, 250	15, 950	15, 661	15. 381	15, 112	14, 851	14, 599	14, 355
6	14, 119	13, 891	13, 669	13, 455	13, 247	13, 045	12, 849	12, 659	12, 474	12, 294
7	12, 120	11, 950	11, 785	11, 624	11, 467	11, 315	11, 166	11, 021	10, 880	10, 742
8	10, 608	10, 477	10, 348	10, 223	10, 101	9, 982	9, 865	9, 751	9, 640	9, 531
9	9, 424	9, 320	9, 218	9, 118	9, 020	8, 924	8, 830	8, 738	8, 648	8, 560
10	8, 473	8, 388	8, 305	8, 223	8, 143	8, 064	7, 987	7, 911	7, 836	7, 763
11	7, 691	7, 621	7, 551	7, 483	7, 416	7, 350	7, 285	7, 222	7, 159	7, 098
12	7, 037	6, 977	6, 919	6, 861	6, 804	6, 748	6, 693	6, 639	6, 586	6, 533
13	6, 481	6, 430	6, 380	6, 331	6, 282	6, 234	6, 186	6, 140	6, 094	6, 048
14	6, 003	5, 959	5, 916	5, 873	5, 830	5, 789	5, 747	5, 707	5, 666	5, 627
15	5, 588	5, 549	5, 511	5, 473	5, 436	5, 399	5, 363	5, 327	5, 292	5, 257
16	5, 222	5, 188	5, 155	5, 121	5, 088	5, 056	5, 024	4, 992	4, 961	4, 930
17	4, 899	4, 869	4, 839	4, 809	4, 780	4, 751	4, 722	4, 694	4, 666	4, 638
18	4, 610	4, 583	4, 556	4, 530	4, 503	4, 477	4, 451	4, 426	4, 401	4, 376
19	4, 351	4, 326	4, 302	4, 278	4, 254	4, 231	4, 208	4, 185	4, 162	4, 139
20	4, 117	4, 094	4, 072	4, 051	4, 029	4, 008	3, 986	3, 965	3, 945	3, 924
21	3, 904	3, 883	3, 863	3, 843	3, 824	3, 804	3, 785	3, 766	3, 747	3, 728
22	3, 709	3, 691	3, 672	3, 654	3, 636	3, 618	3, 600	3, 583	3, 565	3, 548
23	3, 531	3, 514	3, 497	3, 480	3, 463	3, 447	3. 430	3, 414	3, 398	3, 382
24	3, 366	3, 351	3, 335	3, 319	3, 304	3, 289	3, 274	3, 259	3, 244	3, 229
25	3, 214	3, 200	3, 185	3, 171	3, 157	3, 142	3, 128	3, 114	3, 101	3, 087
26	3, 073	3, 060	3, 046	3, 033	3, 020	3, 006	2, 993	2, 980	2, 967	2, 955
27	2, 942	2, 929	2, 917	2, 904	2, 892	2, 880	2, 867	2, 855	2, 843	2, 831
28	2, 819	2, 807	2, 796	2, 784	2, 772	2, 761	2, 749	2, 738	2, 727	2, 716
29	2, 704	2, 693	2, 682	2, 671	2, 660	2, 650	2, 639	2, 628	2, 618	2, 607
30	2, 597	2, 586	2, 576	2, 565	2, 555	2, 545	2, 535	2, 525	2, 515	2, 505
31	2, 495	2, 485	2, 475	2, 466	2, 456	2, 446	2, 437	2, 427	2, 418	2, 409
32	2, 399	2, 390	2, 381	2, 372	2, 362	2, 353	2, 344	2, 335	2, 326	2, 317
33	2, 309	2, 300	2, 291	2, 282	2, 274	2, 265	2, 257	2, 248	2, 240	2, 231
34	2, 223	2, 214	2, 206	2, 198	2, 190	2, 181	2, 173	2, 165	2, 157	2, 149
35	2, 141	2, 133	2, 125	2, 118	2, 110	2, 102	2, 094	2, 087	2, 079	2, 071
36	2, 064	2, 056	2, 049	2, 041	2, 034	2, 026	2, 019	2, 012	2, 004	1, 997
37	1, 990	1, 982	1, 975	1, 968	1, 961	1, 954	1, 947	1, 940	1, 933	1, 926
38	1, 919	1, 912	1, 905	1, 899	1, 892	1, 885	1, 878	1, 872	1, 865	1, 858
39	1, 852	1, 845	1, 838	1, 832	1, 825	1, 819	1, 812	1, 806	1, 800	1, 793
40	1, 787	1, 781	1, 774	1, 768	1, 762	1, 756	1, 749	1, 743	1, 737	1, 731
41	1, 725	1, 719	1, 713	1, 707	1, 701	1, 695	1, 689	1, 683	1, 677	1, 671
42	1, 665	1, 659	1, 654	1, 648	1, 642	1, 636	1, 631	1, 625	1, 619	1, 614
43	1, 608	1, 602	1, 597	1, 591	1, 586	1, 580	1, 575	1, 569	1, 564	1, 558
44	1, 553	1, 547	1, 542	1, 537	1, 531	1, 526	1, 521	1, 515	1, 510	1, 505
45	1, 499	1. 494	1, 489	1, 484	1, 479	1, 474	1, 468	1, 463	1, 458	1, 453
46	1, 448	1, 443	1, 438	1, 433	1, 428	1, 423	1, 418	1, 413	1, 408	1, 403

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 1,500 Meters (Ballistic Zone 4) (Computer Zone 4)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	1, 398	1, 393	1, 389	1, 384	1, 379	1, 374	1, 369	1, 364	1, 360	1, 355
48	1, 350	1, 345	1, 341	1, 336	1, 331	1, 327	1, 322	1, 317	1, 313	1, 308
49	1, 304	1, 299	1, 294	1, 290	1, 285	1, 281	1, 276	1, 272	1, 267	1, 263
50	1, 258	1, 254	1, 249	1, 245	1, 241	1, 236	1, 232	1, 227	1, 223	1, 219
51	1, 214	1, 210	1, 206	1, 201	1, 197	1, 193	1, 189	1, 184	1, 180	1, 176
52	1, 172	1, 167	1, 163	1, 159	1, 155	1, 151	1, 146	1, 142	1, 138	1, 134
53	1, 130	1, 126	1, 122	1, 118	1, 114	1, 110	1, 106	1, 102	1, 098	1, 093
54	1, 089	1, 085	1, 082	1, 078	1, 074	1, 070	1, 066	1, 062	1, 058	1, 054
55	1, 050	1, 046	1, 042	1, 038	1, 034	1, 031	1, 027	1, 023	1, 019	1, 015
56	1, 011	1, 008	1, 004	1, 000	996	993	989	985	981	978
57	974	970	966	963	959	955	952	948	944	941
58	937	933	930	926	923	919	915	912	908	905
59	901	897	894	890	887	883	880	876	873	869
60	866	862	859	855	852	848	845	842	838	835
61	831	828	824	821	818	814	811	807	804	801
62	797	794	791	787	784	781	777	774	771	767
63	764	761	758	754	751	748	744	741	738	735
64	731	728	725	722	718	715	712	709	706	702
65	699	696	693	690	687	683	680	677	674	671
66	668	665	661	658	655	652	649	646	643	640
67	637	633	630	627	624	621	618	615	612	609
68	606	603	600	597	594	591	588	585	582	579
69	576	573	570	567	564	561	558	555	552	549
70	546	543	540	537	534	531	528	525	522	519
71	516	513	511	508	505	502	499	496	493	490
72	487	484	481	479	476	473	470	467	464	461
73	458	456	453	450	447	444	441	439	436	433
74	430	427	424	422	419	416	413	410	407	405
75	402	399	396	393	391	388	385	382	379	377
76	374	371	368	366	363	360	357	354	352	349
77	346	343	341	338	335	332	330	327	324	321
78	319	316	313	311	308	305	302	300	297	294
79	292	289	286	283	281	278	275	273	270	267
80	264	262	259	256	254	251	248	246	243	240
81	238	235	232	229	227	224	221	219	216	213
82	211	208	205	203	200	197	195	192	189	187
83	184	181	179	176	174	171	168	166	163	160
84	158	155	152	150	147	144	142	139	136	134
85	131	129	126	123	121	118	115	113	110	107
86	105	102	100	97	94	92	89	86	84	81
87	79	76	73	71	68	65	63	60	58	55
88	52	50	47	45	42	39	37	34	31	29
89	26	24	21	18	16	13	10	8	5	3

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 2,000 Meters (Ballistic Zone 5) (Computer Zone 5) (Fallout Zone 1)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	36, 188	35, 128	34, 126	33, 176	32, 276	31, 422	30, 610	29, 837	29, 101	28, 399
4	27, 729	27, 089	26, 477	25, 891	25, 329	24, 791	24, 275	23, 779	23, 302	22, 844
5	22, 402	21, 978	21, 568	21, 173	20, 792	20, 424	20, 069	19, 725	19, 393	19, 071
6	18, 760	18, 458	18, 166	17, 883	17, 608	17, 341	17, 082	16, 831	16, 586	16, 348
7	16, 117	15, 893	15, 674	15, 461	15, 254	15, 052	14, 855	14, 663	14, 476	14, 293
8	14, 115	13, 941	13, 771	13, 606	13, 444	13, 285	13, 131	12, 980	12, 832	12, 687
9	12, 546	12, 407	12, 271	12, 139	12, 009	11, 882	11, 757	11, 635	11, 515	11, 397
10	11, 282	11, 169	11, 059	10, 950	10, 843	10, 739	10, 636	10, 535	10, 436	10, 339
11	10, 243	10, 150	10, 057	9, 967	9, 878	9, 790	9, 704	9, 620	9, 535	9, 454
12	9, 374	9, 295	9, 217	9, 140	9, 064	8, 990	8, 917	8, 845	8, 774	8, 704
13	8, 635	8, 567	8, 500	8, 434	8, 369	8, 305	8, 242	8, 180	8, 119	8, 058
14	7, 999	7, 940	7, 882	7, 825	7, 769	7, 713	7, 658	7, 604	7, 550	7, 498
15	7, 446	7, 394	7, 343	7, 293	7, 244	7, 195	7, 147	7, 099	7, 052	7, 005
16	6, 959	6, 914	6, 869	6, 825	6, 781	6, 738	6, 695	6, 653	6, 611	6, 570
17	6, 529	6, 488	6, 448	6, 409	6, 370	6, 331	6, 293	6, 255	6, 218	6, 181
18	6, 144	6, 108	6, 072	6, 037	6, 002	5, 967	5, 933	5, 899	5, 865	5, 832
19	5, 799	5, 766	5, 734	5, 702	5, 670	5, 639	5, 608	5, 577	5, 547	5, 517
20	5, 487	5, 457	5, 428	5, 399	5, 370	5, 342	5, 313	5, 285	5, 258	5, 230
21	5, 203	5, 176	5, 149	5, 123	5, 097	5, 071	5, 045	5, 019	4, 994	4, 969
22	4, 944	4, 919	4, 895	4, 870	4, 846	4, 823	4, 799	4, 775	4, 752	4, 729
23	4, 706	4, 683	4, 661	4, 639	4, 616	4, 594	4, 573	4, 551	4, 530	4, 508
24	4, 487	4, 466	4, 445	4, 425	4, 404	4, 384	4, 364	4, 344	4, 324	4, 304
25	4, 285	4, 265	4, 246	4, 227	4, 208	4, 189	4, 170	4, 152	4, 133	4, 115
26	4, 097	4, 079	4, 061	4, 043	4, 025	4, 008	3, 990	3, 973	3, 956	3, 939
27	3, 922	3, 905	3, 888	3, 871	3, 855	3, 839	3, 822	3, 806	3, 790	3, 774
28	3, 758	3, 742	3, 727	3, 711	3, 696	3, 680	3, 665	3, 650	3, 635	3, 620
29	3, 605	3, 590	3, 576	3, 561	3, 547	3, 532	3, 518	3, 504	3, 489	3, 475
30	3, 461	3, 447	3, 434	3, 420	3, 406	3, 393	3, 379	3, 366	3, 352	3, 339
31	3, 326	3, 313	3, 300	3, 287	3, 274	3, 261	3, 249	3, 236	3, 223	3, 211
32	3, 198	3, 186	3, 174	3, 161	3, 149	3, 137	3, 125	3, 113	3, 101	3, 089
33	3, 078	3, 066	3, 054	3, 043	3, 031	3, 020	3, 008	2, 997	2, 986	2, 974
34	2, 963	2, 952	2, 941	2, 930	2, 919	2, 908	2, 897	2, 887	2, 876	2, 865
35	2, 854	2, 844	2, 833	2, 823	2, 813	2, 802	2, 792	2, 782	2, 771	2, 761
36	2, 751	2, 741	2, 731	2, 721	2, 711	2, 701	2, 691	2, 682	2, 672	2, 662
37	2, 653	2, 643	2, 633	2, 624	2, 614	2, 605	2, 596	2, 586	2, 577	2, 568
38	2, 558	2, 549	2, 540	2, 531	2, 522	2, 513	2, 504	2, 495	2, 486	2, 477
39	2, 468	2, 460	2, 451	2, 442	2, 434	2, 425	2, 416	2, 408	2, 399	2, 391
40	2, 382	2, 374	2, 365	2, 357	2, 349	2, 340	2, 332	2, 324	2, 316	2, 308
41	2, 300	2, 291	2, 283	2, 275	2, 267	2, 259	2, 251	2, 244	2, 236	2, 228
42	2, 220	2, 212	2, 205	2, 197	2, 189	2, 182	2, 174	2, 166	2, 159	2, 151
43	2, 144	2, 136	2, 129	2, 121	2, 114	2, 107	2, 099	2, 092	2, 085	2, 077
44	2, 070	2, 063	2, 056	2, 048	2, 041	2, 034	2, 027	2, 020	2, 013	2, 006
45	1, 999	1, 992	1, 985	1, 978	1, 971	1, 964	1, 958	1, 951	1, 944	1, 937
46	1, 930	1, 924	1, 917	1, 910	1, 904	1, 897	1, 890	1, 884	1, 877	1, 871

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 2,000 Meters (Ballistic Zone 5) (Computer Zone 5) (Fallout Zone 1)—continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	1, 864	1, 858	1, 851	1, 845	1, 838	1, 832	1, 825	1, 819	1, 813	1, 806
48	1, 800	1, 794	1, 787	1, 781	1, 775	1, 769	1, 762	1, 756	1, 750	1, 744
49	1, 738	1, 732	1, 726	1, 720	1, 713	1, 707	1, 701	1, 695	1, 689	1, 683
50	1, 677	1, 672	1, 666	1, 660	1, 654	1, 648	1, 642	1, 636	1, 630	1, 625
51	1, 619	1, 613	1, 607	1, 602	1, 596	1, 590	1, 585	1, 579	1, 573	1, 568
52	1, 562	1, 556	1, 551	1, 545	1, 540	1, 534	1, 528	1, 523	1, 517	1, 512
53	1, 507	1, 501	1, 496	1, 490	1, 485	1, 479	1, 474	1, 469	1, 463	1, 458
54	1, 453	1, 447	1, 442	1, 437	1, 431	1, 426	1, 421	1, 416	1, 410	1, 405
55	1, 400	1, 395	1, 389	1, 384	1, 379	1, 374	1, 369	1, 364	1, 359	1, 354
56	1, 348	1, 343	1, 338	1, 333	1, 328	1, 323	1, 318	1, 313	1, 308	1, 303
57	1, 298	1, 293	1, 288	1, 283	1, 279	1, 274	1, 269	1, 264	1, 259	1, 254
58	1, 249	1, 244	1, 240	1, 235	1, 230	1, 225	1, 220	1, 216	1, 211	1, 206
59	1, 201	1, 197	1, 192	1, 187	1, 182	1, 178	1, 173	1, 168	1, 164	1, 159
60	1, 154	1, 150	1, 145	1, 140	1, 136	1, 131	1, 127	1, 122	1, 117	1, 113
61	1, 108	1, 104	1, 099	1, 095	1, 090	1, 086	1, 081	1, 077	1, 072	1, 068
62	1, 063	1, 059	1, 054	1, 050	1, 045	1, 041	1, 036	1, 032	1, 027	1, 023
63	1, 019	1, 014	1, 010	1, 006	1, 001	997	992	988	984	979
64	975	971	966	962	958	954	949	945	941	937
65	932	928	924	920	915	911	907	903	899	894
66	890	886	882	878	873	869	865	861	857	853
67	849	845	840	836	832	828	824	820	816	812
68	808	804	800	796	792	788	784	780	775	771
69	767	763	759	755	751	748	744	740	736	732
70	728	724	720	716	712	708	704	700	696	692
71	688	685	681	677	673	669	665	661	657	653
72	650	646	642	638	634	630	627	623	619	615
73	611	607	604	600	596	592	588	585	581	577
74	573	570	566	562	558	554	551	547	543	539
75	536	532	528	525	521	517	513	510	506	502
76	498	495	491	487	484	480	476	473	469	465
77	462	458	454	451	447	443	440	436	432	429
78	425	421	418	414	410	407	403	400	396	392
79	389	385	381	378	374	371	367	363	360	356
80	353	349	345	342	338	335	331	327	324	320
81	317	313	310	306	302	299	295	292	288	285
82	281	277	274	270	267	263	260	256	253	249
83	245	242	238	235	231	228	224	221	217	214
84	210	207	203	200	196	193	189	185	182	178
85	175	171	168	164	161	157	154	150	147	143
86	140	136	133	129	126	122	119	115	112	108
87	105	101	98	94	91	87	84	80	77	73
88	70	66	63	59	56	52	49	45	42	38
89	35	31	28	24	21	17	14	10	7	3

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 2,500 Meters (Computer Zone 6)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	44, 692	43, 411	42, 197	41, 046	39, 953	38, 914	37, 926	36, 984	36, 085	35, 228
4	34, 408	33, 625	32, 875	32, 156	31, 467	30, 806	30, 171	29, 562	28, 975	28, 411
5	27, 867	27, 343	26, 838	26, 351	25, 880	25, 426	24, 987	24, 562	24, 151	23, 754
6	23, 369	22, 995	22, 634	22, 283	21, 942	21, 612	21, 291	20, 979	20, 676	20, 381
7	20, 095	19, 816	19, 544	19, 280	19, 023	18, 772	18, 527	18, 289	18, 056	17, 830
8	17, 608	17, 392	17, 181	16, 975	16, 774	16, 577	16, 385	16, 197	16, 013	15, 833
9	15, 657	15, 484	15, 316	15, 151	14, 989	14, 830	14, 675	14, 523	14, 374	14, 228
10	14, 084	13, 944	13, 806	13, 670	13, 538	13, 407	13, 279	13, 154	13, 030	12, 909
11	12, 790	12, 673	12, 558	12, 446	12, 335	12, 225	12, 118	12, 013	11, 909	11, 807
12	11, 706	11, 608	11, 510	11, 415	11, 320	11, 228	11, 136	11, 047	10, 958	10, 871
13	10, 785	10, 700	10, 617	10, 535	10, 454	10, 374	10, 295	10, 218	10, 141	10, 066
14	9, 992	9, 918	9, 846	9, 775	9, 704	9, 635	9, 566	9, 499	9, 432	9, 366
15	9, 301	9, 237	9, 174	9, 111	9, 049	9, 988	8, 928	8, 869	8, 810	8, 752
16	8, 694	8, 638	8, 582	8, 526	8, 472	8, 418	8, 364	8, 312	8, 259	8, 208
17	8, 157	8, 106	8, 057	8, 007	7, 959	7, 910	7, 863	7, 815	7, 769	7, 723
18	7, 677	7, 632	7, 587	7, 543	7, 499	7, 456	7, 413	7, 370	7, 328	7, 287
19	7, 246	7, 205	7, 165	7, 125	7, 085	7, 046	7, 007	6, 969	6, 931	6, 893
20	6, 856	6, 819	6, 782	6, 746	6, 710	6, 675	6, 639	6, 604	6, 570	6, 536
21	6, 502	6, 468	6, 434	6, 401	6, 369	6, 336	6, 304	6, 272	6, 240	6, 209
22	6, 178	6, 147	6, 116	6, 086	6, 056	6, 026	5, 997	5, 967	5, 938	5, 910
23	5, 881	5, 853	5, 824	5, 797	5, 769	5, 741	5, 714	5, 687	5, 660	5, 634
24	5, 607	5, 581	5, 555	5, 529	5, 504	5, 478	5, 453	5, 428	5, 403	5, 379
25	5, 354	5, 330	5, 306	5, 282	5, 258	5, 235	5, 211	5, 188	5, 165	5, 142
26	5, 120	5, 097	5, 075	5, 052	5, 030	5, 008	4, 987	4, 965	4, 943	4, 922
27	4, 901	4, 880	4, 859	4, 838	4, 818	4, 797	4, 777	4, 757	4, 736	4, 717
28	4, 697	4, 677	4, 657	4, 638	4, 619	4, 600	4, 581	4, 562	4, 543	4, 524
29	4, 505	4, 487	4, 469	4, 450	4, 432	4, 414	4, 396	4, 379	4, 361	4, 343
30	4, 326	4, 309	4, 291	4, 274	4, 257	4, 240	4, 223	4, 206	4, 190	4, 173
31	4, 157	4, 140	4, 124	4, 108	4, 092	4, 076	4, 060	4, 044	4, 028	4, 013
32	3, 997	3, 982	3, 966	3, 951	3, 936	3, 921	3, 906	3, 891	3, 876	3, 861
33	3, 846	3, 832	3, 817	3, 803	3, 788	3, 774	3, 760	3, 745	3, 731	3, 717
34	3, 703	3, 689	3, 676	3, 662	3, 648	3, 635	3, 621	3, 608	3, 594	3, 581
35	3, 568	3, 554	3, 541	3, 528	3, 515	3, 502	3, 489	3, 476	3, 464	3, 451
36	3, 438	3, 426	3, 413	3, 401	3, 388	3, 376	3, 364	3, 352	3, 339	3, 327
37	3, 315	3, 303	3, 291	3, 279	3, 267	3, 256	3, 244	3, 232	3, 221	3, 209
38	3, 198	3, 186	3, 175	3, 163	3, 152	3, 141	3, 130	3, 118	3, 107	3, 096
39	3, 085	3, 074	3, 063	3, 052	3, 041	3, 031	3, 020	3, 009	2, 999	2, 988
40	2, 977	2, 967	2, 956	2, 946	2, 936	2, 925	2, 915	2, 905	2, 894	2, 884
41	2, 874	2, 864	2, 854	2, 844	2, 834	2, 824	2, 814	2, 804	2, 794	2, 785
42	2, 775	2, 765	2, 755	2, 746	2, 736	2, 727	2, 717	2, 708	2, 698	2, 689
43	2, 679	2, 670	2, 661	2, 651	2, 642	2, 633	2, 624	2, 615	2, 605	2, 596
44	2, 587	2, 578	2, 569	2, 560	2, 551	2, 543	2, 534	2, 525	2, 516	2, 507
45	2, 499	2, 490	2, 481	2, 473	2, 464	2, 455	2, 447	2, 438	2, 430	2, 421
46	2, 413	2, 404	2, 396	2, 388	2, 379	2, 371	2, 363	2, 355	2, 346	2, 338

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 2,500 Meters (Computer Zone 6)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	2, 330	2, 322	2, 314	2, 306	2, 298	2, 290	2, 282	2, 274	2, 266	2, 258
48	2, 250	2, 242	2, 234	2, 226	2, 218	2, 211	2, 203	2, 195	2, 187	2, 180
49	2, 172	2, 164	2, 157	2, 149	2, 142	2, 134	2, 127	2, 119	2, 112	2, 104
50	2, 097	2, 089	2, 082	2, 074	2, 067	2, 060	2, 052	2, 045	2, 038	2, 031
51	2, 023	2, 016	2, 009	2, 002	1, 995	1, 988	1, 980	1, 973	1, 966	1, 959
52	1, 952	1, 945	1, 938	1, 931	1, 924	1, 917	1, 910	1, 904	1, 897	1, 890
53	1, 883	1, 876	1, 869	1, 863	1, 856	1, 849	1, 842	1, 836	1, 829	1, 822
54	1, 815	1, 809	1, 802	1, 796	1, 789	1, 782	1, 776	1, 769	1, 763	1, 756
55	1, 750	1, 743	1, 737	1, 730	1, 724	1, 717	1, 711	1, 705	1, 698	1, 692
56	1, 685	1, 679	1, 673	1, 666	1, 660	1, 654	1, 648	1, 641	1, 635	1, 629
57	1, 623	1, 617	1, 610	1, 604	1, 598	1, 592	1, 586	1, 580	1, 574	1, 568
58	1, 561	1, 555	1, 549	1, 543	1, 537	1, 531	1, 525	1, 519	1, 513	1, 507
59	1, 501	1, 496	1, 490	1, 484	1, 478	1, 472	1, 466	1, 460	1, 454	1, 449
60	1, 443	1, 437	1, 431	1, 425	1, 420	1, 414	1, 408	1, 402	1, 397	1, 391
61	1, 385	1, 379	1, 374	1, 368	1, 362	1, 357	1, 351	1, 346	1, 340	1, 334
62	1, 329	1, 323	1, 318	1, 312	1, 306	1, 301	1, 295	1, 290	1, 284	1, 279
63	1, 273	1, 268	1, 262	1, 257	1, 251	1, 246	1, 240	1, 235	1, 230	1, 224
64	1, 219	1, 213	1, 208	1, 203	1, 197	1, 192	1, 187	1, 181	1, 176	1, 171
65	1, 165	1, 160	1, 155	1, 149	1, 144	1, 139	1, 134	1, 128	1, 123	1, 118
66	1, 113	1, 107	1, 102	1, 097	1, 092	1, 087	1, 081	1, 076	1, 071	1, 066
67	1, 061	1, 056	1, 050	1, 045	1, 040	1, 035	1, 030	1, 025	1, 020	1, 015
68	1, 010	1, 005	1, 000	994	989	984	979	974	969	964
69	959	954	949	944	939	934	929	924	919	914
70	910	905	900	895	890	885	880	875	870	865
71	860	856	851	846	841	836	831	826	822	817
72	812	807	802	798	793	788	783	778	774	769
73	764	759	754	750	745	740	735	731	726	721
74	717	712	707	702	698	693	688	684	679	674
75	670	665	660	656	651	646	642	637	632	628
76	623	618	614	609	605	600	595	591	586	582
77	577	572	568	563	559	554	549	545	540	536
78	531	527	522	518	513	508	504	499	495	490
79	486	481	477	472	468	463	459	454	450	445
80	441	436	432	427	423	418	414	409	405	400
81	396	391	387	382	378	373	369	365	360	356
82	351	347	342	338	333	329	325	320	316	311
83	307	302	298	294	289	285	280	276	271	267
84	263	258	254	249	245	241	236	232	227	223
85	219	214	210	205	201	197	192	188	184	179
86	175	170	166	162	157	153	148	144	140	135
87	131	127	122	118	113	109	105	100	96	92
88	87	83	79	74	70	65	61	57	52	48
89	44	39	35	31	26	22	17	13	9	4

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 3,000 Meters (Ballistic Zone 6) (Computer Zone 7)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	53, 007	51, 519	50, 107	48, 766	47, 491	46, 277	45, 120	44, 017	42, 964	41, 957
4	40, 995	40, 073	39, 191	38, 344	37, 533	36, 753	36, 004	35, 284	34, 590	33, 923
5	33, 280	32, 660	32, 062	31, 485	30, 927	30, 388	29, 868	29, 364	28, 876	28, 404
6	27, 946	27, 503	27, 073	26, 656	26, 251	25, 857	25, 476	25, 104	24, 744	24, 393
7	24, 052	23, 719	23, 396	23, 081	22, 774	22, 475	22, 184	21, 900	21, 622	21, 352
8	21, 088	20, 830	20, 578	20, 332	20, 092	19, 857	19, 627	19, 403	19, 183	18, 968
9	18, 758	18, 552	18, 351	18, 153	17, 960	17, 771	17, 585	17, 403	17, 225	17, 050
10	16, 879	16, 711	16, 546	16, 384	16, 225	16, 070	15, 917	15, 766	15, 619	15, 474
11	15, 331	15, 192	15, 054	14, 919	14, 786	14, 656	14, 527	14, 401	14, 277	14, 155
12	14, 034	13, 916	13, 800	13, 685	13, 573	13, 462	13, 352	13, 245	13, 139	13, 034
13	12, 931	12, 830	12, 730	12, 632	12, 535	12, 439	12, 345	12, 252	12, 161	12, 071
14	11, 981	11, 894	11, 807	11, 722	11, 637	11, 554	11, 472	11, 391	11, 311	11, 232
15	11, 154	11, 078	11, 002	10, 927	10, 853	10, 780	10, 707	10, 636	10, 566	10, 496
16	10, 428	10, 360	10, 293	10, 226	10, 161	10, 096	10, 032	9, 969	9, 906	9, 844
17	9, 783	9, 723	9, 663	9, 604	9, 546	9, 488	9, 431	9, 374	9, 318	9, 263
18	9, 208	9, 154	9, 100	9, 047	8, 995	8, 943	8, 892	8, 841	8, 790	8, 741
19	8, 691	8, 642	8, 594	8, 546	8, 499	8, 452	8, 405	8, 359	8, 314	8, 269
20	8, 224	8, 180	8, 136	8, 092	8, 049	8, 007	7, 964	7, 922	7, 881	7, 840
21	7, 799	7, 759	7, 719	7, 679	7, 640	7, 601	7, 562	7, 524	7, 486	7, 448
22	7, 411	7, 374	7, 337	7, 301	7, 265	7, 229	7, 194	7, 159	7, 124	7, 089
23	7, 055	7, 021	6, 987	6, 954	6, 921	6, 888	6, 855	6, 823	6, 790	6, 759
24	6, 727	6, 696	6, 664	6, 633	6, 603	6, 572	6, 542	6, 512	6, 482	6, 453
25	6, 424	6, 394	6, 366	6, 337	6, 308	6, 280	6, 252	6, 224	6, 197	6, 169
26	6, 142	6, 115	6, 088	6, 061	6, 035	6, 009	5, 982	5, 956	5, 931	5, 905
27	5, 880	5, 854	5, 829	5, 805	5, 780	5, 755	5, 731	5, 707	5, 683	5, 659
28	5, 635	5, 611	5, 588	5, 564	5, 541	5, 518	5, 495	5, 473	5, 450	5, 428
29	5, 405	5, 383	5, 361	5, 339	5, 318	5, 296	5, 275	5, 253	5, 232	5, 211
30	5, 190	5, 169	5, 149	5, 128	5, 107	5, 087	5, 067	5, 047	5, 027	5, 007
31	4, 987	4, 968	4, 948	4, 929	4, 909	4, 890	4, 871	4, 852	4, 833	4, 815
32	4, 796	4, 777	4, 759	4, 741	4, 722	4, 704	4, 686	4, 668	4, 650	4, 633
33	4, 615	4, 597	4, 580	4, 562	4, 545	4, 528	4, 511	4, 494	4, 477	4, 460
34	4, 443	4, 427	4, 410	4, 394	4, 377	4, 361	4, 345	4, 328	4, 312	4, 296
35	4, 280	4, 265	4, 249	4, 233	4, 217	4, 202	4, 186	4, 171	4, 156	4, 141
36	4, 125	4, 110	4, 095	4, 080	4, 065	4, 051	4, 036	4, 021	4, 007	3, 992
37	3, 978	3, 963	3, 949	3, 935	3, 920	3, 906	3, 892	3, 878	3, 864	3, 850
38	3, 837	3, 823	3, 809	3, 795	3, 782	3, 768	3, 755	3, 741	3, 728	3, 715
39	3, 702	3, 688	3, 675	3, 662	3, 649	3, 636	3, 623	3, 611	3, 598	3, 585
40	3, 572	3, 560	3, 547	3, 535	3, 522	3, 510	3, 497	3, 485	3, 473	3, 461
41	3, 448	3, 436	3, 424	3, 412	3, 400	3, 388	3, 376	3, 365	3, 353	3, 341
42	3, 329	3, 318	3, 306	3, 294	3, 283	3, 271	3, 260	3, 249	3, 237	3, 226
43	3, 215	3, 203	3, 192	3, 181	3, 170	3, 159	3, 148	3, 137	3, 126	3, 115
44	3, 104	3, 094	3, 083	3, 072	3, 061	3, 051	3, 040	3, 029	3, 019	3, 008
45	2, 998	2, 987	2, 977	2, 967	2, 956	2, 946	2, 936	2, 926	2, 915	2, 905
46	2, 895	2, 885	2, 875	2, 865	2, 855	2, 845	2, 835	2, 825	2, 815	2, 805

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 3,000 Meters (Ballistic Zone 6) (Computer Zone 7)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	2, 796	2, 786	2, 776	2, 766	2, 757	2, 747	2, 738	2, 728	2, 718	2, 709
48	2, 699	2, 690	2, 681	2, 671	2, 662	2, 652	2, 643	2, 634	2, 625	2, 615
49	2, 606	2, 597	2, 588	2, 579	2, 570	2, 561	2, 552	2, 543	2, 534	2, 525
50	2, 516	2, 507	2, 498	2, 489	2, 480	2, 471	2, 463	2, 454	2, 445	2, 437
51	2, 428	2, 419	2, 411	2, 402	2, 393	2, 385	2, 376	2, 368	2, 359	2, 351
52	2, 342	2, 334	2, 326	2, 317	2, 309	2, 301	2, 292	2, 284	2, 276	2, 268
53	2, 259	2, 251	2, 243	2, 235	2, 227	2, 219	2, 210	2, 202	2, 194	2, 186
54	2, 178	2, 170	2, 162	2, 154	2, 147	2, 139	2, 131	2, 123	2, 115	2, 107
55	2, 099	2, 092	2, 084	2, 076	2, 068	2, 061	2, 053	2, 045	2, 038	2, 030
56	2, 022	2, 015	2, 007	2, 000	1, 992	1, 985	1, 977	1, 970	1, 962	1, 955
57	1, 947	1, 940	1, 932	1, 925	1, 917	1, 910	1, 903	1, 895	1, 888	1, 881
58	1, 874	1, 866	1, 859	1, 852	1, 845	1, 837	1, 830	1, 823	1, 816	1, 809
59	1, 802	1, 794	1, 787	1, 780	1, 773	1, 766	1, 759	1, 752	1, 745	1, 738
60	1, 731	1, 724	1, 717	1, 710	1, 703	1, 696	1, 689	1, 683	1, 676	1, 669
61	1, 662	1, 655	1, 648	1, 642	1, 635	1, 628	1, 621	1, 614	1, 608	1, 601
62	1, 594	1, 588	1, 581	1, 574	1, 568	1, 561	1, 554	1, 548	1, 541	1, 534
63	1, 528	1, 521	1, 515	1, 508	1, 501	1, 495	1, 488	1, 482	1, 475	1, 469
64	1, 462	1, 456	1, 499	1, 443	1, 437	1, 430	1, 424	1, 417	1, 411	1, 405
65	1, 398	1, 392	1, 385	1, 379	1, 373	1, 366	1, 360	1, 354	1, 348	1, 341
66	1, 335	1, 329	1, 322	1, 316	1, 310	1, 304	1, 298	1, 291	1, 285	1, 279
67	1, 273	1, 267	1, 260	1, 254	1, 248	1, 242	1, 236	1, 230	1, 224	1, 218
68	1, 211	1, 205	1, 199	1, 193	1, 187	1, 181	1, 175	1, 169	1, 163	1, 157
69	1, 151	1, 145	1, 139	1, 133	1, 127	1, 121	1, 115	1, 109	1, 103	1, 097
70	1, 091	1, 085	1, 080	1, 074	1, 068	1, 062	1, 056	1, 050	1, 044	1, 038
71	1, 032	1, 027	1, 021	1, 015	1, 009	1, 003	997	992	986	980
72	974	968	963	957	951	945	940	934	928	922
73	917	911	905	900	894	888	883	877	871	865
74	860	854	848	843	837	832	826	820	815	809
75	803	798	792	787	781	775	770	764	759	753
76	748	742	737	731	725	720	714	709	703	698
77	692	687	681	676	670	665	659	654	648	643
78	637	632	626	621	616	610	605	599	594	588
79	583	577	572	567	561	556	550	545	540	534
80	529	523	518	513	507	502	496	491	486	480
81	475	470	464	459	453	448	443	437	432	427
82	421	416	411	405	400	395	389	384	379	373
83	368	363	358	352	347	342	336	331	326	320
84	315	310	305	299	294	289	283	278	273	268
85	262	257	252	247	241	236	231	225	220	215
86	210	204	199	194	189	183	178	173	168	162
87	157	152	147	141	136	131	126	120	115	110
88	105	99	94	89	84	79	73	68	63	58
89	52	47	42	37	31	26	21	16	10	5

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters.Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 3,500 Meters (Computer Zone 8)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	61, 145	59, 463	57, 865	56, 344	54, 896	53, 516	52, 200	50, 942	49, 741	48, 592
4	47, 492	46, 438	45, 428	44, 459	43, 528	42, 634	41, 774	40, 947	40, 150	39, 383
5	38, 643	37, 929	37, 241	36, 576	35, 933	35, 312	34, 711	34, 130	33, 567	33, 022
6	32, 493	31, 981	31, 484	31, 002	30, 533	30, 079	29, 637	29, 207	28, 790	28, 384
7	27, 989	27, 604	27, 229	26, 864	26, 509	26, 162	25, 824	25, 495	25, 173	24, 860
8	24, 553	24, 254	23, 962	23, 677	23, 398	23, 125	22, 859	22, 598	22, 343	22, 093
9	21, 849	21, 610	21, 376	21, 147	20, 923	20, 703	20, 487	20, 276	20, 069	19, 866
10	19, 666	19, 471	19, 279	19, 091	18, 907	18, 725	18, 547	18, 373	18, 201	18, 033
11	17, 867	17, 704	17, 545	17, 387	17, 233	17, 081	16, 932	16, 785	16, 640	16, 498
12	16, 358	16, 221	16, 085	15, 952	15, 821	15, 692	15, 564	15, 439	15, 316	15, 194
13	15, 075	14, 957	14, 840	14, 726	14, 613	14, 502	14, 392	14, 284	14, 177	14, 072
14	13, 969	13, 866	13, 765	13, 666	13, 568	13, 471	13, 375	13, 281	13, 188	13, 096
15	13, 005	12, 916	12, 828	12, 740	12, 654	12, 569	12, 485	12, 402	12, 320	12, 239
16	12, 159	12, 080	12, 002	11, 924	11, 848	11, 773	11, 698	11, 624	11, 551	11, 479
17	11, 408	11, 338	11, 268	11, 199	11, 131	11, 064	10, 997	10, 932	10, 866	10, 802
18	10, 738	10, 675	10, 613	10, 551	10, 490	10, 429	10, 369	10, 310	10, 251	10, 193
19	10, 136	10, 079	10, 022	9, 967	9, 911	9, 857	9, 803	9, 749	9, 696	9, 643
20	9, 591	9, 539	9, 488	9, 438	9, 387	9, 338	9, 288	9, 240	9, 191	9, 143
21	9, 096	9, 049	9, 002	8, 956	8, 910	8, 865	8, 820	8, 775	8, 731	8, 687
22	8, 644	8, 600	8, 558	8, 515	8, 473	8, 432	8, 390	8, 349	8, 309	8, 268
23	8, 228	8, 189	8, 149	8, 110	8, 072	8, 033	7, 995	7, 958	7, 920	7, 883
24	7, 846	7, 809	7, 773	7, 737	7, 701	7, 666	7, 630	7, 596	7, 561	7, 526
25	7, 492	7, 458	7, 425	7, 391	7, 358	7, 325	7, 292	7, 260	7, 228	7, 196
26	7, 164	7, 132	7, 101	7, 070	7, 039	7, 008	6, 978	6, 948	6, 918	6, 888
27	6, 858	6, 829	6, 799	6, 770	6, 742	6, 713	6, 684	6, 656	6, 628	6, 600
28	6, 573	6, 545	6, 518	6, 490	6, 463	6, 437	6, 410	6, 384	6, 357	6, 331
29	6, 305	6, 279	6, 254	6, 228	6, 203	6, 178	6, 152	6, 128	6, 103	6, 078
30	6, 054	6, 030	6, 005	5, 981	5, 958	5, 934	5, 910	5, 887	5, 864	5, 840
31	5, 817	5, 794	5, 772	5, 749	5, 727	5, 704	5, 682	5, 660	5, 638	5, 616
32	5, 594	5, 573	5, 551	5, 530	5, 508	5, 487	5, 466	5, 445	5, 424	5, 404
33	5, 383	5, 363	5, 342	5, 322	5, 302	5, 282	5, 262	5, 242	5, 222	5, 203
34	5, 183	5, 164	5, 144	5, 125	5, 106	5, 087	5, 068	5, 049	5, 030	5, 012
35	4, 993	4, 974	4, 956	4, 938	4, 920	4, 901	4, 883	4, 866	4, 848	4, 830
36	4, 812	4, 795	4, 777	4, 760	4, 742	4, 725	4, 708	4, 691	4, 674	4, 657
37	4, 640	4, 623	4, 606	4, 590	4, 573	4, 557	4, 540	4, 524	4, 508	4, 491
38	4, 475	4, 459	4, 443	4, 427	4, 412	4, 396	4, 380	4, 364	4, 349	4, 333
39	4, 318	4, 303	4, 287	4, 272	4, 257	4, 242	4, 227	4, 212	4, 197	4, 182
40	4, 167	4, 152	4, 138	4, 123	4, 109	4, 094	4, 080	4, 065	4, 051	4, 037
41	4, 023	4, 008	3, 994	3, 980	3, 966	3, 952	3, 939	3, 925	3, 911	3, 897
42	3, 884	3, 870	3, 857	3, 843	3, 830	3, 816	3, 803	3, 790	3, 776	3, 763
43	3, 750	3, 737	3, 724	3, 711	3, 698	3, 685	3, 672	3, 659	3, 647	3, 634
44	3, 621	3, 609	3, 596	3, 584	3, 571	3, 559	3, 546	3, 534	3, 522	3, 509
45	3, 497	3, 485	3, 473	3, 461	3, 449	3, 437	3, 425	3, 413	3, 401	3, 389
46	3, 377	3, 365	3, 354	3, 342	3, 330	3, 319	3, 307	3, 296	3, 284	3, 273

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 3,500 Meters (Computer Zone 8—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	3, 261	3, 250	3, 238	3, 227	3, 216	3, 205	3, 193	3, 182	3, 171	3, 160
48	3, 149	3, 138	3, 127	3, 116	3, 105	3, 094	3, 083	3, 072	3, 062	3, 051
49	3, 040	3, 030	3, 019	3, 008	2, 998	2, 987	2, 977	2, 966	2, 956	2, 945
50	2, 935	2, 924	2, 914	2, 904	2, 893	2, 883	2, 873	2, 863	2, 852	2, 842
51	2, 832	2, 822	2, 812	2, 802	2, 792	2, 782	2, 772	2, 762	2, 752	2, 742
52	2, 733	2, 723	2, 713	2, 703	2, 693	2, 684	2, 674	2, 664	2, 655	2, 645
53	2, 636	2, 626	2, 616	2, 607	2, 598	2, 588	2, 579	2, 569	2, 560	2, 550
54	2, 541	2, 532	2, 523	2, 513	2, 504	2, 495	2, 486	2, 476	2, 467	2, 458
55	2, 449	2, 440	2, 431	2, 422	2, 413	2, 404	2, 395	2, 386	2, 377	2, 368
56	2, 359	2, 350	2, 341	2, 333	2, 324	2, 315	2, 306	2, 298	2, 289	2, 280
57	2, 271	2, 263	2, 254	2, 245	2, 237	2, 228	2, 220	2, 211	2, 203	2, 194
58	2, 186	2, 177	2, 169	2, 160	2, 152	2, 143	2, 135	2, 127	2, 118	2, 110
59	2, 102	2, 093	2, 085	2, 077	2, 069	2, 060	2, 052	2, 044	2, 036	2, 028
60	2, 019	2, 011	2, 003	1, 995	1, 987	1, 979	1, 971	1, 963	1, 955	1, 947
61	1, 939	1, 931	1, 923	1, 915	1, 907	1, 899	1, 891	1, 883	1, 876	1, 868
62	1, 860	1, 852	1, 844	1, 836	1, 829	1, 821	1, 813	1, 805	1, 798	1, 790
63	1, 782	1, 775	1, 767	1, 759	1, 752	1, 744	1, 736	1, 729	1, 721	1, 714
64	1, 706	1, 698	1, 691	1, 683	1, 676	1, 668	1, 661	1, 653	1, 646	1, 639
65	1, 631	1, 624	1, 616	1, 609	1, 601	1, 594	1, 587	1, 579	1, 572	1, 565
66	1, 557	1, 550	1, 543	1, 535	1, 528	1, 521	1, 514	1, 506	1, 499	1, 492
67	1, 485	1, 478	1, 470	1, 463	1, 456	1, 449	1, 442	1, 435	1, 427	1, 420
68	1, 413	1, 406	1, 399	1, 392	1, 385	1, 378	1, 371	1, 364	1, 357	1, 350
69	1, 343	1, 336	1, 329	1, 322	1, 315	1, 308	1, 301	1, 294	1, 287	1, 280
70	1, 273	1, 266	1, 259	1, 252	1, 246	1, 239	1, 232	1, 225	1, 218	1, 211
71	1, 204	1, 198	1, 191	1, 184	1, 177	1, 170	1, 164	1, 157	1, 150	1, 143
72	1, 137	1, 130	1, 123	1, 116	1, 110	1, 103	1, 096	1, 090	1, 083	1, 076
73	1, 069	1, 063	1, 056	1, 049	1, 043	1, 036	1, 030	1, 023	1, 016	1, 010
74	1, 003	996	990	983	977	970	964	957	950	944
75	937	931	924	918	911	905	898	892	885	879
76	872	866	859	853	846	840	833	827	820	814
77	808	801	795	788	782	775	769	763	756	750
78	744	737	731	724	718	712	705	699	693	686
79	680	674	667	661	655	648	642	636	629	623
80	617	611	604	598	592	585	579	573	567	560
81	554	548	542	535	529	523	517	510	504	498
82	492	485	479	473	467	461	454	448	442	436
83	430	423	417	411	405	399	392	386	380	374
84	368	361	355	349	343	337	331	325	318	312
85	306	300	294	288	281	275	269	263	257	251
86	245	238	232	226	220	214	208	202	196	189
87	183	177	171	165	159	153	147	140	134	128
88	122	116	110	104	98	92	85	79	73	67
89	61	55	49	43	37	31	24	18	12	6

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 4,000 Meters (Ballistic Zone 7) (Computer Zone 9) (Fallout Zone 2)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	69, 119	67, 254	65, 479	63, 788	62, 176	60, 638	59, 169	57, 765	56, 422	55, 136
4	53, 904	52, 723	51, 590	50, 501	49, 456	48, 451	47, 484	46, 553	45, 656	44, 791
5	43, 957	43, 153	42, 376	41, 625	40, 899	40, 198	39, 519	38, 862	38, 225	37, 608
6	37, 010	36, 430	35, 868	35, 321	34, 791	34, 276	33, 775	33, 288	32, 815	32, 354
7	31, 906	31, 469	31, 044	30, 630	30, 227	29, 833	29, 449	29, 075	28, 710	28, 353
8	28, 005	27, 666	27, 334	27, 009	26, 692	26, 382	26, 079	25, 783	25, 493	25, 209
9	24, 931	24, 659	24, 393	24, 132	23, 876	23, 626	23, 381	23, 140	22, 905	22, 673
10	22, 447	22, 224	22, 006	21, 792	21, 581	21, 375	21, 172	20, 973	20, 778	20, 586
11	20, 397	20, 212	20, 030	19, 851	19, 675	19, 502	19, 331	19, 164	18, 999	18, 837
12	18, 678	18, 521	18, 367	18, 215	18, 065	17, 918	17, 773	17, 630	17, 489	17, 351
13	17, 214	17, 080	16, 947	16, 817	16, 688	16, 561	16, 436	16, 313	16, 191	16, 071
14	15, 953	15, 836	15, 721	15, 608	15, 496	15, 385	15, 276	15, 169	15, 062	14, 958
15	14, 854	14, 752	14, 651	14, 552	14, 453	14, 356	14, 260	14, 165	14, 072	13, 979
16	13, 888	13, 798	13, 709	13, 621	13, 533	13, 447	13, 362	13, 278	13, 195	13, 113
17	13, 032	12, 951	12, 872	12, 793	12, 715	12, 639	12, 563	12, 487	12, 413	12, 339
18	12, 267	12, 195	12, 123	12, 053	11, 983	11, 914	11, 846	11, 778	11, 711	11, 645
19	11, 579	11, 514	11, 450	11, 386	11, 323	11, 260	11, 199	11, 137	11, 077	11, 017
20	10, 957	10, 898	10, 840	10, 782	10, 725	10, 668	10, 612	10, 556	10, 501	10, 446
21	10, 392	10, 338	10, 285	10, 232	10, 180	10, 128	10, 076	10, 025	9, 975	9, 925
22	9, 875	9, 826	9, 777	9, 729	9, 681	9, 633	9, 586	9, 539	9, 493	9, 447
23	9, 401	9, 356	9, 311	9, 266	9, 222	9, 178	9, 135	9, 092	9, 049	9, 006
24	8, 964	8, 923	8, 881	8, 840	8, 799	8, 758	8, 718	8, 678	8, 639	8, 599
25	8, 560	8, 522	8, 483	8, 445	8, 407	8, 369	8, 332	8, 295	8, 258	8, 222
26	8, 185	8, 149	8, 113	8, 078	8, 043	8, 008	7, 973	7, 938	7, 904	7, 870
27	7, 836	7, 802	7, 769	7, 736	7, 703	7, 670	7, 638	7, 605	7, 573	7, 542
28	7, 510	7, 478	7, 447	7, 416	7, 385	7, 355	7, 324	7, 294	7, 264	7, 234
29	7, 204	7, 175	7, 145	7, 116	7, 087	7, 059	7, 030	7, 002	6, 973	6, 945
30	6, 917	6, 890	6, 862	6, 835	6, 807	6, 780	6, 753	6, 727	6, 700	6, 673
31	6, 647	6, 621	6, 595	6, 569	6, 543	6, 518	6, 492	6, 467	6, 442	6, 417
32	6, 392	6, 367	6, 343	6, 318	6, 294	6, 270	6, 246	6, 222	6, 198	6, 175
33	6, 151	6, 128	6, 104	6, 081	6, 058	6, 035	6, 012	5, 990	5, 967	5, 945
34	5, 922	5, 900	5, 878	5, 856	5, 834	5, 813	5, 791	5, 769	5, 748	5, 727
35	5, 705	5, 684	5, 663	5, 642	5, 622	5, 601	5, 580	5, 560	5, 539	5, 519
36	5, 499	5, 479	5, 459	5, 439	5, 419	5, 399	5, 380	5, 360	5, 341	5, 321
37	5, 302	5, 283	5, 264	5, 245	5, 226	5, 207	5, 188	5, 169	5, 151	5, 132
38	5, 114	5, 096	5, 077	5, 059	5, 041	5, 023	5, 005	4, 987	4, 969	4, 952
39	4, 934	4, 917	4, 899	4, 882	4, 864	4, 847	4, 830	4, 813	4, 796	4, 779
40	4, 762	4, 745	4, 728	4, 712	4, 695	4, 678	4, 662	4, 646	4, 629	4, 613
41	4, 597	4, 581	4, 564	4, 548	4, 532	4, 517	4, 501	4, 485	4, 469	4, 454
42	4, 438	4, 422	4, 407	4, 392	4, 376	4, 361	4, 346	4, 330	4, 315	4, 300
43	4, 285	4, 270	4, 255	4, 241	4, 226	4, 211	4, 196	4, 182	4, 167	4, 153
44	4, 138	4, 124	4, 109	4, 095	4, 081	4, 067	4, 052	4, 038	4, 024	4, 010
45	3, 996	3, 982	3, 968	3, 955	3, 941	3, 927	3, 913	3, 900	3, 886	3, 873
46	3, 859	3, 846	3, 832	3, 819	3, 806	3, 792	3, 779	3, 766	3, 753	3, 740

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 4,000 Meters (Ballistic Zone 7) (Computer Zone 9) (Fallout Zone 2) Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	3,727	3,714	3,701	3,688	3,675	3,662	3,649	3,636	3,624	3,611
48	3,598	3,586	3,573	3,561	3,548	3,536	3,523	3,511	3,499	3,486
49	3,474	3,462	3,450	3,438	3,425	3,413	3,401	3,389	3,377	3,365
50	3,354	3,342	3,330	3,318	3,306	3,295	3,283	3,271	3,260	3,248
51	3,236	3,225	3,213	3,202	3,191	3,179	3,168	3,156	3,145	3,134
52	3,123	3,111	3,100	3,089	3,078	3,067	3,056	3,045	3,034	3,023
53	3,012	3,001	2,990	2,979	2,968	2,957	2,947	2,936	2,925	2,915
54	2,904	2,893	2,883	2,872	2,861	2,851	2,840	2,830	2,819	2,809
55	2,799	2,788	2,778	2,768	2,757	2,747	2,737	2,727	2,716	2,706
56	2,696	2,686	2,676	2,666	2,656	2,646	2,635	2,626	2,616	2,606
57	2,596	2,586	2,576	2,566	2,556	2,546	2,537	2,527	2,517	2,507
58	2,498	2,488	2,478	2,469	2,459	2,449	2,440	2,430	2,421	2,411
59	2,402	2,392	2,383	2,373	2,364	2,354	2,345	2,336	2,326	2,317
60	2,308	2,298	2,289	2,280	2,271	2,261	2,252	2,243	2,234	2,225
61	2,216	2,207	2,197	2,188	2,179	2,170	2,161	2,152	2,143	2,134
62	2,125	2,116	2,107	2,099	2,090	2,081	2,072	2,063	2,054	2,045
63	2,037	2,028	2,019	2,010	2,002	1,993	1,984	1,976	1,967	1,958
64	1,950	1,941	1,932	1,924	1,915	1,907	1,898	1,889	1,881	1,872
65	1,864	1,855	1,847	1,839	1,830	1,822	1,813	1,805	1,796	1,788
66	1,780	1,771	1,763	1,755	1,746	1,738	1,730	1,721	1,713	1,705
67	1,697	1,689	1,680	1,672	1,664	1,656	1,648	1,639	1,631	1,623
68	1,615	1,607	1,599	1,591	1,583	1,575	1,567	1,558	1,550	1,542
69	1,534	1,526	1,518	1,510	1,502	1,495	1,487	1,479	1,471	1,463
70	1,455	1,447	1,439	1,431	1,423	1,416	1,408	1,400	1,392	1,384
71	1,376	1,369	1,361	1,353	1,345	1,337	1,330	1,322	1,314	1,307
72	1,299	1,291	1,283	1,276	1,268	1,260	1,253	1,245	1,237	1,230
73	1,222	1,214	1,207	1,199	1,192	1,184	1,176	1,169	1,161	1,154
74	1,146	1,139	1,131	1,124	1,116	1,109	1,101	1,094	1,086	1,079
75	1,071	1,064	1,056	1,049	1,041	1,034	1,026	1,019	1,011	1,004
76	997	989	982	974	967	960	952	945	938	930
77	923	916	908	901	894	886	879	872	864	857
78	850	842	835	828	821	813	806	799	792	784
79	777	770	763	755	748	741	734	726	719	712
80	705	698	690	683	676	669	662	655	647	640
81	633	626	619	612	605	597	590	583	576	569
82	562	555	548	540	533	526	519	512	505	498
83	491	484	477	470	463	455	448	441	434	427
84	420	413	406	399	392	385	378	371	364	357
85	350	343	336	329	322	315	308	301	294	287
86	280	273	266	259	252	244	237	230	223	216
87	209	203	196	189	182	175	168	161	154	147
88	140	133	126	119	112	105	98	91	84	77
89	70	63	56	49	42	35	28	21	14	7

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 4,500 Meters (Computer Zone 10)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	76, 936	74, 898	72, 956	71, 104	69, 336	67, 647	66, 033	64, 488	63, 009	61, 592
4	60, 233	58, 930	57, 678	56, 475	55, 319	54, 206	53, 135	52, 103	51, 109	50, 150
5	49, 224	48, 331	47, 468	46, 634	45, 827	45, 046	44, 291	43, 560	42, 851	42, 164
6	41, 498	40, 852	40, 224	39, 615	39, 024	38, 449	37, 891	37, 347	36, 819	36, 305
7	35, 804	35, 316	34, 841	34, 379	33, 928	33, 488	33, 059	32, 640	32, 232	31, 833
8	31, 444	31, 064	30, 692	30, 329	29, 975	29, 628	29, 288	28, 957	28, 632	28, 314
9	28, 003	27, 698	27, 400	27, 108	26, 822	26, 541	26, 267	25, 997	25, 733	25, 474
10	25, 220	24, 970	24, 725	24, 485	24, 250	24, 018	23, 791	23, 568	23, 349	23, 133
11	22, 922	22, 714	22, 510	22, 309	22, 111	21, 917	21, 726	21, 538	21, 354	21, 172
12	20, 993	20, 817	20, 644	20, 473	20, 305	20, 140	19, 977	19, 817	19, 659	19, 504
13	19, 351	19, 200	19, 051	18, 904	18, 760	18, 617	18, 477	18, 338	18, 202	18, 067
14	17, 934	17, 804	17, 674	17, 547	17, 421	17, 297	17, 175	17, 054	16, 935	16, 817
15	16, 701	16, 586	16, 473	16, 361	16, 250	16, 141	16, 034	15, 927	15, 822	15, 718
16	15, 616	15, 514	15, 414	15, 315	15, 217	15, 120	15, 025	14, 930	14, 837	14, 745
17	14, 653	14, 563	14, 474	14, 385	14, 298	14, 212	14, 126	14, 042	13, 958	13, 876
18	13, 794	13, 713	13, 633	13, 554	13, 475	13, 397	13, 321	13, 245	13, 169	13, 095
19	13, 021	12, 948	12, 876	12, 804	12, 733	12, 663	12, 594	12, 525	12, 457	12, 389
20	12, 322	12, 256	12, 190	12, 125	12, 061	11, 997	11, 934	11, 871	11, 809	11, 748
21	11, 687	11, 626	11, 566	11, 507	11, 448	11, 390	11, 332	11, 275	11, 218	11, 162
22	11, 106	11, 051	10, 996	10, 941	10, 888	10, 834	10, 781	10, 728	10, 676	10, 624
23	10, 573	10, 522	10, 472	10, 422	10, 372	10, 323	10, 274	10, 225	10, 177	10, 129
24	10, 082	10, 035	9, 988	9, 942	9, 896	9, 851	9, 805	9, 761	9, 716	9, 672
25	9, 628	9, 584	9, 541	9, 498	9, 456	9, 413	9, 371	9, 330	9, 288	9, 247
26	9, 206	9, 166	9, 125	9, 086	9, 046	9, 006	8, 967	8, 928	8, 890	8, 852
27	8, 814	8, 776	8, 738	8, 701	8, 664	8, 627	8, 591	8, 554	8, 518	8, 482
28	8, 447	8, 411	8, 376	8, 341	8, 307	8, 272	8, 238	8, 204	8, 170	8, 137
29	8, 103	8, 070	8, 037	8, 004	7, 972	7, 939	7, 907	7, 875	7, 843	7, 812
30	7, 780	7, 749	7, 718	7, 687	7, 657	7, 626	7, 596	7, 566	7, 536	7, 506
31	7, 477	7, 447	7, 418	7, 389	7, 360	7, 331	7, 303	7, 274	7, 246	7, 218
32	7, 190	7, 162	7, 134	7, 107	7, 080	7, 052	7, 025	6, 999	6, 972	6, 945
33	6, 919	6, 892	6, 866	6, 840	6, 814	6, 788	6, 763	6, 737	6, 712	6, 687
34	6, 662	6, 637	6, 612	6, 587	6, 563	6, 538	6, 514	6, 489	6, 465	6, 441
35	6, 418	6, 394	6, 370	6, 347	6, 323	6, 300	6, 277	6, 254	6, 231	6, 208
36	6, 185	6, 163	6, 140	6, 118	6, 095	6, 073	6, 051	6, 029	6, 007	5, 985
37	5, 964	5, 942	5, 921	5, 899	5, 878	5, 857	5, 836	5, 815	5, 794	5, 773
38	5, 752	5, 732	5, 711	5, 691	5, 670	5, 650	5, 630	5, 610	5, 590	5, 570
39	5, 550	5, 530	5, 511	5, 491	5, 472	5, 452	5, 433	5, 414	5, 395	5, 375
40	5, 356	5, 337	5, 319	5, 300	5, 281	5, 263	5, 244	5, 226	5, 207	5, 189
41	5, 171	5, 152	5, 134	5, 116	5, 098	5, 080	5, 063	5, 045	5, 027	5, 010
42	4, 992	4, 975	4, 957	4, 940	4, 923	4, 905	4, 888	4, 871	4, 854	4, 837
43	4, 820	4, 803	4, 787	4, 770	4, 753	4, 737	4, 720	4, 704	4, 687	4, 671
44	4, 655	4, 639	4, 622	4, 606	4, 590	4, 574	4, 558	4, 543	4, 527	4, 511
45	4, 495	4, 480	4, 464	4, 448	4, 433	4, 418	4, 402	4, 387	4, 372	4, 356
46	4, 341	4, 326	4, 311	4, 296	4, 281	4, 266	4, 251	4, 236	4, 221	4, 207

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distant (Meters), 4,500 Meters (Computer Zone 10)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	4, 192	4, 177	4, 163	4, 148	4, 134	4, 119	4, 105	4, 091	4, 076	4, 062
48	4, 048	4, 034	4, 019	4, 005	3, 991	3, 977	3, 963	3, 949	3, 936	3, 922
49	3, 908	3, 894	3, 881	3, 867	3. 853	3, 840	3, 826	3, 813	3, 799	3, 786
50	3, 772	3, 759	3, 746	3, 732	3, 719	3, 706	3, 693	3, 680	3, 667	3, 654
51	3, 641	3, 628	3, 615	3, 602	3, 589	3, 576	3, 563	3, 551	3, 538	3, 525
52	3, 513	3, 500	3, 487	3, 475	3, 462	3, 450	3, 437	3, 425	3, 413	3, 400
53	3, 388	3, 376	3, 363	3, 351	3, 339	3, 327	3, 315	3, 303	3, 291	3, 279
54	3, 267	3, 255	3, 243	3, 231	3, 219	3, 207	3, 195	3, 183	3, 172	3, 160
55	3, 148	3, 136	3, 125	3, 113	3, 102	3, 090	3, 079	3, 067	3, 056	3, 044
56	3, 033	3, 021	3, 010	2, 999	2, 987	2, 976	2, 965	2, 953	2, 942	2, 931
57	2, 920	2, 909	2, 898	2. 886	2, 875	2, 864	2, 853	2, 842	2, 831	2, 820
58	2, 810	2, 799	2, 788	2, 777	2, 766	2, 755	2, 745	2, 734	2, 723	2, 712
59	2, 702	2, 691	2, 680	2, 670	2, 659	2, 649	2, 638	2, 627	2, 617	2, 606
60	2, 596	2, 585	2, 575	2, 565	2, 554	2, 544	2, 534	2, 523	2, 513	2, 503
61	2, 492	2, 482	2, 472	2, 462	2, 451	2, 441	2, 431	2, 421	2, 411	2, 401
62	2, 391	2, 381	2, 371	2, 361	2, 351	2, 341	2, 331	2, 321	2, 311	2, 301
63	2, 291	2, 281	2, 271	2, 261	2, 252	2, 242	2, 232	2, 222	2, 213	2, 203
64	2, 193	2, 183	2, 174	2, 164	2, 154	2, 145	2, 135	2, 125	2, 116	2, 106
65	2, 097	2, 087	2, 078	2, 068	2, 059	2, 049	2, 040	2, 030	2. 021	2, 011
66	2, 002	1, 993	1, 983	1, 974	1, 964	1, 955	1, 946	1, 937	1, 927	1, 918
67	1, 909	1, 899	1, 890	1, 881	1, 872	1, 863	1, 853	1, 844	1, 835	1, 826
68	1, 817	1, 808	1, 798	1, 789	1, 780	1, 771	1, 762	1, 753	1, 744	1, 735
69	1, 726	1, 717	1, 708	1, 699	1, 690	1, 681	1, 672	1, 663	1, 654	1. 646
70	1. 637	1, 628	1, 619	1, 610	1, 601	1, 592	1, 584	1, 575	1, 566	1, 557
71	1, 548	1, 540	1, 531	1, 522	1, 513	1, 505	1, 496	1, 487	1, 478	1, 470
72	1, 461	1, 452	1, 444	1, 435	1, 426	1, 418	1, 409	1, 401	1, 392	1, 383
73	1, 375	1, 366	1, 358	1, 349	1, 341	1, 332	1, 323	1, 315	1, 306	1, 298
74	1, 289	1, 281	1, 272	1, 264	1, 256	1, 247	1, 239	1, 230	1, 222	1, 213
75	1, 205	1, 196	1, 188	1, 180	1, 171	1, 163	1, 155	1, 146	1, 138	1, 129
76	1, 121	1, 113	1, 105	1, 096	1, 088	1, 080	1, 071	1, 063	1, 055	1, 046
77	1, 038	1, 030	1, 022	1, 013	1, 005	997	989	980	972	964
78	956	948	939	931	923	915	907	899	890	882
79	874	866	858	850	842	833	825	817	809	801
80	793	785	777	769	761	753	744	736	728	720
81	712	704	696	688	680	672	664	656	648	640
82	632	624	616	608	600	592	584	576	568	560
83	552	544	536	528	520	512	504	496	489	481
84	473	465	457	449	441	433	425	417	409	401
85	393	386	378	370	362	354	346	338	330	322
86	314	307	299	291	283	275	267	259	251	244
87	236	228	220	212	204	196	188	181	173	165
88	157	149	141	133	126	118	110	102	94	86
89	78	71	63	55	47	39	31	24	16	8

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 5,000 Meters (Ballistic Zone 8) (Computer Zone 11)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	84, 605	82, 404	80, 304	78, 299	76, 382	74, 550	72, 796	71, 117	69, 508	67, 965
4	66, 484	65, 062	63, 695	62, 382	61, 118	59, 901	58, 729	57, 600	56, 510	55, 460
5	54, 445	53, 465	52, 518	51, 602	50, 716	49, 859	49, 029	48, 225	47, 445	46, 690
6	45, 957	45, 245	44, 555	43, 884	43, 233	42, 599	41, 984	41, 385	40, 802	40, 235
7	39, 683	39, 145	38, 621	38, 110	37, 612	37, 127	36, 653	36, 191	35, 740	35, 300
8	34, 870	34, 449	34, 039	33, 638	33, 246	32, 862	32, 487	32, 120	31, 761	31, 410
9	31, 066	30, 729	30, 399	30, 075	29, 759	29, 448	29, 144	28, 846	28, 554	28, 267
10	27, 985	27, 709	27, 438	27, 173	26, 912	26, 655	26, 404	26, 157	25, 914	25, 675
11	25, 441	25, 211	24, 984	24, 762	24, 543	24, 328	24, 117	23, 908	23, 704	23, 502
12	23, 304	23, 109	22, 917	22, 728	22, 542	22, 359	22, 178	22, 001	21, 826	21, 653
13	21, 483	21, 316	21, 151	20, 989	20, 828	20, 670	20, 515	20, 361	20, 210	20, 061
14	19, 913	19, 768	19, 625	19, 483	19, 344	19, 206	19, 071	18, 937	18, 804	18, 674
15	18, 545	18, 418	18, 292	18, 168	18, 045	17, 924	17, 805	17, 687	17, 570	17, 455
16	17, 341	17, 229	17, 117	17, 008	16, 899	16, 792	16, 686	16, 581	16, 477	16, 375
17	16, 273	16, 173	16, 074	15, 976	15, 879	15, 783	15, 689	15, 595	15, 502	15, 410
18	15, 320	15, 230	15, 141	15, 053	14, 966	14, 880	14, 794	14, 710	14, 627	14, 544
19	14, 462	14, 381	14, 301	14, 221	14, 143	14, 065	13, 987	13, 911	13, 835	13, 760
20	13, 686	13, 613	13, 540	13, 468	13, 396	13, 325	13, 255	13, 186	13, 117	13, 048
21	12, 981	12, 914	12, 847	12, 781	12, 716	12, 651	12, 587	12, 524	12, 461	12, 398
22	12, 336	12, 275	12, 214	12, 153	12, 094	12, 034	11, 975	11, 917	11, 859	11, 801
23	11, 745	11, 688	11, 632	11, 576	11, 521	11, 466	11, 412	11, 358	11, 305	11, 252
24	11, 199	11, 147	11, 095	11, 044	10, 993	10, 942	10, 892	10, 842	10, 793	10, 744
25	10, 695	10, 646	10, 598	10, 551	10, 503	10, 456	10, 410	10, 364	10, 318	10, 272
26	10, 227	10, 182	10, 137	10, 093	10, 049	10, 005	9, 961	9, 918	9, 875	9, 833
27	9, 791	9, 749	9, 707	9, 666	9, 624	9, 584	9, 543	9, 503	9, 463	9, 423
28	9, 383	9, 344	9, 305	9, 266	9, 228	9, 189	9, 151	9, 114	9, 076	9, 039
29	9, 002	8, 965	8, 928	8, 892	8, 856	8, 820	8, 784	8, 749	8, 713	8, 678
30	8, 643	8, 609	8, 574	8, 540	8, 506	8, 472	8, 438	8, 405	8, 372	8, 339
31	8, 306	8, 273	8, 241	8, 208	8, 176	8, 144	8, 113	8, 081	8, 050	8, 018
32	7, 987	7, 957	7, 926	7, 895	7, 865	7, 835	7, 805	7, 775	7, 745	7, 716
33	7, 686	7, 657	7, 628	7, 599	7, 570	7, 542	7, 513	7, 485	7, 457	7, 428
34	7, 401	7, 373	7, 345	7, 318	7, 290	7, 263	7, 236	7, 209	7, 183	7, 156
35	7, 129	7, 103	7, 077	7, 051	7, 025	6, 999	6, 973	6, 948	6, 922	6, 897
36	6, 871	6, 846	6, 821	6, 796	6, 772	6, 747	6, 722	6, 698	6, 674	6, 650
37	6, 625	6, 601	6, 578	6, 554	6, 530	6, 507	6, 483	6, 460	6, 437	6, 414
38	6, 391	6, 368	6, 345	6, 322	6, 300	6, 277	6, 255	6, 232	6, 210	6, 188
39	6, 166	6, 144	6, 122	6, 100	6, 079	6, 057	6, 036	6, 014	5, 993	5, 972
40	5, 951	5, 930	5, 909	5, 888	5, 867	5, 847	5, 826	5, 805	5, 785	5, 765
41	5, 744	5, 724	5, 704	5, 684	5, 664	5, 644	5, 624	5, 605	5, 585	5, 566
42	5, 546	5, 527	5, 507	5, 488	5, 469	5, 450	5, 431	5, 412	5, 393	5, 374
43	5, 355	5, 337	5, 318	5, 299	5, 281	5, 262	5, 244	5, 226	5, 208	5, 189
44	5, 171	5, 153	5, 135	5, 118	5, 100	5, 082	5, 064	5, 047	5, 029	5, 012
45	4, 994	4, 977	4, 959	4, 942	4, 925	4, 908	4, 891	4, 874	4, 857	4, 840
46	4, 823	4, 806	4, 789	4, 773	4, 756	4, 739	4, 723	4, 706	4, 690	4, 674

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate

Table 2-1. *Horizontal Distance (Meters), 5,000 Meters (Ballistic Zone 8) (Computer Zone 11)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	4, 657	4, 641	4, 625	4, 609	4, 593	4, 577	4, 561	4, 545	4, 529	4, 513
48	4, 497	4, 481	4, 466	4, 450	4, 434	4, 419	4, 403	4, 388	4, 372	4, 357
49	4, 342	4, 326	4, 311	4, 296	4, 281	4, 266	4, 251	4, 236	4, 221	4, 206
50	4, 191	4, 176	4, 161	4, 147	4, 132	4, 117	4, 103	4, 088	4, 074	4, 059
51	4, 045	4, 030	4, 016	4, 002	3, 987	3, 973	3, 959	3, 945	3, 931	3, 916
52	3, 902	3, 888	3, 874	3, 861	3, 847	3, 833	3, 819	3, 805	3, 791	3, 778
53	3, 764	3, 750	3, 737	3, 723	3, 710	3, 696	3, 683	3, 669	3, 656	3, 642
54	3, 629	3, 616	3, 603	3, 589	3, 576	3, 563	3, 550	3, 537	3, 524	3, 511
55	3, 498	3, 485	3, 472	3, 459	3, 446	3, 433	3, 420	3, 407	3, 395	3, 382
56	3, 369	3, 357	3, 344	3, 331	3, 319	3, 306	3, 294	3, 281	3, 269	3, 256
57	3, 244	3, 232	3, 219	3, 207	3, 195	3, 182	3, 170	3, 158	3, 146	3, 134
58	3, 121	3, 109	3, 097	3, 085	3, 073	3, 061	3, 049	3, 037	3, 025	3, 013
59	3, 002	2, 990	2, 978	2, 966	2, 954	2, 943	2, 931	2, 919	2, 907	2, 896
60	2, 884	2, 872	2, 861	2, 849	2, 838	2, 826	2, 815	2, 803	2, 792	2, 780
61	2, 769	2, 758	2, 746	2, 735	2, 724	2, 712	2, 701	2, 690	2, 679	2, 667
62	2, 656	2, 645	2, 634	2, 623	2, 612	2, 601	2, 589	2, 578	2, 567	2, 556
63	2, 545	2, 534	2, 523	2, 513	2, 502	2, 491	2, 480	2, 469	2, 458	2, 447
64	2, 437	2, 426	2, 415	2, 404	2, 394	2, 383	2, 372	2, 361	2, 351	2, 340
65	2, 330	2, 319	2, 308	2, 298	2, 287	2, 277	2, 266	2, 256	2, 245	2, 235
66	2, 224	2, 214	2, 203	2, 193	2, 183	2, 172	2, 162	2, 151	2, 141	2, 131
67	2, 121	2, 110	2, 100	2, 090	2, 080	2, 069	2, 059	2, 049	2, 039	2, 029
68	2, 018	2, 008	1, 998	1, 988	1, 978	1, 968	1, 958	1, 948	1, 938	1, 928
69	1, 918	1, 908	1, 898	1, 888	1, 878	1, 868	1, 858	1, 848	1, 838	1, 828
70	1, 818	1, 808	1, 799	1, 789	1, 779	1, 769	1, 759	1, 750	1, 740	1, 730
71	1, 720	1, 710	1, 701	1, 691	1, 681	1, 672	1, 662	1, 652	1, 643	1, 633
72	1, 623	1, 614	1, 604	1, 594	1, 585	1, 575	1, 566	1, 556	1, 546	1, 537
73	1, 527	1, 518	1, 508	1, 499	1, 489	1, 480	1, 470	1, 461	1, 451	1, 442
74	1, 433	1, 423	1, 414	1, 404	1, 395	1, 385	1, 376	1, 367	1, 357	1, 348
75	1, 339	1, 329	1, 320	1, 311	1, 301	1, 292	1, 283	1, 273	1, 264	1, 255
76	1, 246	1, 236	1, 227	1, 218	1, 209	1, 199	1, 190	1, 181	1, 172	1, 163
77	1, 153	1, 144	1, 135	1, 126	1, 117	1, 108	1, 098	1, 089	1, 080	1, 071
78	1, 062	1, 053	1, 044	1, 035	1, 026	1, 016	1, 007	998	989	980
79	971	962	953	944	935	926	917	908	899	890
80	881	872	863	854	845	836	827	818	809	800
81	791	782	773	765	756	747	738	729	720	711
82	702	693	684	675	667	658	649	640	631	622
83	613	605	596	587	578	569	560	552	543	534
84	525	516	507	499	490	481	472	463	455	446
85	437	428	420	411	402	393	384	376	367	358
86	349	341	332	323	314	306	297	288	279	271
87	262	253	244	236	227	218	209	201	192	183
88	174	166	157	148	140	131	122	113	105	96
89	87	78	70	61	52	44	35	26	17	9

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate

Table 2-1. *Horizontal Distance (Meters), 6,000 Meters (Ballistic Zone 9) (Computer Zone 12) (Fallout Zone 3)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	99, 534	97, 031	94, 637	92, 347	90, 154	88, 053	86, 038	84, 106	82, 251	80, 470
4	78, 758	77, 112	75, 528	74, 003	72, 534	71, 119	69, 754	68, 437	67, 166	65, 939
5	64, 753	63, 606	62, 497	61, 424	60, 385	59, 378	58, 403	57, 458	56, 542	55, 653
6	54, 790	53, 952	53, 138	52, 347	51, 578	50, 831	50, 104	49, 396	48, 708	48. 037
7	47, 384	46, 748	46, 128	45, 523	44, 933	44, 358	43, 797	43, 249	42, 714	42, 192
8	41, 681	41, 183	40, 695	40, 219	39, 753	39, 298	38, 852	38, 416	37, 989	37. 571
9	37, 162	36. 761	36, 369	35, 984	35, 608	35, 238	34, 876	34, 521	34, 173	33, 831
10	33, 496	33, 167	32, 844	32, 528	32, 217	31, 911	31, 611	31, 317	31, 027	30, 743
11	30, 463	30, 189	29, 919	29, 653	29, 392	29, 136	28, 883	28, 635	28, 390	28, 150
12	27, 913	27, 681	27, 451	27, 226	27, 003	26, 785	26, 569	26, 357	26, 148	25, 942
13	25, 739	25, 539	25, 342	25, 148	24, 956	24, 768	24, 582	24, 398	24, 217	24, 039
14	23, 863	23, 689	23, 518	23, 349	23, 182	23, 018	22, 855	22, 695	22, 537	22, 381
15	22, 226	22, 074	21, 924	21, 776	21, 629	21, 484	21, 341	21, 200	21, 061	20, 923
16	20, 786	20, 652	20, 519	20, 387	20, 258	20, 129	20, 002	19, 877	19, 753	19, 630
17	19, 509	19, 389	19, 270	19, 153	19, 037	18, 922	18, 809	18, 697	18, 586	18, 476
18	18, 367	18, 260	18, 153	18, 048	17, 944	17, 841	17, 738	17, 637	17, 537	17, 438
19	17, 340	17, 243	17, 147	17, 052	16, 958	16, 864	16, 772	16, 681	16, 590	16, 500
20	16, 411	16, 323	16, 236	16, 149	16, 064	15, 979	15, 895	15, 812	15, 729	15, 647
21	15, 566	15, 486	15, 406	15, 327	15, 249	15, 172	15, 095	15, 019	14, 943	14, 868
22	14, 794	14, 720	14, 647	14, 575	14, 503	14, 432	14, 362	14, 292	14, 222	14, 153
23	14, 085	14, 017	13, 950	13, 884	13, 817	13, 752	13, 687	13, 622	13, 558	13, 495
24	13, 432	13, 369	13, 307	13, 246	13, 184	13, 124	13, 064	13, 004	12, 944	12, 886
25	12, 827	12, 769	12, 712	12, 655	12, 598	12, 542	12, 486	12, 430	12, 375	12, 320
26	12, 266	12, 212	12, 159	12, 105	12, 053	12, 000	11, 948	11, 896	11, 845	11, 794
27	11, 743	11, 693	11, 643	11, 593	11, 544	11, 495	11, 446	11, 398	11, 350	11, 302
28	11, 255	11, 208	11, 161	11, 115	11, 069	11, 023	10, 977	10, 932	10, 887	10, 842
29	10, 798	10, 753	10, 710	10, 666	10, 623	10, 579	10, 537	10, 494	10, 452	10, 410
30	10, 368	10, 326	10, 285	10, 244	10, 203	10. 163	10, 122	10, 082	10, 042	10, 003
31	9, 963	9, 924	9, 885	9, 846	9, 808	9, 770	9, 732	9, 694	9, 656	9, 619
32	9, 581	9, 544	9, 508	9, 471	9, 435	9, 398	9, 362	9, 327	9, 291	9, 255
33	9, 220	9, 185	9, 150	9, 116	9, 081	9, 047	9, 013	8, 979	8, 945	8, 911
34	8, 878	8, 845	8, 811	8, 779	8, 746	8, 713	8, 681	8, 648	8, 616	8, 584
35	8, 553	8, 521	8, 490	8, 458	8, 427	8, 396	8, 365	8, 334	8, 304	8, 273
36	8, 243	8, 213	8, 183	8, 153	8, 124	8, 094	8, 065	8, 035	8, 006	7, 977
37	7, 948	7, 919	7, 891	7, 862	7, 834	7, 806	7, 778	7, 750	7, 722	7, 694
38	7, 667	7, 639	7, 612	7, 584	7, 557	7, 530	7, 503	7, 477	7, 450	7, 424
39	7, 397	7, 371	7, 345	7, 319	7, 293	7, 267	7, 241	7, 215	7, 190	7, 164
40	7, 139	7, 114	7, 089	7, 064	7, 039	7, 014	6, 989	6, 965	6, 940	6, 916
41	6, 891	6, 867	6, 843	6, 819	6, 795	6, 771	6, 748	6, 724	6, 700	6, 677
42	6, 654	6, 630	6, 607	6, 584	6, 561	6, 538	6, 515	6, 492	6, 470	6, 447
43	6, 425	6, 402	6, 380	6, 358	6, 336	6, 313	6, 291	6, 270	6. 248	6, 226
44	6, 204	6, 183	6, 161	6, 140	6, 118	6, 097	6, 076	6, 055	6, 033	6, 012
45	5, 992	5, 971	5, 950	5, 929	5, 909	5, 888	5, 867	5, 847	5. 827	5, 806
46	5, 786	5, 766	5, 746	5, 726	5, 706	5, 686	5, 666	5, 646	5, 627	5, 607

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 6,000 Meters (Ballistic Zone 9) (Computer Zone 12) (Fallout Zone 3)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	5, 588	5, 568	5, 549	5, 529	5, 510	5, 491	5, 471	5, 452	5, 433	5, 414
48	5, 395	5, 376	5, 358	5, 339	5, 320	5, 301	5, 283	5, 264	5, 246	5, 227
49	5, 209	5, 191	5, 172	5, 154	5, 136	5, 118	5, 100	5, 082	5, 064	5, 046
50	5, 028	5, 010	4, 993	4, 975	4, 957	4, 940	4, 922	4, 905	4, 887	4, 870
51	4, 853	4, 835	4, 818	4, 801	4, 784	4, 767	4, 750	4, 733	4, 716	4, 699
52	4, 682	4, 665	4, 648	4, 632	4, 615	4, 598	4, 582	4, 565	4, 549	4, 532
53	4, 516	4, 499	4, 483	4, 467	4, 451	4, 434	4, 418	4, 402	4, 386	4, 370
54	4, 354	4, 338	4, 322	4, 306	4, 290	4, 275	4, 259	4, 243	4, 228	4, 212
55	4, 196	4, 181	4, 165	4, 150	4, 134	4, 119	4, 104	4, 088	4, 073	4, 058
56	4, 042	4, 027	4, 012	3, 997	3, 982	3, 967	3, 952	3, 937	3, 922	3, 907
57	3, 892	3, 877	3, 862	3, 848	3, 833	3, 818	3, 803	3, 789	3, 774	3, 760
58	3, 745	3, 730	3, 716	3, 702	3, 687	3, 673	3, 658	3, 644	3, 630	3, 615
59	3, 601	3, 587	3, 573	3, 559	3, 544	3, 530	3, 516	3, 502	3, 488	3, 474
60	3, 460	3, 446	3, 432	3, 419	3, 405	3, 391	3, 377	3, 363	3, 350	3, 336
61	3, 322	3, 309	3, 295	3, 281	3, 268	3, 254	3, 241	3, 227	3, 214	3, 200
62	3, 187	3, 173	3, 160	3, 147	3, 133	3, 120	3, 107	3, 094	3, 080	3, 067
63	3, 054	3, 041	3, 028	3, 014	3, 001	2, 988	2, 975	2, 962	2, 949	2, 936
64	2, 923	2, 910	2, 897	2, 885	2, 872	2, 859	2, 846	2, 833	2, 820	2, 808
65	2, 795	2, 782	2, 770	2, 757	2, 744	2, 732	2, 719	2, 706	2, 694	2, 681
66	2, 669	2, 656	2, 644	2, 631	2, 619	2, 606	2, 594	2, 581	2, 569	2, 557
67	2, 544	2, 532	2, 520	2, 507	2, 495	2, 483	2, 470	2, 458	2, 446	2, 434
68	2, 422	2, 410	2, 397	2, 385	2, 373	2, 361	2, 349	2, 337	2, 325	2, 313
69	2, 301	2, 289	2, 277	2, 265	2, 253	2, 241	2, 229	2, 217	2, 205	2, 193
70	2, 182	2, 170	2, 158	2, 146	2, 134	2, 123	2, 111	2, 099	2, 087	2, 076
71	2, 064	2, 052	2, 041	2, 029	2, 017	2, 006	1, 994	1, 982	1, 971	1, 959
72	1, 948	1, 936	1, 924	1, 913	1, 901	1, 890	1, 878	1, 867	1, 855	1, 844
73	1, 833	1, 821	1, 810	1, 798	1, 787	1, 776	1, 764	1, 753	1, 741	1, 730
74	1, 719	1, 707	1, 696	1, 685	1, 674	1, 662	1, 651	1, 640	1, 629	1, 617
75	1, 606	1, 595	1, 584	1, 573	1, 561	1, 550	1, 539	1, 528	1, 517	1, 506
76	1, 495	1, 483	1, 472	1, 461	1, 450	1, 439	1, 428	1, 417	1, 406	1, 395
77	1, 384	1, 373	1, 362	1, 351	1, 340	1, 329	1, 318	1, 307	1, 296	1, 285
78	1, 274	1, 263	1, 252	1, 241	1, 230	1, 220	1, 209	1, 198	1, 187	1, 176
79	1, 165	1, 154	1, 143	1, 133	1, 122	1, 111	1, 100	1, 089	1, 079	1, 068
80	1, 057	1, 046	1, 035	1, 025	1, 014	1, 003	992	982	971	960
81	949	939	928	917	907	896	885	874	864	853
82	842	832	821	810	800	789	779	768	757	747
83	736	725	715	704	694	683	672	662	651	641
84	630	619	609	598	588	577	567	556	546	535
85	524	514	503	493	482	472	461	451	440	430
86	419	409	398	388	377	367	356	346	335	325
87	314	304	293	283	272	262	251	241	230	220
88	209	199	188	178	167	157	146	136	126	115
89	105	94	84	73	63	52	42	31	21	10

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table2-1. *Horizontal Distance (Meters), 7,000 Meters (Computer Zone 13)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	113, 961	111, 185	108, 524	105, 974	103, 527	101, 180	98, 925	96, 759	94, 677	92, 674
4	90, 747	88, 892	87, 104	85, 381	83, 720	82, 118	80, 571	79, 077	77, 633	76, 238
5	74, 889	73, 583	72, 320	71, 096	69, 911	68, 762	67, 648	66, 568	65, 519	64, 502
6	63, 514	62, 554	61, 621	60, 714	59, 832	58, 974	58, 139	57, 326	56, 535	55, 764
7	55, 012	54, 280	53, 566	52, 870	5., 191	51, 528	50, 881	50, 250	49, 633	49, 031
8	48, 442	47, 866	47, 304	46, 754	46, 216	45, 690	45, 175	44, 671	44, 178	43, 695
9	43, 222	42, 758	42, 304	41, 859	41, 423	40. 996	40, 577	40, 166	39, 762	39, 367
10	38, 979	38, 598	38, 224	37, 857	37, 497	37, 143	36, 795	36, 454	36, 118	35, 788
11	35, 464	35, 146	34, 833	34; 525	34, 222	33, 924	33, 631	33, 343	33, 060	32, 781
12	32, 506	32, 236	31, 970	31, 708	31, 450	31, 196	30, 945	30, 699	30, 456	30, 217
13	29, 981	29, 749	29, 520	29, 295	29. 072	28, 853	28, 637	28, 423	28, 213	28, 006
14	27, 801	27, 599	27, 400	27, 204	27. 010	26, 819	26, 630	26, 444	26, 260	26, 078
15	25, 899	25, 722	25, 547	25, 375	25, 204	25, 036	24, 870	24, 705	24, 543	24, 383
16	24, 224	24, 068	23, 913	23, 760	23, 609	23, 460	23, 312	23, 166	23, 022	22, 879
17	22, 738	22, 599	22, 461	22, 324	22, 189	22, 056	21, 924	21, 793	21, 664	21, 536
18	21, 409	21, 284	21, 160	21, 038	20, 916	20, 796	20, 677	20, 560	20, 443	20, 328
19	20, 214	20, 101	19, 989	19, 878	19, 769	19, 660	19, 552	19. 446	19, 340	19, 236
20	19, 132	19, 030	18, 928	18, 827	18, 728	18, 629	18, 531	18, 434	18, 338	18, 243
21	18, 148	18, 055	17, 962	17, 870	17. 779	17, 689	17, 599	17, 510	17, 422	17, 335
22	17, 249	17, 163	17, 078	16, 994	16, 910	16, 827	16, 745	16, 664	16, 583	16, 503
23	16, 423	16, 344	16, 266	16, 188	16, 111	16, 035	15, 959	15, 884	15, 809	15, 735
24	15, 662	15, 589	15, 517	15, 445	15, 374	15, 303	15, 233	15, 163	15, 094	15, 025
25	14, 957	14, 890	14, 823	14, 756	14, 690	14, 624	14, 559	14, 495	14, 430	14, 367
26	14, 303	14, 241	14, 178	14, 116	14, 055	13, 994	13, 933	13, 873	13, 813	13, 753
27	13, 694	13, 636	13. 577	13, 520	13, 462	13, 405	13, 348	13, 292	13, 236	13, 180
28	13, 125	13, 070	13, 016	12, 962	12, 908	12, 854	12, 801	12, 748	12, 696	12, 644
29	12, 592	12, 541	12, 489	12, 439	12, 388	12. 338	12, 288	12. 238	12, 189	12, 140
30	12, 091	12, 043	11, 995	11, 947	11, 899	11, 852	11, 805	11, 758	11, 712	11, 665
31	11, 620	11, 574	11. 528	11, 483	11, 438	11, 394	11, 349	11, 305	11, 261	11, 218
32	11, 174	11, 131	11, 088	11, 046	11, 003	10, 961	10, 919	10, 877	10, 836	10, 794
33	10, 753	10, 712	10, 672	10, 631	10, 591	10, 551	10, 511	10, 472	10, 432	10, 393
34	10, 354	10, 315	10, 277	10, 238	10, 200	10, 162	10, 124	10, 087	10, 049	10, 012
35	9, 975	9, 938	9, 901	9, 865	9, 828	9, 792	9, 756	9, 721	9, 685	9, 649
36	9, 614	9, 579	9, 544	9, 509	9, 475	9, 440	9, 406	9, 372	9, 338	9, 304
37	9, 270	9, 237	9, 203	9, 170	9. 137	9, 104	9, 071	9, 039	9, 006	8, 974
38	8, 942	8, 910	8, 878	8, 846	8, 814	8, 783	8, 752	8, 720	8, 689	8, 658
39	8, 628	8, 597	8, 566	8, 536	8, 506	8, 476	8, 445	8. 416	8, 386	8, 356
40	8, 327	8, 297	8, 268	8, 239	8, 210	8, 181	8, 152	8, 123	8, 095	8, 066
41	8, 038	8, 010	7, 982	7, 954	7, 926	7, 898	7, 870	7, 843	7, 815	7, 788
42	7, 760	7, 733	7, 706	7, 679	7, 653	7, 626	7, 599	7, 573	7, 546	7, 520
43	7, 494	7, 467	7, 441	7, 415	7, 390	7, 364	7, 338	7, 313	7, 287	7, 262
44	7, 236	7, 211	7, 186	7, 161	7, 136	7, 111	7, 087	7, 062	7, 037	7, 013
45	6, 988	6, 964	6, 940	6, 916	6. 892	6, 868	6, 844	6, 820	6, 796	6, 773
46	6, 749	6, 725	6, 702	6, 679	6, 655	6, 632	6, 609	6, 586	6, 563	6, 540

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 7,000 Meters (Computer Zone 13)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	6, 517	6, 495	6, 472	6, 449	6, 427	6, 404	6, 382	6, 360	6, 337	6, 315
48	6, 293	6, 271	6, 249	6, 227	6, 205	6, 184	6, 162	6, 140	6, 119	6, 097
49	6, 076	6, 054	6, 033	6, 012	5, 991	5, 970	5, 949	5, 928	5, 907	5, 886
50	5, 865	5, 844	5, 824	5, 803	5, 782	5, 762	5, 741	5, 721	5, 701	5, 680
51	5, 660	5, 640	5, 620	5, 600	5, 580	5, 560	5, 540	5, 520	5, 501	5, 481
52	5, 461	5, 442	5, 422	5, 403	5, 383	5, 364	5, 344	5, 325	5, 306	5, 287
53	5, 267	5, 248	5, 229	5, 210	5, 191	5, 172	5, 154	5, 135	5, 116	5, 097
54	5, 079	5, 060	5, 042	5, 023	5, 005	4, 986	4, 968	4, 949	4, 931	4, 913
55	4, 895	4, 877	4, 858	4, 840	4, 822	4, 804	4, 787	4, 769	4, 751	4, 733
56	4, 715	4, 697	4, 680	4, 662	4, 645	4, 627	4, 609	4, 592	4, 575	4, 557
57	4, 540	4, 522	4, 505	4, 488	4, 471	4, 454	4, 436	4, 419	4, 402	4, 385
58	4, 368	4, 351	4, 335	4, 318	4, 301	4, 284	4, 267	4, 251	4, 234	4, 217
59	4, 201	4, 184	4, 167	4, 151	4, 134	4, 118	4, 102	4, 085	4, 069	4, 053
60	4, 036	4, 020	4, 004	3, 988	3, 971	3, 955	3, 939	3, 923	3, 907	3, 891
61	3, 875	3, 859	3, 843	3, 828	3, 812	3, 796	3, 780	3, 764	3, 749	3, 733
62	3, 717	3, 702	3, 686	3, 670	3, 655	3, 639	3, 624	3, 608	3, 593	3, 578
63	3, 562	3, 547	3, 532	3, 516	3, 501	3, 486	3, 471	3, 455	3, 440	3, 425
64	3, 410	3, 395	3, 380	3, 365	3, 350	3, 335	3, 320	3, 305	3, 290	3, 275
65	3, 260	3, 245	3, 231	3, 216	3, 201	3, 186	3, 171	3, 157	3, 142	3, 127
66	3, 113	3, 098	3, 084	3, 069	3, 055	3, 040	3, 026	3, 011	2, 997	2, 982
67	2, 968	2, 953	2, 939	2, 925	2, 910	2, 896	2, 882	2, 867	2, 853	2, 839
68	2, 825	2, 811	2, 796	2, 782	2, 768	2, 754	2, 740	2, 726	2, 712	2, 698
69	2, 684	2, 670	2, 656	2, 642	2, 628	2, 614	2, 600	2, 586	2, 572	2, 559
70	2, 545	2, 531	2, 517	2, 503	2, 490	2, 476	2, 462	2, 449	2, 435	2, 421
71	2, 407	2, 394	2, 380	2, 367	2, 353	2, 339	2, 326	2, 312	2, 299	2, 285
72	2, 272	2, 258	2, 245	2, 231	2, 218	2, 205	2, 191	2, 178	2, 164	2, 151
73	2, 138	2, 124	2, 111	2, 098	2, 084	2, 071	2, 058	2, 045	2, 031	2, 018
74	2, 005	1, 992	1, 979	1, 965	1, 952	1, 939	1, 926	1, 913	1, 900	1, 887
75	1, 874	1, 860	1, 847	1, 834	1, 821	1, 808	1, 795	1, 782	1, 769	1, 756
76	1, 743	1, 730	1, 717	1, 704	1, 692	1, 679	1, 666	1, 653	1, 640	1, 627
77	1, 614	1, 601	1, 589	1, 576	1, 563	1, 550	1, 537	1, 525	1, 512	1, 499
78	1, 486	1, 473	1, 461	1, 448	1, 435	1, 423	1, 410	1, 397	1, 384	1, 372
79	1, 359	1, 346	1, 334	1, 321	1, 309	1, 296	1, 283	1, 271	1, 258	1, 245
80	1, 233	1, 220	1, 208	1, 195	1, 183	1, 170	1, 158	1, 145	1, 132	1, 120
81	1, 107	1, 095	1, 082	1, 070	1, 057	1, 045	1, 033	1, 020	1, 008	995
82	983	970	958	945	933	921	908	896	883	871
83	859	846	834	821	809	797	784	772	760	747
84	735	723	710	698	686	673	661	649	636	624
85	612	599	587	575	563	550	538	526	513	501
86	489	477	464	452	440	428	415	403	391	379
87	366	354	342	330	318	305	293	281	269	256
88	244	232	220	208	195	183	171	159	146	134
89	122	110	98	85	73	61	49	37	24	12

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 8,000 Meters (Ballistic Zone 10) (Computer Zone 14) (Fallout Zone 4)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	127, 933	124, 908	122, 004	119, 215	116, 536	113, 960	111, 484	109, 101	106, 807	104, 598
4	102, 470	100, 419	98, 440	96, 531	94, 689	92, 909	91, 190	89, 528	87, 921	86, 367
5	84, 862	83, 405	81, 994	80, 627	79, 301	78, 015	76, 768	75, 558	74, 383	73, 241
6	72, 132	71, 054	70, 006	68, 987	67, 995	67, 030	66, 091	65, 176	64, 284	63, 416
7	62, 569	61, 744	60, 939	60, 153	59, 387	58, 639	57, 908	57, 195	56, 498	55, 817
8	55, 152	54, 502	53, 865	53, 243	52, 635	52, 039	51, 456	50, 886	50, 327	49, 780
9	49, 244	48, 719	48, 205	47, 701	47, 206	46, 722	46, 247	45, 780	45, 323	44, 874
10	44, 434	44, 002	43, 578	43, 161	42, 752	42, 350	41, 955	41, 568	41, 187	40, 812
11	40, 444	40, 082	39, 726	39, 377	39, 032	38, 694	38, 361	38, 034	37, 711	37, 394
12	37, 082	36, 775	36, 472	36, 174	35, 881	35, 592	35, 307	35, 027	34, 751	34, 478
13	34, 210	33, 946	33, 685	33, 429	33, 176	32, 926	32, 680	32, 437	32, 198	31, 962
14	31, 729	31, 499	31, 273	31, 049	30, 828	30, 610	30, 395	30, 183	29, 974	29, 767
15	29, 563	29, 361	29, 162	28, 966	28, 771	28, 580	28, 390	28, 203	28, 018	27, 835
16	27, 655	27, 476	27, 300	27, 126	26, 954	26, 783	26, 615	26, 449	26, 284	26, 122
17	25, 961	25, 802	25, 645	25, 489	25, 335	25, 183	25, 032	24, 884	24, 736	24, 590
18	24, 446	24, 303	24, 162	24, 022	23, 884	23, 747	23, 612	23, 477	23, 345	23, 213
19	23, 083	22, 954	22, 827	22, 700	22, 575	22, 451	22, 328	22, 207	22, 087	21, 967
20	21, 849	21, 732	21, 616	21, 502	21, 388	21, 275	21, 163	21, 053	20, 943	20, 834
21	20, 727	20, 620	20, 514	20, 409	20, 305	20, 202	20, 100	19, 999	19, 899	19, 799
22	19, 700	19, 603	19, 506	19, 409	19, 314	19, 219	19, 126	19, 033	18, 940	18, 849
23	18, 758	18, 668	18, 579	18, 490	18, 402	18, 315	18, 229	18, 143	18, 058	17, 973
24	17, 889	17, 806	17, 724	17, 642	17, 560	17, 480	17, 400	17, 320	17, 241	17, 163
25	17, 085	17, 008	16, 932	16, 856	16, 780	16, 705	16, 631	16, 557	16, 484	16, 411
26	16, 339	16, 267	16, 196	16, 125	16, 055	15, 985	15, 916	15, 847	15, 779	15, 711
27	15, 643	15, 577	15, 510	15, 444	15, 378	15, 313	15, 248	15, 184	15, 120	15, 057
28	14, 994	14, 931	14, 869	14, 807	14, 746	14, 684	14, 624	14, 564	14, 504	14, 444
29	14, 385	14, 326	14, 268	14, 210	14, 152	14, 095	14, 038	13, 981	13, 925	13, 869
30	13, 813	13, 758	13, 703	13, 648	13, 594	13, 540	13, 486	13, 433	13, 380	13, 327
31	13, 275	13, 222	13, 171	13, 119	13, 068	13, 017	12, 966	12, 916	12, 866	12, 816
32	12, 766	12, 717	12, 668	12, 619	12, 571	12, 522	12, 474	12, 427	12, 379	12, 332
33	12, 285	12, 239	12, 192	12, 146	12, 100	12, 054	12, 009	11, 964	11, 919	11, 874
34	11, 829	11, 785	11, 741	11, 697	11, 653	11, 610	11, 567	11, 524	11, 481	11, 439
35	11, 396	11, 354	11, 312	11, 271	11, 229	11, 188	11, 147	11, 106	11, 065	11, 025
36	10, 984	10, 944	10, 904	10, 864	10, 825	10, 785	10, 746	10, 707	10, 668	10, 630
37	10, 591	10, 553	10, 515	10, 477	10, 439	10, 402	10, 364	10, 327	10, 290	10, 253
38	10, 216	10, 180	10, 143	10, 107	10, 071	10, 035	9, 999	9, 963	9, 928	9, 893
39	9, 857	9, 822	9, 787	9, 753	9, 718	9, 684	9, 649	9, 615	9, 581	9, 547
40	9, 514	9, 480	9, 447	9, 413	9, 380	9, 347	9, 314	9, 281	9, 249	9, 216
41	9, 184	9, 152	9, 119	9, 087	9, 056	9, 024	8, 992	8, 961	8, 929	8, 898
42	8, 867	8, 836	8, 805	8, 774	8, 744	8, 713	8, 683	8, 652	8, 622	8, 592
43	8, 562	8, 532	8, 502	8, 473	8, 443	8, 414	8, 384	8, 355	8, 326	8, 297
44	8, 268	8, 240	8, 211	8, 182	8, 154	8, 125	8, 097	8, 069	8, 041	8, 013
45	7, 985	7, 957	7, 929	7, 902	7, 874	7, 847	7, 820	7, 792	7, 765	7, 738
46	7, 711	7, 684	7, 658	7, 631	7, 604	7, 578	7, 551	7, 525	7, 499	7, 473

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 8,000 Meters (Ballistic Zone 10) (Computer Zone 14) (Fallout Zone 4)-Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	7, 447	7, 421	7, 395	7, 369	7, 343	7, 318	7, 292	7, 267	7, 241	7, 216
48	7, 191	7, 165	7, 140	7, 115	7, 090	7, 065	7, 041	7, 016	6, 991	6, 967
49	6, 942	6, 918	6, 894	6, 869	6, 845	6, 821	6, 797	6, 773	6, 749	6, 725
50	6, 701	6, 678	6, 654	6, 631	6, 607	6, 584	6, 560	6, 537	6, 514	6, 491
51	6, 467	6, 444	6, 421	6, 399	6, 376	6, 353	6, 330	6, 308	6, 285	6, 263
52	6, 240	6, 218	6, 195	6, 173	6, 151	6, 129	6, 107	6, 085	6, 063	6, 041
53	6, 019	5, 997	5, 975	5, 953	5, 932	5, 910	5, 889	5, 867	5, 846	5, 824
54	5, 803	5, 782	5, 761	5, 740	5, 718	5, 697	5, 676	5, 655	5, 635	5, 614
55	5, 593	5, 572	5, 551	5, 531	5, 510	5, 490	5, 469	5, 449	5, 428	5, 408
56	5, 388	5, 368	5, 347	5, 327	5, 307	5, 287	5, 267	5, 247	5, 227	5, 207
57	5, 187	5, 168	5, 148	5, 128	5, 108	5, 089	5, 069	5, 050	5, 030	5, 011
58	4, 991	4, 972	4, 953	4, 934	4, 914	4, 895	4, 876	4, 857	4, 838	4, 819
59	4, 800	4, 781	4, 762	4, 743	4, 724	4, 705	4, 687	4, 668	4, 649	4, 631
60	4, 612	4, 593	4, 575	4, 556	4, 538	4, 520	4, 501	4, 483	4, 465	4, 446
61	4, 428	4, 410	4, 392	4, 374	4, 355	4, 337	4, 319	4, 301	4, 283	4, 265
62	4, 248	4, 230	4, 212	4, 194	4, 176	4, 159	4, 141	4, 123	4, 106	4, 088
63	4, 070	4, 053	4, 035	4, 018	4, 000	3, 983	3, 966	3, 948	3, 931	3, 914
64	3, 896	3, 879	3, 862	3, 845	3, 828	3, 810	3, 793	3, 776	3, 759	3, 742
65	3, 725	3, 708	3, 691	3, 674	3, 658	3, 641	3, 624	3, 607	3, 590	3, 574
66	3, 557	3, 540	3, 524	3, 507	3, 490	3, 474	3, 457	3, 441	3, 424	3, 408
67	3, 391	3, 375	3, 358	3, 342	3, 326	3, 309	3, 293	3, 277	3, 260	3, 244
68	3, 228	3, 212	3, 195	3, 179	3, 163	3, 147	3, 131	3, 115	3, 099	3, 083
69	3, 067	3, 051	3, 035	3, 019	3, 003	2, 987	2, 971	2, 955	2, 939	2, 924
70	2, 908	2, 892	2, 876	2, 861	2, 845	2, 829	2, 813	2, 798	2, 782	2, 767
71	2, 751	2, 735	2, 720	2, 704	2, 689	2, 673	2, 658	2, 642	2, 627	2, 611
72	2, 596	2, 581	2, 565	2, 550	2, 534	2, 519	2, 504	2, 488	2, 473	2, 458
73	2, 443	2, 427	2, 412	2, 397	2, 382	2, 367	2, 351	2, 336	2, 321	2, 306
74	2, 291	2, 276	2, 261	2, 246	2, 231	2, 216	2, 201	2, 186	2, 171	2, 156
75	2, 141	2, 126	2, 111	2, 096	2, 081	2, 066	2, 051	2, 037	2, 022	2, 007
76	1, 992	1, 977	1, 962	1, 948	1, 933	1, 918	1, 903	1, 889	1, 874	1, 859
77	1, 845	1, 830	1, 815	1, 801	1, 786	1, 771	1, 757	1, 742	1, 727	1, 713
78	1, 698	1, 684	1, 669	1, 655	1, 640	1, 626	1, 611	1, 597	1, 582	1, 568
79	1, 553	1, 539	1, 524	1, 510	1, 495	1, 481	1, 466	1, 452	1, 438	1, 423
80	1, 409	1, 394	1, 380	1, 366	1, 351	1, 337	1, 323	1, 308	1, 294	1, 280
81	1, 265	1, 251	1, 237	1, 223	1, 208	1, 194	1, 180	1, 166	1, 151	1, 137
82	1, 123	1, 109	1, 094	1, 080	1, 066	1, 052	1, 038	1, 024	1, 009	995
83	981	967	953	939	924	910	896	882	868	854
84	840	826	812	797	783	769	755	741	727	713
85	699	685	671	657	643	629	615	601	587	573
86	559	545	531	517	503	489	475	461	447	433
87	419	405	391	377	363	349	335	321	307	293
88	279	265	251	237	223	209	195	181	167	153
89	139	126	112	98	84	70	56	42	28	14

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 9,000 Meters (Computer Zone 15)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	141, 490	138, 236	135, 109	132, 101	129, 207	126, 421	123, 738	121, 153	118, 662	116, 261
4	113, 944	111, 708	109, 550	107, 466	105, 452	103, 505	101, 622	99, 801	98, 039	96, 332
5	94, 679	93, 078	91, 526	90, 020	88, 560	87, 144	85, 768	84, 433	83, 135	81, 875
6	80, 649	79, 457	78, 298	77, 170	76, 072	75, 003	73, 962	72, 948	71, 960	70, 996
7	70, 057	69, 141	68, 247	67, 374	66, 523	65, 691	64, 879	64, 086	63, 311	62, 554
8	61, 813	61, 089	60, 381	59, 688	59, 010	58, 347	57, 697	57, 061	56, 439	55, 829
9	55, 231	54, 646	54, 072	53, 509	52, 958	52, 417	51, 886	51, 366	50, 855	50, 354
10	49, 862	49, 380	48, 906	48, 440	47, 983	47, 534	47, 093	46, 659	46, 233	45, 814
11	45, 403	44, 998	44, 600	44, 209	43, 824	43, 445	43, 073	42, 706	42, 346	41, 991
12	41, 641	41, 297	40, 959	40, 625	40, 297	39, 973	39, 654	39, 341	39, 031	38, 726
13	38, 426	38, 130	37, 838	37, 551	37, 267	36, 987	36, 712	36, 440	36, 171	35, 907
14	35, 646	35, 388	35, 134	34, 884	34, 636	34, 392	34, 151	33, 913	33, 678	33, 447
15	33, 218	32, 992	32, 768	32, 548	32, 330	32, 115	31, 903	31, 693	31, 485	31, 280
16	31, 078	30, 878	30, 680	30, 485	30, 291	30, 100	29, 912	29, 725	29, 540	29, 358
17	29, 177	28, 999	28, 823	28, 648	28, 475	28, 305	28, 136	27, 968	27, 803	27, 639
18	27, 478	27, 317	27, 159	27, 002	26, 847	26, 693	26, 541	26, 390	26, 241	26, 094
19	25, 947	25, 803	25, 660	25, 518	25, 377	25, 238	25, 100	24, 964	24, 829	24, 695
20	24, 562	24, 431	24, 301	24, 172	24, 044	23, 917	23, 792	23, 668	23, 545	23, 423
21	23, 302	23, 182	23, 063	22, 945	22, 828	22, 713	22, 598	22, 484	22, 372	22, 260
22	22, 149	22, 039	21, 930	21, 822	21, 715	21, 609	21, 503	21, 399	21, 295	21, 192
23	21, 090	20, 989	20, 889	20, 789	20, 691	20, 593	20, 496	20, 399	20, 304	20, 209
24	20, 114	20, 021	19, 928	19, 836	19, 745	19, 654	19, 564	19, 475	19, 386	19, 298
25	19, 211	19, 125	19, 038	18, 953	18, 868	18, 784	18, 701	18, 618	18, 535	18, 454
26	18, 372	18, 292	18, 212	18, 132	18, 053	17, 975	17, 897	17, 820	17, 743	17, 667
27	17, 591	17, 516	17, 441	17, 367	17, 293	17, 220	17, 147	17, 075	17, 003	16, 932
28	16, 861	16, 790	16, 720	16, 651	16, 582	16, 513	16, 445	16, 377	16, 310	16, 243
29	16, 176	16, 110	16, 045	15, 979	15, 915	15, 850	15, 786	15, 722	15, 659	15, 596
30	15, 534	15, 471	15, 410	15, 348	15, 287	15, 226	15, 166	15, 106	15, 047	14, 987
31	14, 928	14, 870	14, 811	14, 753	14, 696	14, 638	14, 582	14, 525	14, 469	14, 412
32	14, 357	14, 301	14, 246	14, 191	14, 137	14, 083	14, 029	13, 975	13, 922	13, 869
33	13, 816	13, 764	13, 711	13, 660	13, 608	13, 557	13, 505	13, 455	13, 404	13, 354
34	13, 304	13, 254	13, 204	13, 155	13, 106	13, 057	13, 009	12, 960	12, 912	12, 864
35	12, 817	12, 769	12, 722	12, 675	12, 629	12, 582	12, 536	12, 490	12, 444	12, 399
36	12, 353	12, 308	12, 263	12, 219	12, 174	12, 130	12, 086	12, 042	11, 998	11, 955
37	11, 912	11, 869	11, 826	11, 783	11, 741	11, 698	11, 656	11, 614	11, 573	11, 531
38	11, 490	11, 449	11, 408	11, 367	11, 326	11, 286	11, 246	11, 206	11, 166	11, 126
39	11, 086	11, 047	11, 008	10, 969	10, 930	10, 891	10, 853	10, 814	10, 776	10, 738
40	10, 700	10, 662	10, 625	10, 587	10, 550	10, 513	10, 476	10, 439	10, 402	10, 365
41	10, 329	10, 293	10, 257	10, 221	10, 185	10, 149	10, 114	10, 078	10, 043	10, 008
42	9, 973	9, 938	9, 903	9, 869	9, 834	9, 800	9, 765	9, 731	9, 697	9, 664
43	9, 630	9, 596	9, 563	9, 530	9, 496	9, 463	9, 430	9, 397	9, 365	9, 332
44	9, 300	9, 267	9, 235	9, 203	9, 171	9, 139	9, 107	9, 075	9, 044	9, 012
45	8, 981	8, 950	8, 919	8, 888	8, 857	8, 826	8, 795	8, 764	8, 734	8, 704
46	8, 673	8, 643	8, 613	8, 583	8, 553	8, 523	8, 494	8, 464	8, 434	8, 405

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 9,000 Meters (Computer Zone 15)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	8, 376	8, 346	8, 317	8, 288	8, 259	8, 230	8, 202	8, 173	8, 144	8, 116
48	8, 088	8, 059	8, 031	8, 003	7, 975	7, 947	7, 919	7, 891	7, 864	7, 836
49	7, 808	7, 781	7, 754	7, 726	7, 699	7, 672	7, 645	7, 618	7, 591	7, 564
50	7, 537	7, 511	7, 484	7, 458	7, 431	7, 405	7, 379	7, 353	7, 326	7, 300
51	7, 274	7, 249	7, 223	7, 197	7, 171	7, 146	7, 120	7, 095	7, 069	7, 044
52	7, 019	6, 993	6, 968	6, 943	6, 918	6, 893	6, 868	6, 844	6, 819	6, 794
53	6, 770	6, 745	6, 721	6, 696	6, 672	6, 648	6, 623	6, 599	6, 575	6, 551
54	6, 527	6, 503	6, 479	6, 456	6, 432	6, 408	6, 385	6, 361	6, 338	6, 314
55	6, 291	6, 267	6, 244	6, 221	6, 198	6, 175	6, 152	6, 129	6, 106	6, 083
56	6, 060	6, 037	6, 015	5, 992	5, 969	5, 947	5, 924	5, 902	5, 879	5, 857
57	5, 835	5, 812	5, 790	5, 768	5, 746	5, 724	5, 702	5, 680	5, 658	5, 636
58	5, 614	5, 593	5, 571	5, 549	5, 528	5, 506	5, 484	5, 463	5, 441	5, 420
59	5, 399	5, 377	5, 356	5, 335	5, 314	5, 293	5, 272	5, 250	5, 229	5, 209
60	5, 188	5, 167	5, 146	5, 125	5, 104	5, 084	5, 063	5, 042	5, 022	5, 001
61	4, 981	4, 960	4, 940	4, 919	4, 899	4, 879	4, 858	4, 838	4, 818	4, 798
62	4, 778	4, 758	4, 738	4, 718	4, 698	4, 678	4, 658	4, 638	4, 618	4, 598
63	4, 578	4, 559	4, 539	4, 519	4, 500	4, 480	4, 461	4, 441	4, 422	4, 402
64	4, 383	4, 363	4, 344	4, 325	4, 305	4, 286	4, 267	4, 248	4, 228	4, 209
65	4, 190	4, 171	4, 152	4, 133	4, 114	4, 095	4, 076	4, 057	4, 038	4, 020
66	4, 001	3, 982	3, 963	3, 945	3, 926	3, 907	3, 889	3, 870	3, 851	3, 833
67	3, 814	3, 796	3, 777	3, 759	3, 741	3, 722	3, 704	3, 686	3, 667	3, 649
68	3, 631	3, 612	3, 594	3, 576	3, 558	3, 540	3, 522	3, 504	3, 486	3, 468
69	3, 450	3, 432	3, 414	3, 396	3, 378	3, 360	3, 342	3, 324	3, 306	3, 289
70	3, 271	3, 253	3, 235	3, 218	3, 200	3, 182	3, 165	3, 147	3, 129	3, 112
71	3, 094	3, 077	3, 059	3, 042	3, 024	3, 007	2, 989	2, 972	2, 955	2, 937
72	2, 920	2, 903	2, 885	2, 868	2, 851	2, 833	2, 816	2, 799	2, 782	2, 765
73	2, 748	2, 730	2, 713	2, 696	2, 679	2, 662	2, 645	2, 628	2, 611	2, 594
74	2, 577	2, 560	2, 543	2, 526	2, 509	2, 492	2, 475	2, 459	2, 442	2, 425
75	2, 408	2, 391	2, 374	2, 358	2, 341	2, 324	2, 307	2, 291	2, 274	2, 257
76	2, 241	2, 224	2, 207	2, 191	2, 174	2, 158	2, 141	2, 124	2, 108	2, 091
77	2, 075	2, 058	2, 042	2, 025	2, 009	1, 992	1, 976	1, 959	1, 943	1, 927
78	1, 910	1, 894	1, 877	1, 861	1, 845	1, 828	1, 812	1, 796	1, 779	1, 763
79	1, 747	1, 731	1, 714	1, 698	1, 682	1, 666	1, 649	1, 633	1, 617	1, 601
80	1, 585	1, 569	1, 552	1, 536	1, 520	1, 504	1, 488	1, 472	1, 456	1, 440
81	1, 423	1, 407	1, 391	1. 375	1, 359	1, 343	1, 327	1, 311	1, 295	1, 279
82	1, 263	1, 247	1, 231	1, 215	1, 199	1, 183	1, 167	1, 151	1, 135	1, 119
83	1, 103	1, 088	1, 072	1, 056	1, 040	1, 024	1, 008	992	976	960
84	945	929	913	897	881	865	850	834	818	802
85	786	770	755	739	723	707	692	676	660	644
86	628	613	597	581	565	550	534	518	502	487
87	471	455	440	424	408	392	377	361	345	330
88	314	298	282	267	251	235	220	204	188	173
89	157	141	125	110	94	78	63	47	31	16

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 10,000 Meters (Ballistic Zone 11) (Computer Zone 16) (Fallout Zone 5)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	154, 666	151, 203	147, 869	144, 658	141, 565	138, 583	135, 708	132, 935	130, 260	127, 677
4	125, 184	122, 775	120, 447	118, 197	116, 020	113, 915	111, 877	109, 904	107, 994	106, 142
5	104, 348	102, 608	100, 921	99, 284	97, 694	96, 151	94, 653	93, 197	91, 782	90, 406
6	89, 068	87, 766	86, 499	85, 266	84, 065	82, 895	81, 756	80, 645	79, 562	78, 507
7	77, 477	76, 472	75, 492	74, 534	73, 600	72, 687	71, 795	70, 924	70, 073	69, 240
8	68, 426	67, 630	66, 851	66, 089	65, 343	64, 613	63, 898	63, 198	62, 513	61, 841
9	61, 183	60, 538	59, 905	59, 285	58, 677	58, 081	57, 496	56, 922	56, 359	55, 806
10	55, 264	54, 731	54, 208	53, 694	53, 190	52, 694	52, 207	51, 729	51, 258	50, 796
11	50, 341	49, 894	49, 455	49, 022	48, 597	48, 179	47, 767	47, 362	46, 963	46, 571
12	46, 185	45, 804	45, 430	45, 061	44, 698	44, 340	43, 988	43, 640	43, 298	42, 961
13	42, 629	42, 301	41, 978	41, 660	41, 346	41, 037	40, 732	40, 431	40, 134	39, 841
14	39, 552	39, 267	38, 986	38, 708	38, 435	38, 164	37, 897	37, 634	37, 374	37, 117
15	36, 864	36, 613	36, 366	36, 122	35, 881	35, 643	35, 407	35, 175	34, 945	34, 718
16	34, 494	34, 272	34, 053	33, 836	33, 622	33, 411	33, 201	32, 995	32, 790	32, 588
17	32, 388	32, 190	31, 994	31, 801	31, 610	31, 420	31, 233	31, 048	30, 865	30. 683
18	30, 504	30, 326	30, 150	29, 976	29, 804	29, 634	29, 465	29, 298	29, 133	28, 969
19	28, 807	28, 647	28, 488	28, 331	28, 175	28, 021	27, 868	27, 717	27, 567	27, 418
20	27, 271	27, 126	26, 981	26, 838	26, 697	26, 556	26, 417	26, 279	26, 143	26, 007
21	25. 873	25, 740	25, 608	25, 478	25, 348	25, 220	25, 093	24. 966	24, 841	24, 717
22	24, 594	24, 473	24, 352	24, 232	24, 113	23, 995	23, 878	23, 762	23, 647	23, 533
23	23, 420	23. 308	23, 197	23, 086	22, 977	22. 868	22, 760	22, 653	22, 547	22, 442
24	22. 337	22, 233	22, 131	22, 028	21, 927	21, 827	21, 727	21, 628	21, 529	21, 432
25	21, 335	21, 239	21, 143	21, 048	20, 954	20, 861	20, 768	20, 676	20, 585	20, 494
26	20. 404	20. 314	20. 226	20, 137	20, 050	19, 963	19, 876	19, 790	19, 705	19, 621
27	19, 537	19, 453	19, 370	19, 288	19, 206	19, 125	19, 044	18, 964	18, 884	18, 805
28	18, 726	18, 648	18, 570	18, 493	18, 416	18, 340	18, 264	18, 189	18, 115	18, 040
29	17, 966	17, 893	17, 820	17, 748	17, 676	17, 604	17, 533	17, 462	17, 392	17, 322
30	17, 253	17, 184	17, 115	17, 047	16, 979	16, 912	16, 845	16, 778	16, 712	16, 646
31	16, 581	16, 516	16, 451	16, 387	16, 323	16, 259	16, 196	16, 133	16, 070	16, 008
32	15. 946	15, 885	15, 824	15, 763	15, 702	15, 642	15. 582	15. 523	15, 463	15, 405
33	15, 346	15, 288	15, 230	15, 172	15, 115	15, 058	15, 001	14, 945	14. 888	14. 833
34	14, 777	14, 722	14, 667	14, 612	14, 557	14, 503	14, 449	14, 396	14, 342	14, 289
35	14, 236	14. 184	14, 131	14, 079	14, 028	13, 976	13, 925	13, 874	13. 823	13. 772
36	13, 722	13, 672	13, 622	13. 572	13, 523	13, 474	13, 425	13, 376	13, 328	13. 279
37	13. 231	13, 184	13, 136	13, 089	13, 041	12, 995	12, 948	12. 901	12, 885	12. 809
38	12, 763	12, 717	12, 672	12, 626	12, 581	12, 536	12, 492	12, 447	12. 403	12, 359
39	12, 315	12, 271	12. 228	12, 184	12, 141	12, 098	12, 055	12. 013	11, 970	11. 928
40	11, 886	11, 844	11, 802	11, 760	11, 719	11, 678	11, 637	11, 596	11, 555	11, 514
41	11, 474	11, 433	11, 393	11, 353	11, 314	11, 274	11, 234	11, 195	11. 156	11, 117
42	11, 078	11, 039	11, 001	10, 962	10, 924	10, 886	10, 848	10. 810	10. 772	10, 735
43	10, 697	10. 660	10. 623	10. 586	10, 549	10, 512	10, 476	10, 439	10, 403	10, 366
44	10, 330	10. 294	10, 259	10, 223	10, 187	10, 152	10, 117	10, 081	10, 046	10. 011
45	9, 977	9, 942	9, 907	9, 873	9, 838	9, 804	9, 770	9, 736	9. 702	9, 668
46	9, 635	9, 601	9, 568	9, 534	9, 501	9, 468	9, 435	9, 402	9, 369	9, 337

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 10,000 Meters (Ballistic Zone 11) (Computer Zone 16) (Fallout Zone 5)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	9, 304	9, 272	9, 239	9, 207	9, 175	9, 143	9, 111	9, 079	9, 047	9, 016
48	8, 984	8, 953	8, 921	8, 890	8, 859	8, 828	8, 797	8, 766	8, 735	8, 705
49	8, 674	8, 644	8, 613	8, 583	8, 553	8. 523	8, 493	8, 463	8, 433	8, 403
50	8, 373	8, 344	8, 314	8, 285	8, 255	8, 226	8, 197	8, 168	8, 139	8, 110
51	8, 081	8, 052	8, 024	7, 995	7, 966	7, 938	7. 910	7, 881	7, 853	7, 825
52	7, 797	7, 769	7, 741	7, 713	7, 685	7, 658	7, 630	7, 603	7, 575	7, 548
53	7. 520	7, 493	7, 466	7, 439	7, 412	7, 385	7. 358	7, 331	7, 304	7, 278
54	7, 251	7, 224	7, 198	7, 172	7, 145	7, 119	7, 093	7, 067	7, 040	7, 014
55	6, 988	6, 963	6, 937	6, 911	6, 885	6, 859	6, 834	6, 808	6, 783	6, 757
56	6, 732	6, 707	6, 682	6, 656	6, 631	6, 606	6, 581	6, 556	6, 531	6, 507
57	6, 482	6, 457	6, 432	6, 408	6, 383	6, 359	6, 334	6, 310	6, 286	6, 261
58	6, 237	6, 213	6, 189	6, 165	6, 141	6, 117	6, 093	6, 069	6, 045	6, 021
59	5, 997	5, 974	5, 950	5, 927	5, 903	5, 880	5, 856	5, 833	5, 809	5, 786
60	5, 763	5, 740	5, 717	5, 694	5, 670	5, 647	5, 624	5, 602	5, 579	5, 556
61	5, 533	5, 510	5, 488	5, 465	5, 442	5, 420	5, 397	5, 375	5, 352	5, 330
62	5, 308	5, 285	5, 263	5, 241	5. 219	5, 196	5, 174	5, 152	5, 130	5, 108
63	5, 086	5, 064	5, 042	5, 021	4, 999	4. 977	4, 955	4, 934	4, 912	4, 890
64	4, 869	4, 847	4. 826	4, 804	4, 783	4, 761	4, 740	4, 719	4, 697	4, 676
65	4, 655	4, 634	4, 613	4, 592	4, 570	4. 549	4, 528	4, 507	4, 486	4, 466
66	4, 445	4, 424	4, 403	4, 382	4, 361	4, 341	4, 320	4, 299	4, 279	4, 258
67	4, 237	4, 217	4. 196	4, 176	4, 156	4, 135	4, 115	4, 094	4, 074	4, 054
68	4, 033	4, 013	3. 993	3, 973	3, 953	3, 932	3, 912	3, 892	3, 872	3, 852
69	3, 832	3. 812	3, 792	3, 772	3, 752	3, 733	3, 713	3, 693	3, 673	3, 653
70	3, 634	3, 614	3, 594	3, 575	3, 555	3, 535	3, 516	3, 496	3, 477	3, 457
71	3, 438	3, 418	3, 399	3, 379	3, 360	3, 340	3, 321	3, 302	3, 282	3, 263
72	3, 244	3, 225	3, 205	3, 186	3, 167	3, 148	3, 129	3, 110	3, 090	3, 071
73	3, 052	3, 033	3, 014	2, 995	2, 976	2, 957	2, 938	2, 919	2, 901	2, 882
74	2, 863	2, 844	2, 825	2, 806	2, 788	2, 769	2, 750	2, 731	2, 713	2, 694
75	2, 675	2, 656	2, 638	2, 619	2, 601	2, 582	2, 563	2, 545	2. 526	2, 508
76	2, 489	2, 471	2, 452	2, 434	2, 415	2, 397	2, 378	2, 360	2, 342	2, 323
77	2, 305	2, 287	2, 268	2, 250	2, 232	2, 213	2, 195	2, 177	2, 159	2, 140
78	2, 122	2, 104	2, 086	2, 068	2, 049	2, 031	2, 013	1, 995	1. 977	1, 959
79	1, 941	1, 923	1, 905	1, 887	1, 868	1, 850	1, 832	1, 814	1, 796	1, 778
80	1, 760	1, 743	1, 725	1, 707	1, 689	1, 671	1, 653	1, 635	1, 617	1, 599
81	1, 581	1, 563	1, 546	1, 528	1, 510	1, 492	1, 474	1, 457	1, 439	1, 421
82	1, 403	1, 385	1. 368	1, 350	1, 332	1, 314	1, 297	1, 279	1, 261	1, 244
83	1, 226	1, 208	1, 191	1, 173	1, 155	1, 138	1, 120	1, 102	1, 085	1, 067
84	1, 049	1, 032	1, 014	997	979	961	944	926	909	891
85	874	856	838	821	803	786	768	751	733	716
86	698	681	663	646	628	611	593	576	558	541
87	523	506	488	471	453	436	418	401	384	366
88	349	331	314	296	279	261	244	227	209	192
89	174	157	139	122	105	87	70	52	35	17

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 11,000 Meters (Computer Zone 17)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	167, 491	163, 835	160, 310	156, 911	153, 632	150, 468	147, 413	144, 464	141, 615	138, 863
4	136, 202	133, 630	131, 142	128, 734	126, 404	124, 148	121, 963	119, 846	117, 794	115, 804
5	113, 874	112, 002	110, 185	108, 421	106, 708	105, 044	103, 426	101, 854	100, 325	98, 838
6	97, 391	95, 983	94, 612	93, 276	91, 976	90, 708	89, 473	88, 269	87, 094	85, 949
7	84, 831	83, 740	82, 675	81, 635	80, 620	79, 627	78, 658	77, 710	76, 784	75, 878
8	74, 992	74, 125	73, 277	72, 447	71, 635	70, 839	70, 060	69, 297	68, 550	67, 817
9	67, 099	66, 396	65, 706	65, 029	64, 366	63, 715	63, 077	62, 450	61, 835	61, 232
10	60, 639	60, 057	59, 486	58, 924	58, 373	57, 831	57, 299	56, 776	56, 262	55, 756
11	55, 259	54, 770	54, 289	53, 817	53, 351	52, 894	52, 443	52, 000	51, 564	51, 134
12	50, 712	50, 295	49, 885	49, 482	49, 084	48, 692	48, 307	47, 926	47, 552	47, 182
13	46, 819	46, 460	46, 106	45, 758	45, 414	45, 075	44, 740	44, 411	44, 085	43, 765
14	43, 448	43, 136	42, 827	42, 523	42, 223	41, 927	41, 634	41, 346	41, 000	40, 779
15	40, 501	40, 227	39, 956	39, 688	39, 423	39, 162	38, 904	38, 649	38, 397	38, 143
16	37, 902	37, 659	37, 419	37, 181	36, 946	36, 714	36, 485	36, 258	36, 033	35, 811
17	35, 592	35, 374	35, 160	34, 948	34, 738	34, 530	34, 325	34, 122	33, 921	33, 721
18	33, 525	33, 330	33, 137	32, 946	32, 757	32, 570	32, 385	32, 202	32, 020	31, 840
19	31, 663	31, 487	31, 312	31, 139	30, 968	30, 799	30, 631	30, 465	30, 301	30, 138
20	29, 976	29, 816	29, 658	29, 501	29, 345	29, 191	29, 038	28, 887	28, 737	28, 588
21	28, 441	28, 295	28, 150	28, 007	27, 865	27, 724	27, 584	27, 445	27, 308	27, 172
22	27, 037	26, 903	26, 770	26, 639	26, 508	26, 379	26, 250	26, 123	25, 997	25, 871
23	25, 747	25, 624	25, 502	25, 380	25, 260	25, 141	25, 022	24, 905	24, 788	24, 672
24	24, 557	24, 444	24, 330	24, 218	24, 107	23, 996	23, 887	23, 778	23, 670	23, 563
25	23, 456	23, 351	23, 246	23, 142	23, 038	22, 936	22, 834	22, 733	22, 632	22, 532
26	22, 433	22, 335	22, 237	22, 141	22, 044	21, 949	21, 854	21, 759	21, 666	21, 573
27	21, 480	21, 389	21, 297	21, 207	21, 117	21, 028	20, 939	20, 851	20, 763	20, 676
28	20, 590	20, 504	20, 418	20, 334	20, 249	20, 166	20, 083	20, 000	19, 918	19, 836
29	19, 755	19, 674	19, 594	19, 515	19, 436	19, 357	19, 279	19, 201	19, 124	19, 047
30	18, 971	18, 895	18, 820	18, 745	18, 670	18, 596	18, 522	18, 449	18, 376	18, 304
31	18, 232	18, 161	18, 089	18, 019	17, 948	17, 878	17, 809	17, 740	17, 671	17, 603
32	17, 535	17, 467	17, 400	17, 333	17, 266	17, 200	17, 135	17, 069	17, 004	16, 939
33	16, 875	16, 811	16, 747	16, 684	16, 621	16, 558	16, 496	16, 434	16, 372	16, 310
34	16, 249	16, 189	16, 128	16, 068	16, 008	15, 948	15, 889	15, 830	15, 772	15, 713
35	15, 655	15, 597	15, 540	15, 482	15, 426	15, 369	15, 312	15, 256	15, 200	15, 145
36	15, 089	15, 034	14, 980	14, 925	14, 871	14, 817	14, 763	14, 709	14, 656	14, 603
37	14, 550	14, 498	14, 445	14, 393	14, 341	14, 290	14, 238	14, 187	14, 136	14, 086
38	14, 035	13, 985	13, 935	13, 885	13, 836	13, 786	13, 737	13, 688	13, 639	13, 591
39	13, 543	13, 495	13, 447	13, 399	13, 351	13, 304	13, 257	13, 210	13, 164	13, 117
40	13, 071	13, 025	12, 979	12, 933	12, 887	12, 842	12, 797	12, 752	12, 707	12, 662
41	12, 618	12, 574	12, 529	12, 486	12, 442	12, 398	12, 355	12, 311	12, 268	12, 225
42	12, 183	12, 140	12, 098	12, 055	12, 013	11, 971	11, 930	11, 888	11, 847	11, 805
43	11, 764	11, 723	11, 682	11, 641	11, 601	11, 561	11, 520	11, 480	11, 440	11, 400
44	11, 361	11, 321	11, 282	11, 243	11, 203	11, 164	11, 126	11, 087	11, 048	11, 010
45	10, 972	10, 933	10, 895	10, 857	10, 820	10, 782	10, 745	10, 707	10, 670	10, 633
46	10, 596	10, 559	10, 522	10, 485	10, 449	10, 413	10, 376	10, 340	10, 304	10, 268

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 11,000 Meters (Computer Zone 17)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	10, 232	10, 197	10, 161	10, 126	10, 090	10, 055	10, 020	9, 985	9, 950	9, 915
48	9, 880	9, 846	9, 811	9, 777	9, 743	9, 709	9, 675	9, 641	9, 607	9, 573
49	9, 539	9, 506	9, 472	9, 439	9, 406	9, 373	9, 340	9, 307	9, 274	9, 241
50	9, 209	9, 176	9, 144	9, 111	9, 079	9, 047	9, 015	8, 983	8, 951	8, 919
51	8, 887	8, 856	8, 824	8, 793	8, 761	8, 730	8, 699	8, 668	8, 637	8, 606
52	8, 575	8, 544	8, 513	8, 483	8, 452	8, 422	8, 391	8, 361	8, 331	8, 301
53	8, 271	8, 241	8, 211	8, 181	8, 151	8, 122	8, 092	8, 063	8, 033	8, 004
54	7, 975	7, 945	7, 916	7, 887	7, 858	7, 829	7, 800	7, 772	7, 743	7, 714
55	7, 686	7, 657	7, 629	7, 600	7, 572	7, 544	7, 516	7, 488	7, 460	7, 432
56	7, 404	7, 376	7, 348	7, 321	7, 293	7, 265	7, 238	7, 211	7, 183	7, 156
57	7, 129	7, 101	7, 074	7, 047	7, 020	6, 993	6, 966	6, 940	6, 913	6, 886
58	6, 859	6, 833	6, 806	6, 780	6, 753	6, 727	6, 701	6, 674	6, 648	6, 622
59	6, 596	6, 570	6, 544	6, 518	6, 492	6, 466	6, 441	6, 415	6, 389	6, 364
60	6, 338	6, 313	6, 287	6, 262	6, 236	6, 211	6, 186	6, 161	6, 135	6, 110
61	6, 085	6, 060	6, 035	6, 010	5, 986	5, 961	5, 936	5, 911	5, 887	5, 862
62	5, 837	5, 813	5, 788	5, 764	5, 739	5, 715	5, 691	5, 666	5, 642	5, 618
63	5, 594	5, 570	5, 546	5, 522	5, 498	5, 474	5, 450	5, 426	5, 402	5, 378
64	5, 355	5, 331	5, 307	5, 284	5, 260	5, 237	5, 213	5, 190	5, 166	5, 143
65	5, 120	5, 096	5, 073	5, 050	5, 027	5, 003	4, 980	4, 957	4, 934	4, 911
66	4, 888	4, 865	4, 842	4, 820	4, 797	4, 774	4, 751	4, 728	4, 706	4, 683
67	4, 660	4, 638	4, 615	4, 593	4, 570	4, 548	4, 525	4, 503	4, 481	4, 458
68	4, 436	4, 414	4, 391	4, 369	4, 347	4, 325	4, 303	4, 281	4, 259	4, 237
69	4, 215	4, 193	4, 171	4, 149	4, 127	4, 105	4, 083	4, 062	4, 040	4, 018
70	3, 996	3, 975	3, 953	3, 931	3, 910	3, 888	3, 867	3, 845	3, 824	3, 802
71	3, 781	3, 759	3, 738	3, 717	3, 695	3, 674	3, 653	3, 631	3, 610	3, 589
72	3, 568	3, 546	3, 525	3, 504	3, 483	3, 462	3, 441	3, 420	3, 399	3, 378
73	3, 357	3, 336	3, 315	3, 294	3, 273	3, 252	3, 232	3, 211	3, 190	3, 169
74	3, 149	3, 128	3, 107	3, 086	3, 066	3, 045	3, 024	3, 004	2, 983	2, 963
75	2, 942	2, 922	2, 901	2, 881	2, 860	2, 840	2, 819	2, 799	2, 778	2, 758
76	2, 738	2, 717	2, 697	2, 677	2, 656	2, 636	2, 616	2, 596	2, 575	2, 555
77	2, 535	2, 515	2, 495	2, 475	2, 454	2, 434	2, 414	2, 394	2, 374	2, 354
78	2, 334	2, 314	2, 294	2, 274	2, 254	2, 234	2, 214	2, 194	2, 174	2, 154
79	2, 134	2, 115	2, 095	2, 075	2, 055	2, 035	2, 015	1, 996	1, 976	1, 956
80	1, 936	1, 916	1, 897	1, 877	1, 857	1, 838	1, 818	1, 798	1, 778	1, 759
81	1, 739	1, 720	1, 700	1, 680	1, 661	1, 641	1, 622	1, 602	1, 582	1, 563
82	1, 543	1, 524	1, 504	1, 485	1, 465	1, 446	1, 426	1, 407	1, 387	1, 368
83	1, 348	1, 329	1, 309	1, 290	1, 271	1, 251	1, 232	1, 212	1, 193	1, 174
84	1, 154	1, 135	1, 115	1, 096	1, 077	1, 057	1, 038	1, 019	999	980
85	961	941	922	903	884	864	845	826	806	787
86	768	749	729	710	691	672	652	633	614	595
87	575	556	537	518	499	479	460	441	422	403
88	383	364	345	326	307	288	268	249	230	211
89	192	173	153	134	115	96	77	57	38	19

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 12,000 Meters (Ballistic Zone 12) (Computer Zone 18) (Fallout Zone 6)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	179, 993	176, 157	172, 455	168, 880	165, 428	162, 093	158, 870	155, 755	152, 743	149, 831
4	147, 013	144, 286	141, 646	139, 089	136, 613	134, 214	131, 888	129, 633	127, 446	125, 324
5	123, 264	121, 265	119, 324	117, 438	115, 605	113, 824	112, 092	110, 408	108, 769	107, 175
6	105, 622	104, 111	102, 639	101, 205	99, 807	98, 445	97, 117	95, 821	94, 558	93, 325
7	92, 121	90, 946	89, 799	88, 678	87, 583	86, 513	85, 468	84, 445	83, 446	82, 468
8	81, 512	80, 576	79, 660	78, 763	77, 885	77, 026	76, 184	75, 359	74, 550	73, 758
9	72, 982	72, 221	71, 474	70, 742	70, 024	69, 319	68, 628	67, 950	67, 284	66, 630
10	65, 988	65, 358	64, 739	64, 130	63, 533	62, 946	62, 369	61, 801	61, 244	60, 696
11	60, 157	59, 626	59, 105	58, 592	58, 087	57, 591	57, 102	56, 621	56, 148	55, 682
12	55, 223	54, 771	54, 326	53, 888	53, 456	53, 031	52, 612	52, 199	51, 792	51, 391
13	50, 995	50, 606	50, 222	49, 843	49, 469	49, 101	48, 738	48, 379	48, 026	47, 677
14	47, 333	46, 994	46, 659	46, 328	46, 002	45, 680	45, 362	45, 048	44, 738	44, 432
15	44, 130	43, 831	43, 536	43, 245	42, 958	42, 674	42, 393	42, 116	41, 842	41, 571
16	41, 303	41, 039	40, 777	40, 519	40, 263	40, 011	39, 761	39, 514	39, 270	39, 029
17	38, 790	38, 554	38, 320	38, 089	37, 861	37, 635	37, 411	37, 190	36, 971	36, 754
18	36, 540	36, 328	36, 118	35, 910	35, 705	35, 501	35, 299	35, 100	34, 902	34, 707
19	34, 513	34, 322	34, 132	33, 944	33, 758	33, 573	33, 391	33, 210	33, 031	32, 853
20	32, 677	32, 503	32, 331	32, 160	31, 990	31, 822	31, 656	31, 491	31, 328	31, 166
21	31, 006	30, 847	30, 689	30, 533	30, 378	30, 224	30, 072	29, 921	29, 772	29, 623
22	29, 476	29, 330	29, 186	29, 042	28, 900	28, 759	28, 619	28, 481	28, 343	28, 207
23	28, 071	27, 937	27, 804	27, 672	27, 541	27, 411	27, 281	27, 153	27, 026	26, 900
24	26, 775	26, 651	26, 528	26, 406	26, 285	26, 164	26, 045	25, 926	25, 808	25, 692
25	25, 576	25, 460	25, 346	25, 233	25, 120	25, 008	24, 897	24, 787	24, 678	24, 569
26	24, 461	24, 354	24, 248	24, 142	24, 037	23, 933	23, 829	23, 727	23, 625	23, 523
27	23, 422	23, 322	23, 223	23, 124	23, 026	22, 929	22, 832	22, 736	22, 641	22, 546
28	22, 452	22, 358	22, 265	22, 173	22, 081	21, 990	21, 899	21, 809	21, 719	21, 631
29	21, 542	21, 454	21, 367	21, 280	21, 194	21, 108	21, 023	20, 938	20, 854	20, 770
30	20, 687	20, 605	20, 522	20, 441	20, 360	20, 279	20, 199	20, 119	20, 039	19, 961
31	19. 882	19, 804	19, 727	19, 650	19, 573	19, 497	19, 421	19, 346	19, 271	19, 196
32	19, 122	19, 048	18, 975	18, 902	18, 830	18, 757	18, 686	18, 614	18, 543	18, 473
33	18, 403	18, 333	18, 263	18, 194	18, 126	18, 057	17, 989	17, 922	17, 854	17, 787
34	17, 721	17, 654	17, 589	17, 523	17, 458	17, 393	17, 328	17, 264	17, 200	17, 136
35	17, 073	17, 010	16, 947	16, 885	16, 823	16, 761	16, 699	16, 638	16, 577	16, 517
36	16, 456	16, 396	16, 336	16, 277	16, 218	16, 159	16, 100	16, 042	15, 984	15, 926
37	15, 868	15, 811	15, 754	15, 697	15, 641	15, 584	15, 528	15, 473	15, 417	15, 362
38	15, 307	15, 252	15, 198	15, 143	15, 089	15, 035	14, 982	14, 928	14, 875	14, 822
39	14, 770	14, 717	14, 665	14, 613	14, 561	14, 510	14, 458	14, 407	14, 356	14, 306
40	14, 255	14, 205	14, 155	14, 105	14, 055	14, 006	13, 956	13, 907	13, 859	13, 810
41	13, 761	13, 713	13, 665	13, 617	13, 569	13, 522	13, 474	13, 427	13, 380	13, 334
42	13, 287	13, 240	13, 194	13, 148	13, 102	13, 056	13, 011	12, 966	12, 920	12, 875
43	12, 830	12, 786	12, 741	12, 697	12, 652	12, 608	12, 565	12, 521	12, 477	12, 434
44	12, 391	12, 347	12, 304	12, 262	12, 219	12, 176	12, 134	12, 092	12, 050	12, 008
45	11, 966	11, 925	11, 883	11, 842	11, 801	11, 760	11, 719	11, 678	11, 637	11, 597
46	11, 556	11, 516	11, 476	11, 436	11, 397	11, 357	11, 317	11, 278	11, 238	11, 199

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 12,000 Meters (Ballistic Zone 12) (Computer Zone 18) (Fallout Zone 6)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	11, 160	11, 121	11, 082	11, 044	11, 005	10, 967	10, 982	10, 890	10, 852	10, 814
48	10, 776	10, 739	10, 601	10, 664	10, 626	10, 589	10, 552	10, 515	10, 478	10, 441
49	10, 404	10, 368	10, 331	10, 295	10, 259	10, 223	10, 187	10, 151	10, 115	10, 079
50	10, 044	10, 008	9, 973	9, 937	9, 902	9, 867	9, 832	9, 797	9, 762	9, 728
51	9, 693	9, 659	9, 624	9, 590	9, 556	9, 522	9, 488	9, 454	9, 420	9, 386
52	9, 352	9, 319	9, 285	9, 252	9, 219	9, 186	9, 152	9, 119	9, 086	9, 054
53	9, 021	8, 988	8, 956	8, 923	8, 891	8, 858	8, 826	8, 749	8, 762	8, 730
54	8, 698	8, 666	8, 634	8, 602	8, 571	8, 539	8, 508	8, 476	8, 445	8, 414
55	8, 383	8, 352	8, 321	8, 290	8, 259	8, 228	8, 198	8, 167	8, 136	8, 106
56	8, 075	8, 045	8, 015	7, 985	7, 954	7, 924	7, 894	7, 865	7, 835	7, 805
57	7, 775	7, 745	7, 716	7, 686	7, 657	7, 628	7, 598	7, 569	7, 540	7, 511
58	7, 482	7, 453	7, 424	7, 395	7, 366	7, 337	7, 308	7, 280	7, 251	7, 223
59	7, 194	7, 166	7, 138	7, 109	7, 081	7, 053	7, 025	6, 997	6, 969	6, 941
60	6, 913	6, 885	6, 857	6, 830	6, 802	6, 774	6, 747	6, 719	6, 692	6, 665
61	6, 637	6, 610	6, 583	6, 556	6, 528	6, 501	6, 474	6, 447	6, 421	6, 394
62	6, 367	6, 340	6, 313	6, 287	6, 260	6, 233	6, 207	6, 180	6. 154	6, 128
63	6, 101	6, 075	6, 049	6, 023	5, 996	5, 970	5, 944	5, 918	5, 892	5, 866
64	5, 840	5, 815	5, 789	5, 763	5, 737	5, 712	5, 686	5, 661	5, 635	5, 609
65	5, 584	5, 559	5, 533	5, 508	5, 483	5, 457	5, 432	5, 407	5, 382	5, 357
66	5, 332	5, 307	5, 282	5, 257	5, 232	5, 207	5, 182	5, 157	5, 133	5, 108
67	5, 083	5, 059	5, 034	5, 009	4, 985	4, 960	4, 936	4, 912	4, 887	4, 863
68	4, 838	4, 814	4, 790	4, 766	4, 742	4, 717	4, 693	4, 669	4, 645	4, 621
69	4, 597	4, 573	4, 549	4, 525	4, 501	4, 478	4, 454	4, 430	4, 406	4, 383
70	4, 359	4, 335	4, 312	4, 288	4, 264	4, 241	4, 217	4, 194	4, 171	4, 147
71	4, 124	4, 100	4, 077	4, 054	4, 030	4, 007	3, 984	3, 961	3, 938	3, 914
72	3, 891	3, 868	3, 845	3, 822	3, 799	3, 776	3, 753	3, 730	3, 707	3, 684
73	3, 662	3, 639	3, 616	3, 593	3, 570	3, 548	3, 525	3, 502	3, 479	3, 457
74	3, 434	3, 412	3, 389	3, 366	3, 344	3, 321	3, 299	3, 276	3, 254	3, 232
75	3, 209	3, 187	3, 164	3, 142	3, 120	3. 097	3, 075	3. 053	3. 031	3, 008
76	2, 986	2, 964	2, 942	2, 920	2, 897	2, 875	2, 853	2, 831	2, 809	2, 787
77	2, 765	2, 743	2, 721	2, 699	2, 677	2, 655	2, 633	2, 611	2, 589	2, 568
78	2, 546	2, 524	2, 502	2, 480	2, 459	2, 437	2, 415	2, 393	2, 372	2, 350
79	2, 328	2, 306	2. 285	2, 263	2, 241	2, 220	2, 198	2, 177	2, 155	2, 133
80	2, 112	2, 090	2, 069	2, 047	2, 026	2, 004	1, 983	1, 961	1, 940	1, 918
81	1, 897	1, 876	1, 854	1, 833	1, 811	1, 790	1, 769	1, 747	1, 726	1, 705
82	1, 683	1, 662	1, 641	1, 619	1, 598	1, 577	1, 556	1, 534	1, 513	1, 492
83	1, 471	1, 449	1. 428	1, 407	1, 386	1, 365	1, 343	1, 322	1, 301	1, 280
84	1, 259	1, 238	1, 217	1, 195	1, 174	1, 153	1, 132	1, 111	1, 090	1, 069
85	1, 048	1, 027	1, 006	985	964	943	922	901	880	859
86	838	817	796	775	754	733	712	691	670	649
87	628	607	586	565	544	523	502	481	460	439
88	418	397	376	355	335	314	293	272	251	230
89	209	188	167	146	125	105	84	63	42	21

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 13,000 Meters (Computer Zone 19)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	192, 193	188, 190	184, 322	180, 583	176, 969	173, 474	170, 093	166, 822	163, 657	160, 593
4	157, 626	154, 752	151, 968	149, 270	146, 655	144, 119	141, 659	139, 272	136, 956	134, 707
5	132, 524	130, 403	128, 342	126, 339	124, 391	122, 497	120, 655	118, 862	117, 118	115, 419
6	113, 765	112, 154	110, 584	109, 053	107, 562	106, 107	104, 689	103, 304	101, 954	100, 635
7	99, 348	98, 091	96, 864	95, 664	94, 492	93, 346	92, 226	91, 131	90, 059	89, 011
8	87, 986	86, 982	86, 000	85, 038	84, 096	83, 173	82, 269	81, 383	80, 515	79, 665
9	78, 831	78, 013	77, 211	76, 424	75, 652	74, 895	74, 151	73, 422	72, 706	72, 002
10	71, 312	70, 634	69, 967	69, 313	68, 670	68, 038	67, 416	66, 806	66, 205	65, 615
11	65, 034	64, 463	63, 902	63, 349	62, 805	62, 270	61, 744	61, 225	60, 715	60, 213
12	59, 718	59, 231	58, 751	58, 279	57, 813	57, 355	56, 903	56, 457	56, 019	55, 586
13	55, 160	54, 739	54, 325	53, 916	53, 513	53, 116	52, 724	52, 337	51, 956	51, 579
14	51, 208	50, 842	50, 480	50, 123	49, 771	49, 423	49, 080	48, 741	48, 406	48, 076
15	47, 750	47, 427	47, 109	46, 795	46, 484	46, 177	45, 874	45, 575	45, 279	44, 986
16	44, 697	44, 411	44, 129	43, 850	43, 574	43, 301	43, 031	42, 764	42, 501	42, 240
17	41, 982	41, 727	41, 474	41, 225	40, 978	40, 734	40, 492	40, 253	40, 016	39, 782
18	39, 550	39, 321	39, 094	38, 870	38, 647	38, 427	38, 209	37, 994	37, 780	37, 569
19	37, 360	37, 152	36, 947	36, 744	36, 543	36, 343	36, 146	35, 950	35, 756	35, 565
20	35, 374	35, 186	35, 000	34, 815	34, 631	34, 450	34, 270	34, 092	33, 915	33, 740
21	33, 567	33, 395	33, 224	33, 055	32, 888	32, 722	32, 557	32, 394	32, 232	32, 072
22	31, 913	31, 755	31, 599	31, 443	31, 290	31, 137	30, 986	30, 836	30, 687	30, 539
23	30, 393	30, 248	30, 103	29, 960	29, 819	29, 678	29, 538	29, 400	29, 262	29, 126
24	28, 991	28, 856	28, 723	28, 591	28, 460	28, 329	28, 200	28, 072	27, 945	27, 818
25	27, 693	27, 568	27, 444	27, 322	27, 200	27, 079	26, 959	26, 839	26, 721	26, 603
26	26, 487	26, 371	26, 256	26, 141	26, 028	25, 915	25, 803	25, 692	25, 581	25, 472
27	25, 363	25, 255	25, 147	25, 040	24, 934	24, 829	24, 724	24, 620	24, 517	24, 414
28	24, 312	24, 211	24, 110	24, 010	23, 911	23, 812	23, 714	23, 617	23, 520	23, 423
29	23, 328	23, 233	23, 138	23, 044	22, 951	22, 858	22, 766	22, 674	22, 583	22, 493
30	22, 403	22, 313	22, 224	22, 136	22, 048	21, 960	21, 873	21, 787	21, 701	21, 616
31	21, 531	21, 447	21, 363	21, 279	21, 196	21, 114	21, 032	20, 950	20, 869	20, 788
32	20, 708	20, 628	20, 549	20, 470	20, 392	20, 313	20, 236	20, 159	20, 082	20, 005
33	19, 929	19, 854	19, 779	19, 704	19, 629	19, 555	19, 482	19, 409	19, 336	19, 263
34	19, 191	19, 119	19, 048	18, 977	18, 906	18, 836	18, 766	18, 696	18, 627	18, 558
35	18, 490	18, 422	18, 354	18, 286	18, 219	18, 152	18, 085	18, 019	17, 953	17, 887
36	17, 822	17, 757	17, 692	17, 628	17, 564	17, 500	17, 437	17, 374	17, 311	17, 248
37	17, 186	17, 124	17, 062	17, 000	16, 939	16, 878	16, 818	16, 757	16, 697	16, 637
38	16, 578	16, 518	16, 459	16, 401	16, 342	16, 284	16, 226	16, 168	16, 110	16, 053
39	15, 996	15, 939	15, 883	15, 827	15, 770	15, 715	15, 659	15, 604	15, 549	15, 494
40	15, 439	15, 384	15, 330	15, 276	15, 222	15, 169	15, 116	15, 062	15, 009	14, 957
41	14, 904	14, 852	14, 800	14, 748	14, 696	14, 645	14, 594	14, 543	14, 492	14, 441
42	14, 390	14, 340	14, 290	14, 240	14, 190	14, 141	14, 092	14, 042	13, 994	13, 945
43	13, 896	13, 848	13, 799	13, 751	13, 704	13, 656	13, 608	13, 561	13, 514	13, 467
44	13, 420	13, 373	13, 327	13, 280	13, 234	13, 188	13, 142	13, 096	13, 051	13, 006
45	12, 960	12, 915	12, 870	12, 826	12, 781	12, 737	12, 692	12, 648	12, 604	12, 560
46	12, 516	12, 473	12, 430	12, 386	12, 343	12, 300	12, 257	12, 215	12, 172	12, 130

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 13,000 Meters (Computer Zone 19)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	12, 087	12, 045	12, 003	11, 961	11, 919	11, 878	11, 836	11, 795	11, 754	11, 713
48	11, 672	11, 631	11, 590	11, 550	11, 509	11, 469	11, 429	11, 389	11, 349	11, 309
49	11, 269	11, 229	11, 190	11, 151	11, 111	11, 072	11, 033	10, 994	10, 956	10, 917
50	10, 878	10, 840	10, 801	10, 763	10, 725	10, 687	10, 649	10, 611	10, 574	10, 536
51	10, 499	10, 461	10, 424	10, 387	10, 350	10, 313	10, 276	10, 239	10, 203	10, 166
52	10, 130	10, 093	10, 057	10, 021	9, 985	9, 949	9, 913	9, 877	9, 842	9, 806
53	9, 771	9, 735	9, 700	9, 665	9, 630	9, 595	9, 560	9, 525	9, 490	9, 455
54	9, 421	9, 386	9, 352	9, 318	9, 283	9, 249	9, 215	9, 181	9, 147	9, 113
55	9, 080	9, 046	9, 012	8, 979	8, 945	8, 912	8, 879	8, 846	8, 813	8, 780
56	8, 747	8, 714	8, 681	8, 648	8, 616	8, 583	8, 551	8, 518	8, 486	8, 454
57	8, 421	8, 389	8, 357	8, 325	8, 293	8, 262	8, 230	8, 198	8, 167	8, 135
58	8, 104	8, 072	8, 041	8, 009	7, 978	7, 947	7, 916	7, 885	7, 854	7, 823
59	7, 792	7, 762	7, 731	7, 700	7, 670	7, 639	7, 609	7, 578	7, 548	7, 518
60	7, 488	7, 458	7, 428	7, 398	7, 368	7, 338	7, 308	7, 278	7, 248	7, 219
61	7, 189	7, 160	7, 130	7, 101	7, 071	7, 042	7, 013	6, 983	6, 954	6, 925
62	6, 896	6, 867	6, 838	6, 809	6, 781	6, 752	6, 723	6, 694	6, 666	6, 637
63	6, 609	6, 580	6, 552	6, 523	6, 495	6, 467	6, 438	6, 410	6, 382	6, 354
64	6, 326	6, 298	6, 270	6, 242	6, 214	6, 187	6, 159	6, 131	6, 103	6, 076
65	6, 048	6, 021	5, 993	5, 966	5, 938	5, 911	5, 884	5, 857	5, 829	5, 802
66	5, 775	5, 748	5, 721	5, 694	5, 667	5, 640	5, 613	5, 586	5, 559	5, 533
67	5, 506	5, 479	5, 453	5, 426	5, 399	5, 373	5, 346	5, 320	5, 293	5, 267
68	5, 241	5, 214	5, 188	5, 162	5, 136	5, 110	5, 083	5, 057	5, 031	5, 005
69	4, 979	4, 953	4, 927	4, 902	4, 876	4, 850	4, 824	4, 798	4, 773	4, 747
70	4, 721	4, 696	4, 670	4, 645	4, 619	4, 594	4, 568	4, 543	4, 517	4, 492
71	4, 467	4, 441	4, 416	4, 391	4, 366	4, 340	4, 315	4, 290	4, 265	4, 240
72	4, 215	4, 190	4, 165	4, 140	4, 115	4, 090	4, 065	4, 040	4, 016	3, 991
73	3, 966	3, 941	3, 917	3, 892	3, 867	3, 843	3, 818	3, 793	3, 769	3, 744
74	3, 720	3, 695	3, 671	3, 646	3, 622	3, 598	3, 573	3, 549	3, 525	3, 500
75	3, 476	3, 452	3, 428	3, 403	3, 379	3, 355	3, 331	3, 307	3, 283	3, 259
76	3, 234	3, 210	3, 186	3, 162	3, 138	3, 114	3, 091	3, 067	3, 043	3, 019
77	2, 995	2, 971	2, 947	2, 924	2, 900	2, 876	2, 852	2, 829	2, 805	2, 781
78	2, 757	2, 734	2, 710	2, 687	2, 663	2, 639	2, 616	2, 592	2, 569	2, 545
79	2, 522	2, 498	2, 475	2, 451	2, 428	2, 404	2, 381	2, 358	2, 334	2, 311
80	2, 288	2, 264	2, 241	2, 218	2, 194	2, 171	2, 148	2, 124	2, 101	2, 078
81	2, 055	2, 032	2, 008	1, 985	1, 962	1, 939	1, 916	1, 893	1, 869	1, 846
82	1, 823	1, 800	1, 777	1, 754	1, 731	1, 708	1, 685	1, 662	1, 639	1, 616
83	1, 593	1, 570	1, 547	1, 524	1, 501	1, 478	1, 455	1, 432	1, 409	1, 386
84	1, 364	1, 341	1, 318	1, 295	1, 272	1, 249	1, 226	1, 204	1, 181	1, 158
85	1, 135	1, 112	1, 089	1, 067	1, 044	1, 021	998	975	953	930
86	907	884	862	839	816	793	771	748	725	703
87	680	657	635	612	589	566	544	521	498	476
88	453	430	408	385	362	340	317	294	272	249
89	226	204	181	159	136	113	91	68	45	23

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters). 14,000 Meters (Ballistic Zone 13) (Computer Zone 20) (Fallout Zone 7)*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
3	204, 112	199, 954	195, 930	192, 038	188, 271	184, 626	181, 096	177, 678	174, 367	171, 160
4	168, 052	165, 039	162, 118	159, 285	156, 537	153, 871	151, 283	148, 770	146, 330	143, 960
5	141, 657	139, 419	137, 243	135, 127	133, 069	131, 066	129, 118	127, 220	125, 373	123, 574
6	121, 821	120, 113	118, 448	116, 824	115, 241	113, 697	112, 190	110, 720	109, 285	107, 883
7	106, 515	105, 178	103, 872	102, 595	101, 347	100, 127	98, 934	97, 768	96, 626	95, 509
8	94, 416	93, 346	92, 298	91, 272	90, 267	89, 282	88, 318	87, 372	86, 446	85, 537
9	84, 646	83, 773	82, 916	82, 075	81, 250	80, 441	79, 646	78, 866	78, 101	77, 349
10	76, 610	75, 885	75, 172	74, 472	73, 783	73, 107	72, 442	71, 789	71, 146	70, 514
11	69, 892	69, 281	68, 679	68, 088	67, 505	66, 932	66, 368	65, 813	65, 266	64, 728
12	64, 198	63, 676	63, 162	62, 655	62, 156	61, 665	61, 180	60, 703	60, 232	59, 768
13	59, 311	58, 860	58, 416	57, 978	57, 545	57, 119	56, 699	56, 284	55, 875	55, 471
14	55, 073	54, 679	54, 291	53, 908	53, 530	53, 157	52, 789	52, 425	52, 066	51, 711
15	51, 361	51, 015	50, 673	50, 336	50, 002	49, 673	49, 347	49, 026	48, 708	48, 394
16	48, 084	47, 777	47, 473	47, 174	46, 877	46, 584	46, 295	46, 008	45, 725	45, 445
17	45, 168	44, 893	44, 622	44, 354	44, 089	43, 827	43, 567	43, 310	43, 056	42, 804
18	42, 555	42, 309	42, 065	41, 824	41, 585	41, 349	41, 114	40, 883	40, 653	40, 426
19	40, 201	39, 978	39, 758	39, 539	39, 323	39, 109	38, 897	38, 686	38, 478	38, 272
20	38, 068	37, 865	37, 665	37, 466	37, 269	37, 074	36, 881	36, 689	36, 499	36, 311
21	36, 124	35, 939	35, 756	35, 574	35, 394	35, 216	35, 039	34, 863	34, 689	34, 517
22	34, 346	34, 176	34, 008	33, 841	33, 676	33, 512	33, 349	33, 188	33, 028	32, 869
23	32, 712	32, 555	32, 400	32, 247	32, 094	31, 943	31, 793	31, 644	31, 496	31, 349
24	31, 204	31, 059	30, 916	30, 774	30, 633	30, 493	30, 354	30, 216	30, 079	29, 943
25	29, 808	29, 674	29, 541	29, 409	29, 278	29, 147	29, 018	28, 890	28, 762	28, 636
26	28, 510	28, 386	28, 262	28, 139	28, 017	27, 896	27, 775	27, 655	27, 537	27, 419
27	27, 301	27, 185	27, 069	26, 954	26, 840	26, 727	26, 614	26, 503	26, 391	26, 281
28	26, 171	26, 062	25, 954	25, 846	25, 739	25, 633	25, 528	25, 423	25, 318	25, 215
29	25, 112	25, 010	24, 908	24, 807	24, 706	24, 607	24, 507	24, 409	24, 311	24, 213
30	24, 116	24, 020	23, 924	23, 829	23, 735	23, 641	23, 547	23, 454	23, 362	23, 270
31	23, 179	23, 088	22, 997	22, 908	22, 818	22, 730	22, 641	22, 554	22, 466	22, 379
32	22, 293	22, 207	22, 122	22, 037	21, 952	21, 868	21, 785	21, 702	21, 619	21, 537
33	21, 455	21, 374	21, 293	21, 212	21, 132	21, 053	20, 973	20, 895	20, 816	20, 738
34	20, 661	20, 583	20, 507	20, 430	20, 354	20, 278	20, 203	20, 128	20, 054	19, 980
35	19, 906	19, 832	19, 759	19, 687	19, 614	19, 542	19, 471	19, 399	19, 328	19, 258
36	19, 187	19, 117	19, 048	18, 978	18, 909	18, 841	18, 772	18, 704	18, 637	18, 569
37	18, 502	18, 435	18, 369	18, 303	18, 237	18, 171	18, 106	18, 041	17, 976	17, 912
38	17, 848	17, 784	17, 720	17, 657	17, 594	17, 531	17, 469	17, 407	17, 345	17, 283
39	17, 222	17, 161	17, 100	17, 039	16, 979	16, 919	16, 859	16, 799	16, 740	16, 681
40	16, 622	16, 563	16, 505	16, 447	16, 389	16, 331	16, 274	16, 217	16, 160	16, 103
41	16, 047	15, 990	15, 934	15, 878	15, 823	15, 767	15, 712	15, 657	15, 602	15, 548
42	15, 494	15, 439	15, 385	15, 332	15, 278	15, 225	15, 172	15, 119	15, 066	15, 014
43	14, 961	14, 909	14, 857	14, 806	14, 754	14, 703	14, 651	14, 601	14, 550	14, 499
44	14, 449	14, 398	14, 348	14, 298	14, 249	14, 199	14, 150	14, 101	14, 052	14, 003
45	13, 954	13, 905	13, 857	13, 809	13, 761	13, 713	13, 665	13, 618	13, 570	13, 523
46	13, 476	13, 429	13, 383	13, 336	13, 290	13, 243	13, 197	13, 151	13, 105	13, 060

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

Table 2-1. *Horizontal Distance (Meters), 14,000 Meters (Ballistic Zone 13) (Computer Zone 20) (Fallout Zone 7)—Continued*

Degrees	Elevation angle, tenths of a degree									
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
47	13, 014	12, 969	12, 924	12, 878	12, 834	12, 789	12, 744	12, 700	12, 655	12, 611
48	12, 567	12, 523	12, 479	12, 435	12, 392	12, 348	12, 305	12, 262	12, 219	12, 176
49	12, 133	12, 091	12, 048	12, 006	11, 963	11, 921	11, 879	11, 837	11, 796	11, 754
50	11, 713	11, 671	11, 630	11, 589	11, 548	11, 507	11, 466	11, 425	11, 385	11, 344
51	11, 304	11, 264	11, 224	11, 184	11, 144	11, 104	11, 064	11, 025	10, 985	10, 946
52	10, 907	10, 868	10, 829	10, 790	10, 751	10, 712	10, 673	10, 635	10, 597	10, 558
53	10, 520	10, 482	10, 444	10, 406	10, 368	10, 331	10, 293	10, 255	10, 218	10, 181
54	10, 143	10, 106	10, 069	10, 032	9, 995	9, 959	9, 922	9, 885	9, 849	9, 812
55	9, 776	9, 740	9, 704	9, 668	9, 632	9, 596	9, 560	9, 524	9, 489	9, 453
56	9, 418	9, 382	9, 347	9, 312	9, 277	9, 242	9, 207	9, 172	9, 137	9, 102
57	9, 068	9, 033	8, 998	8, 964	8, 930	8, 895	8, 861	8, 827	8, 793	8, 759
58	8, 725	8, 691	8, 658	8, 624	8, 590	8, 557	8, 523	8, 490	8, 457	8, 423
59	8, 390	8, 357	8, 324	8, 291	8, 258	8, 225	8, 193	8, 160	8, 127	8, 095
60	8, 062	8, 030	7, 997	7, 965	7, 933	7, 901	7, 869	7, 836	7, 804	7, 773
61	7, 741	7, 709	7, 677	7, 645	7, 614	7, 582	7, 551	7, 519	7, 488	7, 457
62	7, 425	7, 394	7, 363	7, 332	7, 301	7, 270	7, 239	7, 208	7, 177	7, 146
63	7, 116	7, 085	7, 054	7, 024	6, 993	6, 963	6, 933	6, 902	6, 872	6, 842
64	6, 811	6, 781	6, 751	6, 721	6, 691	6, 661	6, 631	6, 602	6, 572	6, 542
65	6, 512	6, 483	6, 453	6, 424	6, 394	6, 365	6, 335	6, 306	6, 277	6, 247
66	6, 218	6, 189	6, 160	6, 131	6, 102	6, 073	6, 044	6, 015	5, 986	5, 957
67	5, 928	5, 900	5, 871	5, 842	5, 814	5, 785	5, 757	5, 728	5, 700	5, 671
68	5, 643	5, 615	5, 586	5, 558	5, 530	5, 502	5, 474	5, 445	5, 417	5, 389
69	5, 361	5, 333	5, 306	5, 278	5, 250	5, 222	5, 194	5, 167	5, 139	5, 111
70	5, 084	5, 056	5, 029	5, 001	4, 974	4, 946	4, 919	4, 891	4, 864	4, 837
71	4, 809	4, 782	4, 755	4, 728	4, 701	4, 673	4, 646	4, 619	4, 592	4, 565
72	4, 538	4, 511	4, 485	4, 458	4, 431	4, 404	4, 377	4, 350	4, 324	4, 297
73	4, 270	4, 244	4, 217	4, 191	4, 164	4, 137	4, 111	4, 085	4, 058	4, 032
74	4, 005	3, 979	3, 953	3, 926	3, 900	3, 874	3, 847	3, 821	3, 795	3, 769
75	3, 743	3, 717	3, 691	3, 664	3, 638	3, 612	3, 586	3, 560	3, 535	3, 509
76	3, 483	3, 457	3, 431	3, 405	3, 379	3, 354	3, 328	3, 302	3, 276	3, 251
77	3, 225	3, 199	3, 174	3, 148	3, 122	3, 097	3, 071	3, 046	3, 020	2, 995
78	2, 969	2, 944	2, 918	2, 893	2, 867	2, 842	2, 817	2, 791	2, 766	2, 741
79	2, 715	2, 690	2, 665	2, 639	2, 614	2, 589	2, 564	2, 539	2, 513	2, 488
80	2, 463	2, 438	2, 413	2, 388	2, 363	2, 338	2, 313	2, 287	2, 262	2, 237
81	2, 212	2, 187	2, 163	2, 138	1, 113	2, 088	2, 063	2, 038	2, 013	1, 988
82	1, 963	1, 938	1, 914	1, 889	1, 864	1, 839	1, 814	1, 789	1, 765	1, 740
83	1, 715	1, 690	1, 666	1, 641	1, 616	1, 592	1, 567	1, 542	1, 518	1, 493
84	1, 468	1, 444	1, 419	1, 394	1, 370	1, 345	1, 320	1, 296	1, 271	1, 247
85	1, 222	1, 198	1, 173	1, 148	1, 124	1, 099	1, 075	1, 050	1, 026	1, 001
86	977	952	928	903	879	854	830	805	781	757
87	732	708	683	659	634	610	585	561	537	512
88	488	463	439	415	390	366	341	317	293	268
89	244	219	195	171	146	122	98	73	49	24

Enter table with elevation angle to nearest tenth of a degree. Obtain horizontal distance to the nearest 10 meters. Do not interpolate.

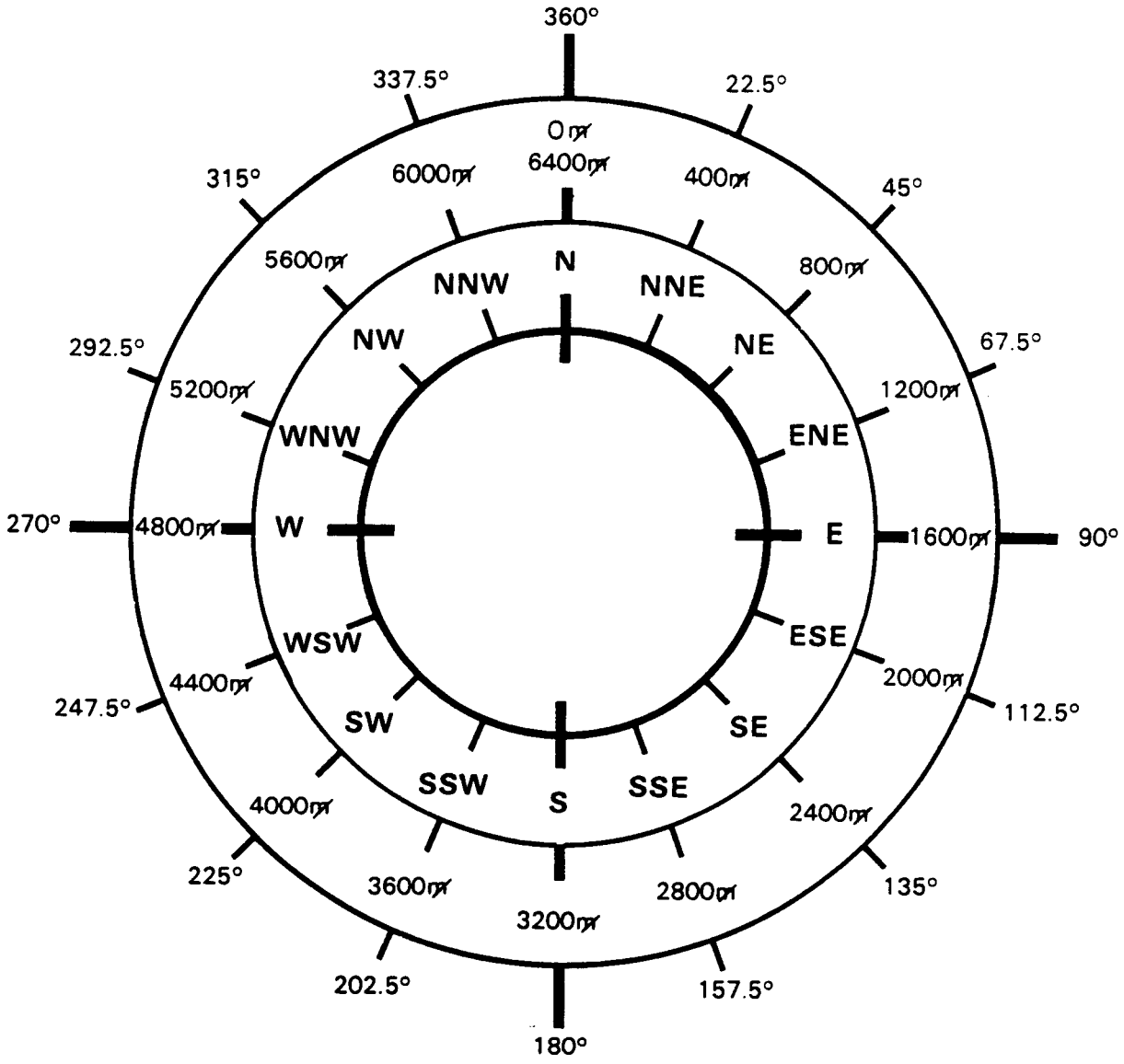


Figure 2-2. *Conversion of points of a compass to mils, degrees, and 16 points (cardinal).*

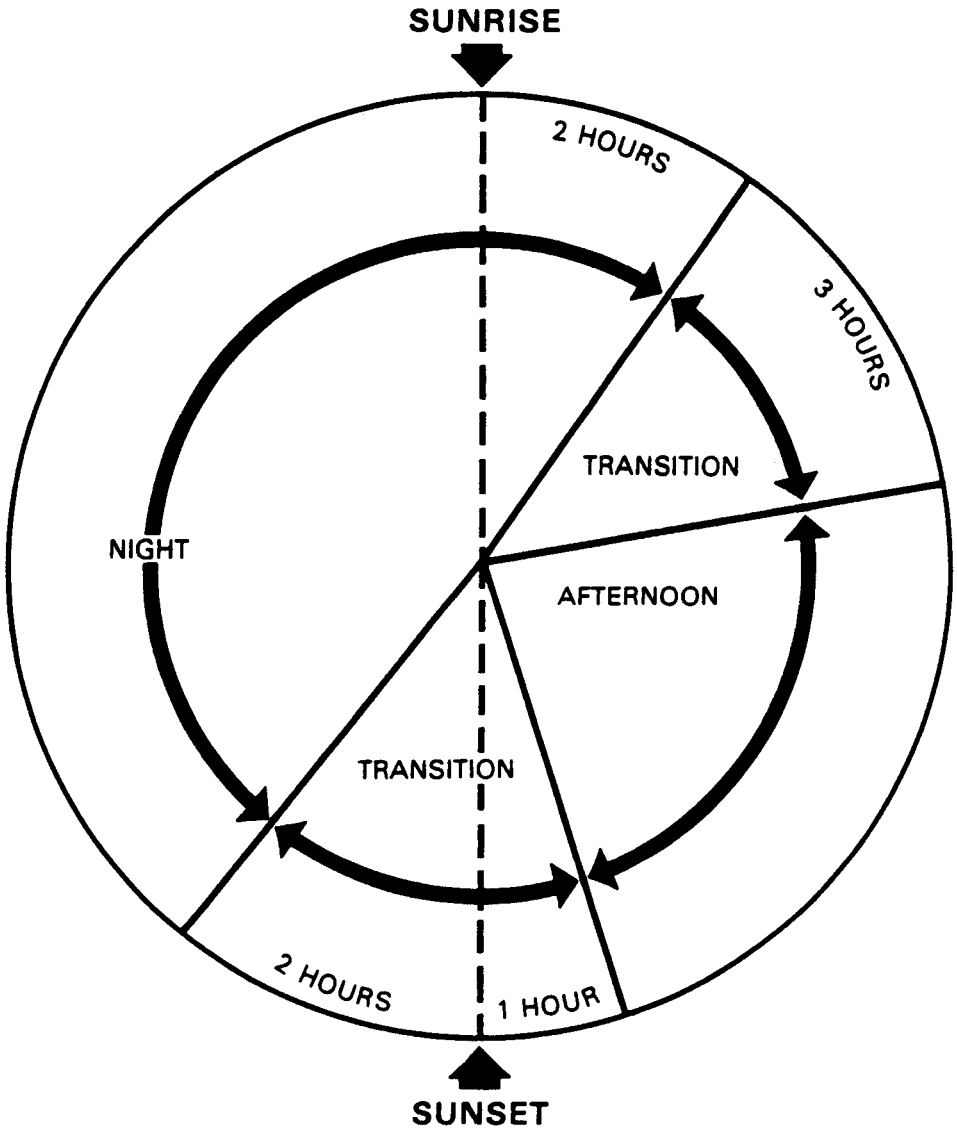


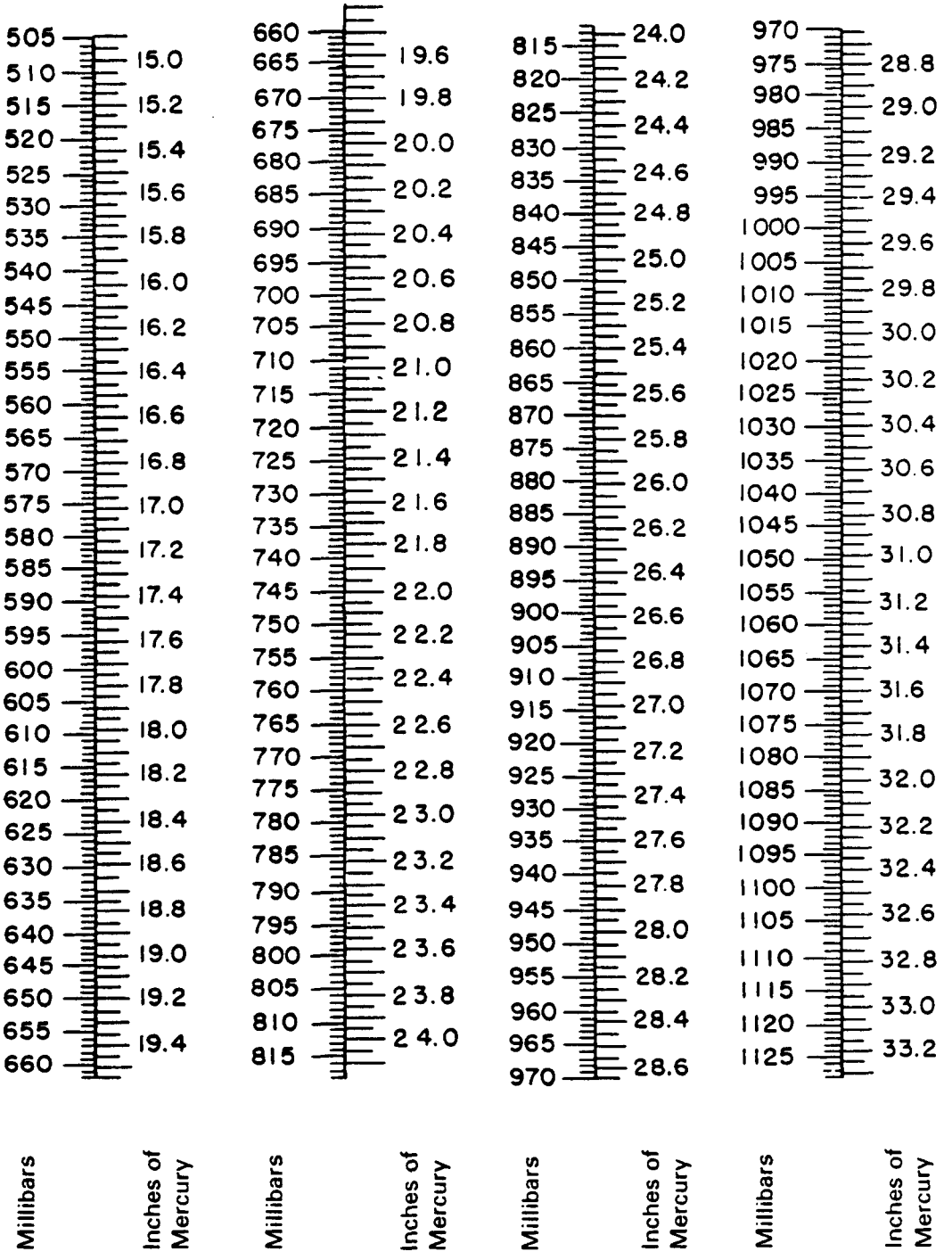
Figure 2-3. *Meteorological day (ballistic messages using departure method).*

2-4. Pressure Conversion (Inches of Mercury to Millibars)

The millibars of pressure for a certain number of inches of mercury may be determined from chart 2-1.

Chart 2-1. *Pressure Conversion (Inches of Mercury to Millibars).*

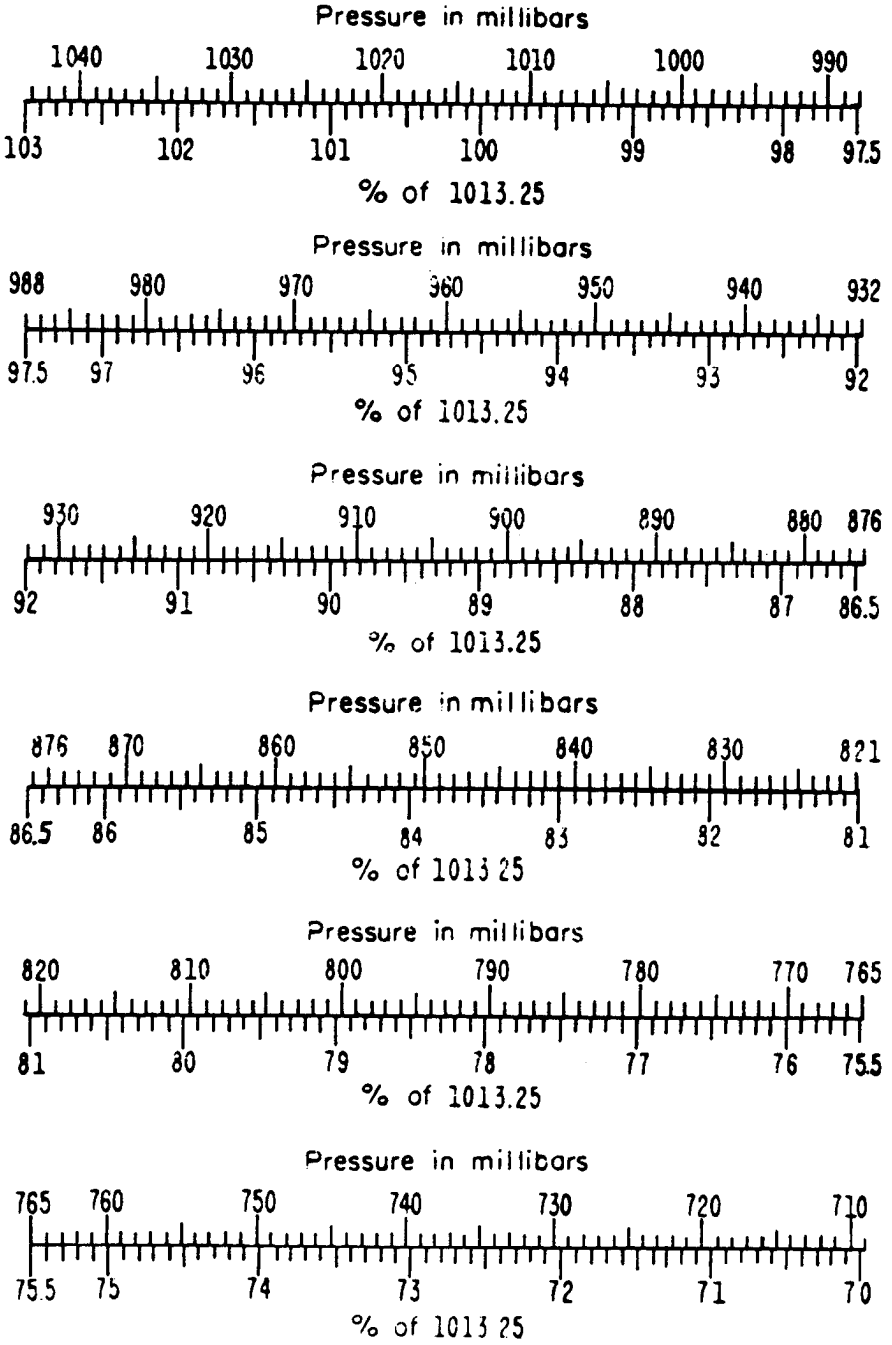
Formula: 1,000 Millibars = 29.53 Inches of Mercury.



2-5. Conversion of Pressure to Percent of Standard

The conversion of surface pressure in millibars to percent of the standard mean sea level pressure is accomplished by use of chart 2-2.

Chart 2-2. *Conversion of Pressure to Percent of Standard.*



2-6. Virtual Temperature Tables

The virtual temperature tables (table 2-2) are computed for an assumed station pressure of 990 millibars (mb), this being approximately the average station pressure for most areas of the United States. These tables, without correction for pressure differences, are appropriate for all artillery applications. Computations for the tables were made using table 72 (Virtual Temperature Increment of Saturated Air), Smithsonian Meteorological Tables, Sixth Edition 1951 and the Relative Humidity-Psychrometric Tables, US Department of Commerce, Weather Bureau 1953.

Table 2-2. *Virtual Temperature (Degrees Celsius)*

Air temp °C.	Wet-bulb depression, degrees Celsius																			
	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
*−5	−4.6	−4.6	−4.6	−4.6	−4.6	−4.6	−4.6	−4.6	−4.6	−4.7	−4.7	−4.7	−4.7	−4.7	−4.7	−4.7	−4.7	−4.7	−4.8	−4.8
−4	−3.5	−3.5	−3.6	−3.6	−3.6	−3.6	−3.6	−3.6	−3.6	−3.6	−3.6	−3.6	−3.6	−3.7	−3.7	−3.7	−3.7	−3.7	−3.7	−3.7
−3	−2.5	−2.5	−2.5	−2.5	−2.5	−2.5	−2.6	−2.6	−2.6	−2.6	−2.6	−2.6	−2.6	−2.6	−2.6	−2.6	−2.7	−2.7	−2.7	−2.7
−2	−1.4	−1.5	−1.5	−1.5	−1.5	−1.5	−1.5	−1.5	−1.5	−1.6	−1.6	−1.6	−1.6	−1.6	−1.6	−1.6	−1.6	−1.6	−1.6	−1.6
−1	−0.4	−0.4	−0.4	−0.4	−0.4	−0.5	−0.5	−0.5	−0.5	−0.5	−0.5	−0.5	−0.5	−0.6	−0.6	−0.6	−0.6	−0.6	−0.6	−0.6
0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
1	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5
2	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5
3	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
4	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.6	4.6	4.6
5	5.9	5.9	5.9	5.9	5.9	5.9	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7
6	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.7
7	8.1	8.1	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.9	7.9	7.9	7.9	7.9	7.9	7.8	7.8	7.8	7.8
8	9.2	9.1	9.1	9.1	9.1	9.1	9.1	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	8.9	8.9	8.9	8.9	8.9
9	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.1	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
10	11.3	11.3	11.3	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.1	11.1	11.1	11.1	11.1	11.0	11.0
11	12.4	12.4	12.4	12.4	12.4	12.4	12.3	12.3	12.3	12.3	12.3	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.1
12	13.5	13.5	13.5	13.5	13.5	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.3	13.3	13.3	13.3	13.3	13.2	13.2	13.2
13	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.5	14.5	14.5	14.5	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.3	14.3
14	15.8	15.8	15.7	15.7	15.7	15.7	15.7	15.6	15.6	15.6	15.6	15.6	15.6	15.5	15.5	15.5	15.5	15.5	15.4	15.4
15	16.9	16.9	16.8	16.8	16.8	16.8	16.8	16.8	16.7	16.7	16.7	16.7	16.7	16.6	16.6	16.6	16.6	16.6	16.5	16.5
16	18.0	18.0	18.0	18.0	17.9	17.9	17.9	17.9	17.9	17.8	17.8	17.8	17.8	17.8	17.7	17.7	17.7	17.7	17.7	17.7
17	19.2	19.2	19.1	19.1	19.1	19.1	19.0	19.0	19.0	19.0	19.0	18.9	18.9	18.9	18.9	18.9	18.8	18.8	18.8	18.8
18	20.3	20.3	20.3	20.2	20.2	20.2	20.2	20.2	20.1	20.1	20.1	20.1	20.1	20.0	20.0	20.0	20.0	20.0	19.9	19.9
19	21.5	21.5	21.4	21.4	21.4	21.4	21.4	21.3	21.3	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.1	21.1	21.1	21.1
20	22.6	22.6	22.6	22.6	22.5	22.5	22.5	22.5	22.5	22.4	22.4	22.4	22.4	22.4	22.3	22.3	22.3	22.3	22.2	22.2
21	23.8	23.8	23.8	23.8	23.8	23.7	23.7	23.7	23.6	23.6	23.6	23.6	23.6	23.5	23.5	23.5	23.4	23.4	23.4	23.4
22	25.0	25.0	25.0	24.9	24.9	24.9	24.9	24.8	24.8	24.8	24.8	24.8	24.7	24.7	24.7	24.6	24.6	24.6	24.6	24.5
23	26.2	26.2	26.2	26.1	26.1	26.1	26.1	26.0	26.0	26.0	26.0	25.9	25.9	25.9	25.9	25.8	25.8	25.8	25.7	25.7
24	27.4	27.4	27.4	27.4	27.3	27.3	27.3	27.2	27.2	27.2	27.2	27.1	27.1	27.1	27.1	27.0	27.0	27.0	27.0	26.9
25	28.7	28.6	28.6	28.6	28.6	28.5	28.5	28.4	28.4	28.4	28.4	28.3	28.3	28.3	28.3	28.2	28.2	28.2	28.2	28.1
26	29.9	29.9	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.5	29.5	29.4	29.4	29.4	29.4	29.4
27	31.2	31.1	31.1	31.1	31.0	31.0	30.9	30.9	30.9	30.9	30.8	30.8	30.8	30.7	30.7	30.7	30.6	30.6	30.6	30.6
28	32.4	32.4	32.4	32.3	32.3	32.2	32.2	32.2	32.2	32.1	32.1	32.1	32.0	32.0	32.0	31.9	31.9	31.9	31.8	31.8
29	33.7	33.7	33.7	33.6	33.6	33.5	33.5	33.5	33.4	33.4	33.4	33.3	33.3	33.2	33.2	33.2	33.2	33.2	33.1	33.1
30	35.0	35.0	35.0	34.9	34.9	34.8	34.8	34.8	34.7	34.7	34.7	34.6	34.6	34.6	34.5	34.5	34.5	34.4	34.4	34.4

31	36.3	36.3	36.3	36.2	36.2	36.1	36.1	36.1	36.0	36.0	36.0	35.9	35.9	35.9	35.8	35.8	35.8	35.7	35.6	35.6
32	37.7	37.6	37.6	37.6	37.5	37.4	37.4	37.4	37.3	37.3	37.3	37.2	37.2	37.2	37.1	37.1	37.0	37.0	37.0	36.9
33	39.0	39.0	39.0	38.9	38.8	38.8	38.8	38.7	38.7	38.7	38.6	38.5	38.5	38.5	38.4	38.4	38.4	38.4	38.3	38.2
34	40.4	40.3	40.3	40.3	40.2	40.2	40.1	40.1	40.1	40.0	40.0	40.0	39.9	39.8	39.8	39.8	39.7	39.7	39.6	39.6
35	41.8	41.7	41.7	41.7	41.6	41.6	41.5	41.5	41.5	41.4	41.4	41.3	41.3	41.2	41.2	41.1	41.1	41.0	41.0	41.0
36	43.2	43.2	43.2	43.1	43.0	43.0	42.9	42.9	42.9	4.28	42.8	42.7	42.6	42.6	42.6	42.5	42.5	42.4	42.4	42.4
37	44.6	44.6	44.6	44.5	44.4	44.4	44.3	44.3	44.3	44.2	44.2	44.1	44.0	44.0	44.0	44.0	43.9	43.8	43.8	43.7
38	46.1	46.0	46.0	46.0	45.9	45.9	45.8	45.8	45.7	45.6	45.6	45.6	45.5	45.5	45.4	45.4	45.3	45.2	45.2	45.2
39	47.6	47.5	47.5	47.4	47.4	47.4	47.3	47.3	47.2	47.1	47.0	47.0	47.0	46.9	46.8	46.8	46.8	46.8	46.7	46.6
40	49.1	49.0	49.0	49.0	49.0	48.9	48.8	48.8	48.7	48.6	48.6	48.5	48.5	48.4	48.3	48.3	48.2	48.2	48.1	48.1
41	50.7	50.6	50.6	50.5	50.5	50.4	50.3	50.3	50.2	50.2	50.1	50.0	50.0	49.9	49.9	49.8	49.8	49.7	49.6	49.6
42	52.2	52.2	52.2	52.0	52.0	51.9	51.8	51.8	51.7	51.7	51.6	51.5	51.5	51.4	51.4	51.3	51.3	51.2	51.1	51.1
43	53.8	53.7	53.7	53.6	53.6	53.5	53.4	53.4	53.3	53.3	53.2	53.2	53.1	53.0	53.0	52.9	52.9	52.8	52.8	52.7
44	55.5	55.4	55.4	55.2	55.2	55.1	55.1	55.0	54.9	54.9	54.8	54.8	54.7	54.7	54.6	54.4	54.4	54.3	54.3	54.2

*For temperatures below—5° celsius, use air temperature as virtual temperature, regardless of wet-bulb depression. Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C.	Wet-bulb depression, degrees Celsius																			
	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9
*−5	−4.8	−4.8	−4.8	−4.8	−4.8	−4.8	−4.8	−4.8	−4.8	−4.9	−4.9	−4.9	−4.9	−4.9	−4.9	−4.9	−4.9	−4.9	−5.0	−5.0
−4	−3.7	−3.8	−3.8	−3.8	−3.8	−3.8	−3.8	−3.8	−3.8	−3.8	−3.8	−3.8	−3.9	−3.9	−3.9	−3.9	−3.9	−3.9	−3.9	−3.9
−3	−2.7	−2.7	−2.7	−2.7	−2.8	−2.8	−2.8	−2.8	−2.8	−2.8	−2.8	−2.8	−2.8	−2.8	−2.8	−2.9	−2.9	−2.9	−2.9	−2.9
−2	−1.7	−1.7	−1.7	−1.7	−1.7	−1.7	−1.7	−1.7	−1.8	−1.8	−1.8	−1.8	−1.8	−1.8	−1.8	−1.8	−1.8	−1.8	−1.9	−1.9
−1	−0.6	−0.6	−0.6	−0.7	−0.7	−0.7	−0.7	−0.7	−0.7	−0.7	−0.7	−0.7	−0.8	−0.8	−0.8	−0.8	−0.8	−0.8	−0.8	−0.8
0	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2
2	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3
3	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3
4	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.4
5	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.4	5.4	5.4
6	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.5	6.5	6.5	6.5	6.5
7	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
8	8.9	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.6	8.6	8.6	8.6
9	9.9	9.9	9.9	9.9	9.9	9.9	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.7	9.7	9.7	9.7	9.7	9.7
10	11.0	11.0	11.0	11.0	11.0	11.0	10.9	10.9	10.9	10.9	10.9	10.9	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
11	12.1	12.1	12.1	12.1	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	11.9	11.9	11.9	11.9	11.9	11.8	11.8	11.8
12	13.2	13.2	13.2	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.0	13.0	13.0	13.0	13.0	13.0	13.0	12.9	12.9	12.9
13	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.1	14.1	14.1	14.1	14.1	14.1	14.0	14.0	14.0	14.0
14	15.4	15.4	15.4	15.4	15.3	15.3	15.3	15.3	15.3	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.1	15.1	15.1	15.1
15	16.5	16.5	16.5	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.3	16.3	16.3	16.3	16.3	16.2	16.2	16.2	16.2	16.2
16	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.5	17.5	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.3	17.3	17.3	17.3
17	18.8	18.7	18.7	18.7	18.7	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5	18.4	18.4	18.4	18.4
18	19.9	19.9	19.9	19.8	19.8	19.8	19.8	19.8	19.7	19.7	19.7	19.7	19.6	19.6	19.6	19.6	19.6	19.6	19.5	19.5
19	21.0	21.0	21.0	21.0	21.0	21.0	20.9	20.9	20.9	20.9	20.8	20.8	20.8	20.8	20.7	20.7	20.7	20.7	20.7	20.6
20	22.2	22.2	22.2	22.1	22.1	22.1	22.1	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.8	21.8	21.8
21	23.4	23.3	23.3	23.3	23.3	23.2	23.2	23.2	23.2	23.2	23.1	23.1	23.1	23.1	23.0	23.0	23.0	23.0	23.0	22.9
22	24.5	24.5	24.5	24.4	24.4	24.4	24.4	24.4	24.3	24.3	24.3	24.3	24.2	24.2	24.2	24.2	24.1	24.1	24.1	24.1
23	25.7	25.7	25.6	25.6	25.6	25.6	25.5	25.5	25.5	25.5	25.4	25.4	25.4	25.4	25.4	25.3	25.3	25.3	25.2	25.2
24	26.9	26.9	26.9	26.8	26.8	26.8	26.8	26.7	26.7	26.6	26.6	26.6	26.6	26.6	26.6	26.5	26.5	26.5	26.4	26.4
25	28.1	28.1	28.0	28.0	28.0	28.0	27.9	27.9	27.9	27.8	27.8	27.8	27.8	27.7	27.7	27.7	27.7	27.6	27.6	27.6
26	29.3	29.3	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.8	28.8	28.8
27	30.5	30.5	30.5	30.4	30.4	30.4	30.4	30.3	30.3	30.3	30.2	30.2	30.2	30.2	30.1	30.1	30.1	30.0	30.0	30.0
28	31.8	31.8	31.7	31.7	31.7	31.6	31.6	31.6	31.5	31.5	31.5	31.5	31.4	31.4	31.4	31.3	31.3	31.3	31.2	31.2
29	33.1	33.0	33.0	33.0	32.9	32.9	32.9	32.8	32.8	32.8	32.7	32.7	32.7	32.6	32.6	32.6	32.5	32.5	32.5	32.4
30	34.3	34.3	34.3	34.2	34.2	34.2	34.1	34.1	34.1	34.0	34.0	34.0	33.9	33.9	33.9	33.8	33.8	33.8	33.7	33.7

31	35.6	35.6	35.5	35.5	35.4	35.4	35.4	35.4	35.4	35.3	35.3	35.2	35.2	35.2	35.1	35.1	35.1	35.0	35.0	35.0
32	36.9	36.9	36.8	36.8	36.8	36.7	36.7	36.6	36.6	36.6	36.5	36.5	36.5	36.4	36.4	36.4	36.3	36.3	36.2	36.2
33	38.2	38.2	38.1	38.1	38.1	38.0	38.0	37.9	37.9	37.9	37.8	37.8	37.8	37.7	37.7	37.6	37.6	37.6	37.6	37.5
34	39.6	39.5	39.5	39.4	39.4	39.4	39.3	39.2	39.2	39.2	39.2	39.1	39.1	39.1	39.0	39.0	38.9	38.9	38.9	38.8
35	40.9	40.8	40.8	40.8	40.8	40.7	40.6	40.6	40.6	40.6	40.5	40.4	40.4	40.4	40.4	40.3	40.2	40.2	40.2	40.2
36	42.3	42.3	42.2	42.1	42.1	42.1	42.1	42.0	41.9	41.9	41.8	41.8	41.8	41.7	41.7	41.6	41.6	41.6	41.6	41.5
37	43.7	43.7	43.6	43.6	43.5	43.4	43.4	43.4	43.4	43.3	43.3	43.2	43.1	43.1	43.0	43.0	43.0	43.0	42.9	42.8
38	45.2	45.1	45.0	45.0	44.9	44.8	44.8	44.8	44.7	44.7	44.7	44.6	44.6	44.5	44.5	44.4	44.3	44.3	44.2	44.2
39	46.6	46.5	46.5	46.4	46.4	46.3	46.2	46.2	46.2	46.2	46.1	46.1	46.0	45.9	45.9	45.8	45.8	45.7	45.6	45.6
40	48.0	47.9	47.9	47.8	47.8	47.8	47.8	47.7	47.7	47.6	47.5	47.5	47.4	47.4	47.3	47.3	47.2	47.2	47.1	47.0
41	49.5	49.5	49.4	49.4	49.3	49.2	49.2	49.1	49.1	49.0	49.0	48.9	48.9	48.8	48.7	48.7	48.6	48.6	48.5	48.5
42	51.0	51.0	50.9	50.9	50.8	50.8	50.7	50.6	50.6	50.5	50.5	50.4	50.4	50.3	50.3	50.2	50.2	50.1	50.1	50.0
43	52.6	52.6	52.4	52.4	52.3	52.3	52.2	52.2	52.1	52.1	52.0	51.9	51.9	51.8	51.8	51.7	51.7	51.6	51.6	51.5
44	54.2	54.1	54.1	54.0	53.9	53.9	53.8	53.8	53.6	53.6	53.5	53.5	53.4	53.4	53.3	53.3	53.2	53.2	53.1	53.1

*For temperatures below — 5° celsius, use air temperature as virtual temperature, regardless of wet-bulb depression. Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C.	Wet-bulb depression, degrees Celsius																			
	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9
*−5	−5.0	−5.0																		
−4	−3.9	−4.0	−4.0	−4.0																
−3	−2.9	−2.9	−2.9	−2.9	−2.9	−3.0	−3.0													
−2	−1.9	−1.9	−1.9	−1.9	−1.9	−1.9	−1.9	−2.0	−2.0	−2.0										
−1	−0.8	−0.8	−0.9	−0.9	−0.9	−0.9	−0.9	−0.9	−0.9	−0.9	−1.0									
0	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0				
1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0		
2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1
4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.1
5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2
6	6.5	6.5	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.2
7	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.3	7.3	7.3
8	8.6	8.6	8.6	8.6	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.3
9	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.4	9.4	9.4	9.4
10	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.5	10.5	10.5	10.5	10.5
11	11.8	11.8	11.8	11.8	11.8	11.7	11.7	11.7	11.7	11.7	11.7	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.5
12	12.9	12.9	12.9	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.7	12.7	12.7	12.7	12.7	12.7	12.6	12.6	12.6	12.6
13	14.0	14.0	13.9	13.9	13.9	13.9	13.9	13.9	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.7	13.7	13.7	13.7	13.7
14	15.1	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.9	14.9	14.9	14.9	14.9	14.9	14.8	14.8	14.8	14.8	14.8	14.8
15	16.2	16.2	16.1	16.1	16.1	16.1	16.1	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.9	15.9	15.9	15.9	15.9	15.8
16	17.3	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.1	17.1	17.1	17.1	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
17	18.4	18.4	18.3	18.3	18.3	18.3	18.3	18.3	18.2	18.2	18.2	18.2	18.2	18.2	18.1	18.1	18.1	18.1	18.1	18.0
18	19.5	19.5	19.5	19.4	19.4	19.4	19.4	19.4	19.4	19.3	19.3	19.3	19.3	19.2	19.2	19.2	19.2	19.2	19.2	19.1
19	20.6	20.6	20.6	20.6	20.5	20.5	20.5	20.5	20.5	20.4	20.4	20.4	20.4	20.4	20.4	20.3	20.3	20.3	20.3	20.3
20	21.8	21.8	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6	21.6	21.5	21.5	21.5	21.5	21.5	21.4	21.4	21.4	21.4
21	22.9	22.9	22.9	22.8	22.8	22.8	22.8	22.8	22.7	22.7	22.7	22.7	22.6	22.6	22.6	22.6	22.6	22.6	22.5	22.5
22	24.0	24.0	24.0	24.0	24.0	23.9	23.9	23.9	23.9	23.8	23.8	23.8	23.8	23.8	23.8	23.7	23.7	23.7	23.7	23.6
23	25.2	25.2	25.2	25.2	25.1	25.1	25.1	25.1	25.0	25.0	25.0	25.0	24.9	24.9	24.9	24.9	24.9	24.8	24.8	24.8
24	26.4	26.4	26.3	26.3	26.3	26.3	26.2	26.2	26.2	26.2	26.1	26.1	26.1	26.1	26.1	26.0	26.0	26.0	26.0	25.9
25	27.6	27.5	27.5	27.5	27.4	27.4	27.4	27.4	27.4	27.3	27.3	27.3	27.3	27.2	27.2	27.2	27.2	27.2	27.1	27.1
26	28.8	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.5	28.4	28.4	28.4	28.3	28.3	28.3	28.3
27	29.9	29.9	29.9	29.9	29.9	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.5	29.5	29.5	29.4
28	31.2	31.2	31.1	31.1	31.1	31.1	31.0	31.0	31.0	30.9	30.9	30.9	30.8	30.8	30.8	30.8	30.8	30.7	30.7	30.7
29	32.4	32.4	32.4	32.4	32.3	32.3	32.3	32.2	32.2	32.2	32.1	32.1	32.1	32.0	32.0	32.0	31.9	31.9	31.9	31.9
30	33.7	33.6	33.6	33.6	33.5	33.5	33.5	33.5	33.4	33.4	33.4	33.3	33.3	33.3	33.2	33.2	33.2	33.2	33.1	33.1

31	34.9	34.9	34.8	34.8	34.8	34.7	34.7	34.7	34.7	34.6	34.6	34.6	34.5	34.5	34.5	34.4	34.4	34.4	34.4	34.3
32	36.2	36.1	36.1	36.1	36.1	36.0	36.0	36.0	35.9	35.9	35.9	35.8	35.8	35.7	35.7	35.7	35.6	35.6	35.6	35.6
33	37.4	37.4	37.4	37.4	37.3	37.3	37.3	37.2	37.2	37.2	37.1	37.1	37.0	37.0	37.0	37.0	36.9	36.9	36.8	36.8
34	38.8	38.7	38.7	38.7	38.6	38.6	38.5	38.5	38.5	38.5	38.4	38.4	38.4	38.3	38.3	38.2	38.2	38.2	38.2	38.1
35	40.1	40.1	40.0	40.0	40.0	39.9	39.9	39.8	39.8	39.8	39.7	39.7	39.6	39.6	39.6	39.6	39.5	39.5	39.4	39.4
36	41.4	41.4	41.3	41.3	41.3	41.3	41.2	41.2	41.1	41.0	41.0	41.0	41.0	40.9	40.9	40.8	4.08	40.8	40.7	40.7
37	42.8	42.7	42.7	42.7	42.7	42.6	42.6	42.5	42.5	42.4	42.4	42.4	42.3	42.3	42.2	42.2	42.1	42.1	42.0	42.0
38	44.2	44.2	44.1	44.1	44.0	44.0	43.9	43.8	43.8	43.8	43.8	43.7	43.7	43.6	43.6	43.5	43.5	43.4	43.4	43.4
39	45.6	45.5	45.5	45.5	45.4	45.4	45.3	45.3	45.2	45.2	45.1	45.1	45.0	45.0	44.9	44.9	44.8	44.8	44.8	44.8
40	47.0	46.9	46.9	46.8	46.8	46.8	46.8	46.7	46.7	46.6	46.6	46.5	46.5	46.4	46.4	46.3	46.3	46.2	46.2	46.1
41	48.4	48.4	48.3	48.3	48.2	48.2	48.2	48.2	48.1	48.1	48.0	48.0	47.9	47.9	47.8	47.8	47.7	47.7	47.6	47.6
42	50.0	49.9	49.8	49.8	49.7	49.7	49.6	49.6	49.5	49.5	49.4	49.4	49.3	49.3	49.2	49.2	49.1	49.1	49.0	49.0
43	51.5	51.4	51.4	51.2	51.2	51.1	51.1	51.0	51.0	50.9	50.9	50.8	50.8	50.7	50.7	50.6	50.6	50.5	50.5	50.4
44	53.0	53.0	52.8	52.8	52.7	52.7	52.6	52.6	52.5	52.5	52.4	52.4	52.3	52.3	52.2	52.2	52.0	52.0	51.9	51.9

*For temperatures below — 5° celsius, use air temperature as virtual temperature, regardless of wet-bulb depression. Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C.	Wet-bulb depression, degrees Celsius																			
	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9
2	2.0	2.0																		
3	3.1	3.1	3.1	3.1	3.0	3.0														
4	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.0											
5	5.2	5.2	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.0	5.0							
6	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.0				
7	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	7.1	7.1	7.1	7.1	7.0	
8	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.1	8.1	8.1	8.1
9	9.4	9.4	9.4	9.4	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
10	10.5	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.2	10.2	10.2	10.2
11	11.5	11.5	11.5	11.5	11.5	11.5	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.3	11.3	11.3	11.3	11.3	11.3
12	12.6	12.6	12.6	12.6	12.5	12.5	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.3	12.3
13	13.7	13.7	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.4	13.4	13.4	13.4
14	14.7	14.7	14.7	14.7	14.7	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.5	14.5	14.5	14.5
15	15.8	15.8	15.8	15.8	15.8	15.8	15.7	15.7	15.7	15.7	15.7	15.7	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.5
16	16.9	16.9	16.9	16.9	16.9	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.7	16.7	16.7	16.7	16.7	16.6	16.6	16.6
17	18.0	18.0	18.0	18.0	18.0	17.9	17.9	17.9	17.9	17.9	17.9	17.8	17.8	17.8	17.8	17.8	17.8	17.7	17.7	17.7
18	19.1	19.1	19.1	19.1	19.1	19.0	19.0	19.0	19.0	19.0	19.0	18.9	18.9	18.9	18.9	18.9	18.9	18.8	18.8	18.8
19	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.1	20.1	20.1	20.1	20.0	20.0	20.0	20.0	20.0	20.0	20.0	19.9	19.9
20	21.4	21.4	21.3	21.3	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.1	21.1	21.1	21.1	21.1	21.0	21.0	21.0
21	22.5	22.5	22.4	22.4	22.4	22.4	22.4	22.4	22.3	22.3	22.3	22.3	22.2	22.2	22.2	22.2	22.2	22.2	22.1	22.1
22	23.6	23.6	23.6	23.6	23.5	23.5	23.5	23.5	23.4	23.4	23.4	23.4	23.4	23.4	23.3	23.3	23.3	23.3	23.3	23.2
23	24.8	24.7	24.7	24.7	24.7	24.7	24.6	24.6	24.6	24.6	24.6	24.6	24.5	24.5	24.5	24.4	24.4	24.4	24.4	24.4
24	25.9	25.9	25.9	25.9	25.8	25.8	25.8	25.8	25.8	25.7	25.7	25.7	25.6	25.6	25.6	25.6	25.6	25.6	25.5	25.5
25	27.1	27.0	27.0	27.0	27.0	27.0	26.9	26.9	26.9	26.9	26.8	26.8	26.8	26.8	26.8	26.7	26.7	26.7	26.7	26.6
26	28.3	28.2	28.2	28.2	28.2	28.1	28.1	28.1	28.1	28.0	28.0	28.0	28.0	28.0	27.9	27.9	27.9	27.8	27.8	27.8
27	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0
28	30.6	30.6	30.6	30.6	30.5	30.5	30.5	30.4	30.4	30.4	30.4	30.4	30.3	30.3	30.3	30.3	30.2	30.2	30.2	30.1
29	31.8	31.8	31.8	31.7	31.7	31.7	31.7	31.6	31.6	31.6	31.6	31.6	31.5	31.5	31.4	31.4	31.4	31.4	31.4	31.3
30	33.1	33.0	33.0	33.0	33.0	32.9	32.9	32.9	32.8	32.8	32.8	32.8	32.7	32.7	32.7	32.6	32.6	32.6	32.6	32.5

31	34.3	34.3	34.2	34.2	34.2	34.2	34.1	34.1	34.0	34.0	34.0	33.9	33.9	33.9	33.9	33.8	33.8	33.8	33.8	33.7
32	35.5	35.5	35.5	35.5	35.4	35.4	35.4	35.3	35.3	35.2	35.2	35.2	35.2	35.1	35.1	35.1	35.1	35.0	35.0	35.0
33	36.8	36.7	36.7	36.7	36.7	36.6	36.6	36.6	36.6	36.5	36.4	36.4	36.4	36.4	36.3	36.3	36.2	36.2	36.2	36.2
34	38.0	38.0	38.0	38.0	37.9	37.9	37.8	37.8	37.8	37.8	37.7	37.7	37.6	37.6	37.6	37.6	37.5	37.5	37.5	37.5
35	39.4	39.4	39.3	39.3	39.2	39.1	39.1	39.1	39.1	39.0	39.0	38.9	38.9	38.9	38.9	38.8	38.8	38.7	38.7	38.7
36	40.6	40.6	40.6	40.6	40.5	40.5	40.4	40.4	40.3	40.3	40.3	40.3	40.2	40.2	40.1	40.1	40.0	40.0	40.0	40.0
37	42.0	42.0	41.9	41.9	41.8	41.8	41.7	41.7	41.7	41.7	41.6	41.6	41.5	41.5	41.4	41.4	41.4	41.4	41.3	41.3
38	43.4	43.3	43.3	43.2	43.2	43.1	43.1	43.0	43.0	43.0	43.0	42.9	42.9	42.8	42.8	42.7	42.7	42.6	42.6	42.6
39	44.7	44.7	44.6	44.6	44.5	44.5	44.4	44.4	44.3	44.3	44.2	44.2	44.2	44.2	44.1	44.1	44.0	44.0	43.9	43.9
40	46.1	46.0	46.0	45.9	45.9	45.8	45.8	45.8	45.8	45.7	45.7	45.6	45.6	45.5	45.5	45.4	45.4	45.4	45.3	45.3
41	47.5	47.5	47.4	47.4	47.3	47.3	47.2	47.2	47.1	47.1	47.0	47.0	46.9	46.9	46.8	46.8	46.8	46.7	46.7	46.6
42	48.9	48.9	48.9	48.8	48.8	48.7	48.7	48.6	48.6	48.5	48.5	48.4	48.4	48.2	48.2	48.2	48.2	48.2	48.0	48.0
43	50.4	50.3	50.3	50.2	50.2	50.2	50.0	50.0	49.9	49.9	49.8	49.8	49.7	49.7	49.6	49.6	49.6	49.5	49.5	49.4
44	51.8	51.8	51.7	51.7	51.6	51.6	51.6	51.5	51.5	51.4	51.4	51.2	51.2	51.1	51.1	51.1	51.0	51.0	50.9	50.9

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C.	Wet-bulb depression, degrees Celsius																			
	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9
8	8.1	8.1	8.1	8.0																
9	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.0											
10	10.2	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.0							
11	11.3	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.0		
12	12.3	12.3	12.3	12.3	12.3	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.1	12.1	12.1	12.1	12.1	12.0
13	13.4	13.4	13.4	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.1
14	14.5	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2
15	15.5	15.5	15.5	15.5	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.3	15.3	15.3	15.3	15.3	15.3	15.2
16	16.6	16.6	16.6	16.6	16.6	16.5	16.5	16.5	16.5	16.5	16.5	16.4	16.4	16.4	16.4	16.4	16.4	16.3	16.3	16.3
17	17.7	17.7	17.7	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.4	17.4	17.4
18	18.8	18.8	18.8	18.7	18.7	18.7	18.7	18.7	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.5	18.5	18.5	18.5	18.5
19	19.9	19.9	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.7	19.7	19.7	19.7	19.7	19.7	19.6	19.6	19.6	19.6
20	21.0	21.0	21.0	20.9	20.9	20.9	20.9	20.9	20.8	20.8	20.8	20.8	20.8	20.8	20.7	20.7	20.7	20.7	20.7	20.7
21	22.1	22.1	22.1	22.0	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.8	21.8	21.8	21.8	21.8	21.8
22	23.2	23.2	23.2	23.2	23.2	23.1	23.1	23.1	23.1	23.1	23.0	23.0	23.0	23.0	23.0	22.9	22.9	22.9	22.9	22.9
23	24.4	24.3	24.3	24.3	24.3	24.3	24.2	24.2	24.2	24.2	24.2	24.1	24.1	24.1	24.1	24.1	24.0	24.0	24.0	24.0
24	25.5	25.5	25.4	25.4	25.4	25.4	25.4	25.3	25.3	25.3	25.3	25.3	25.2	25.2	25.2	25.2	25.2	25.1	25.1	25.1
25	26.6	26.6	26.6	26.6	26.5	26.5	26.5	26.5	26.5	26.4	26.4	26.4	26.4	26.4	26.3	26.3	26.3	26.3	26.2	26.2
26	27.8	27.8	27.7	27.7	27.7	27.7	27.6	27.6	27.6	27.6	27.6	27.5	27.5	27.5	27.5	27.4	27.4	27.4	27.4	27.4
27	29.0	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.5	28.5	28.5
28	30.1	30.1	30.1	30.0	30.0	30.0	30.0	30.0	29.9	29.9	29.9	29.9	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7
29	31.3	31.3	31.3	31.2	31.2	31.2	31.2	31.1	31.1	31.1	31.0	31.0	31.0	31.0	30.9	30.9	30.9	30.9	30.8	30.8
30	32.5	32.5	32.5	32.4	32.4	32.4	32.4	32.3	32.3	32.3	32.2	32.2	32.2	32.2	32.1	32.1	32.1	32.1	32.0	32.0
31	33.7	33.7	33.7	33.6	33.6	33.6	33.6	33.5	33.5	33.5	33.4	33.4	33.4	33.4	33.3	33.3	33.2	33.2	33.2	33.2
32	34.9	34.9	34.8	34.8	34.8	34.8	34.7	34.7	34.7	34.7	34.6	34.6	34.6	34.6	34.5	34.5	34.4	34.4	34.4	34.4
33	36.1	36.1	36.1	36.1	36.0	36.0	36.0	36.0	35.9	35.9	35.8	35.8	35.8	35.8	35.7	35.7	35.6	35.6	35.6	35.6
34	37.4	37.4	37.3	37.3	37.3	37.3	37.2	37.2	37.1	37.1	37.1	37.1	37.0	37.0	36.9	36.9	36.9	36.9	36.8	36.8
35	38.7	38.6	38.6	38.5	38.5	38.5	38.5	38.4	38.4	38.3	38.3	38.3	38.3	38.3	38.2	38.2	38.1	38.1	38.1	38.1
36	39.9	39.9	39.8	39.8	39.8	39.8	39.8	39.7	39.7	39.6	39.6	39.5	39.5	39.5	39.5	39.5	39.4	39.4	39.3	39.3
37	41.2	41.2	41.1	41.1	41.0	41.0	41.0	41.0	40.9	40.9	40.9	40.8	40.8	40.8	40.8	40.7	40.7	40.6	40.6	40.6
38	42.6	42.5	42.5	42.5	42.4	42.4	42.3	42.3	42.2	42.2	42.1	42.1	42.1	42.1	42.1	42.0	42.0	41.9	41.9	41.8
39	43.9	43.8	43.8	43.7	43.7	43.6	43.6	43.6	43.6	43.5	43.5	43.5	43.4	43.4	43.3	43.3	43.2	43.2	43.1	43.1
40	45.2	45.2	45.1	45.1	45.0	44.9	44.9	44.9	44.9	44.8	44.8	44.8	44.8	44.7	44.7	44.7	44.6	44.6	44.5	44.5
41	46.6	46.5	46.5	46.4	46.4	46.4	46.3	46.3	46.2	46.2	46.1	46.1	46.0	46.0	46.0	45.9	45.9	45.8	45.8	45.8
42	47.9	47.9	47.8	47.8	47.8	47.7	47.7	47.6	47.5	47.5	47.5	47.4	47.4	47.4	47.3	47.3	47.2	47.2	47.2	47.1
43	49.4	49.3	49.3	49.3	49.2	49.2	49.1	49.1	49.0	49.0	49.0	48.9	48.9	48.8	48.8	48.6	48.6	48.6	48.5	48.5
44	50.8	50.8	50.7	50.7	50.7	50.5	50.5	50.4	50.4	50.4	50.3	50.3	50.2	50.2	50.1	50.1	50.1	50.0	50.0	49.8

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C	Wet-bulb depression, degrees Celsius																			
	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9
13	13.1	13.1	13.1	13.1	13.1	13.0														
14	14.2	14.2	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.0										
15	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.1	15.1	15.1	15.1	15.0							
16	16.3	16.3	16.3	16.3	16.3	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.1	16.1	16.1	16.1	16.0			
17	17.4	17.4	17.4	17.4	17.3	17.3	17.3	17.3	17.3	17.3	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.1	17.1	17.1
18	18.5	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.3	18.3	18.3	18.3	18.3	18.3	18.2	18.2	18.2	18.2	18.2
19	19.6	19.6	19.5	19.5	19.5	19.5	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.3	19.3	19.3	19.3	19.3	19.2
20	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.5	20.5	20.5	20.5	20.5	20.4	20.4	20.4	20.4	20.4	20.4	20.3	20.3
21	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.5	21.5	21.5	21.5	21.5	21.4	21.4	21.4
22	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.7	22.7	22.7	22.7	22.7	22.6	22.6	22.6	22.6	22.6	22.5	22.5	22.5
23	24.0	23.9	23.9	23.9	23.9	23.9	23.8	23.8	23.8	23.8	23.8	23.8	23.7	23.7	23.7	23.7	23.7	23.6	23.6	23.6
24	25.1	25.1	25.0	25.0	25.0	25.0	25.0	24.9	24.9	24.9	24.9	24.9	24.9	24.8	24.8	24.8	24.8	24.8	24.7	24.7
25	26.2	26.2	26.2	26.1	26.1	26.1	26.1	26.1	26.1	26.0	26.0	26.0	26.0	26.0	25.9	25.9	25.9	25.9	25.8	25.8
26	27.4	27.3	27.3	27.3	27.2	27.2	27.2	27.2	27.2	27.2	27.1	27.1	27.1	27.0	27.0	27.0	27.0	27.0	27.0	26.9
27	28.5	28.4	28.4	28.4	28.4	28.4	28.4	28.3	28.3	28.3	28.3	28.2	28.2	28.2	28.2	28.2	28.2	28.1	28.1	28.1
28	29.6	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.2	29.2	29.2
29	30.8	30.8	30.8	30.8	30.7	30.7	30.6	30.6	30.6	30.6	30.6	30.6	30.5	30.5	30.5	30.5	30.4	30.4	30.4	30.4
30	32.0	32.0	31.9	31.9	31.9	31.9	31.8	31.8	31.8	31.8	31.8	31.7	31.7	31.7	31.7	31.6	31.6	31.6	31.6	31.5
★31	33.1	33.1	33.1	33.1	33.1	33.0	33.0	33.0	33.0	32.9	32.9	32.9	32.9	32.8	32.8	32.8	32.8	32.7	32.7	32.7
★32	34.4	34.3	34.3	34.3	34.3	34.2	34.2	34.2	34.2	34.1	34.1	34.1	34.1	34.0	34.0	34.0	34.0	33.9	33.9	33.9
33	35.5	35.5	35.5	35.5	35.5	35.4	35.4	35.4	35.4	35.3	35.3	35.2	35.2	35.2	35.2	35.2	35.1	35.1	35.0	35.0
34	36.8	36.8	36.8	36.7	36.7	36.6	36.6	36.6	36.6	36.5	36.5	36.5	36.4	36.4	36.4	36.4	36.3	36.3	36.2	36.2
35	38.0	38.0	38.0	37.9	37.9	37.9	37.9	37.8	37.8	37.7	37.7	37.7	37.6	37.6	37.6	37.6	37.5	37.5	37.5	37.4
36	39.2	39.2	39.2	39.2	39.2	39.1	39.1	39.0	39.0	39.0	39.0	38.9	38.9	38.9	38.8	38.8	38.7	38.7	38.7	38.7
37	40.5	40.5	40.4	40.4	40.4	40.4	40.4	40.3	40.3	40.2	40.2	40.1	40.1	40.1	40.1	40.1	40.0	40.0	39.9	39.9
38	41.8	41.7	41.7	41.7	41.6	41.6	41.6	41.6	41.6	41.5	41.5	41.4	41.4	41.3	41.3	41.3	41.2	41.2	41.2	41.2
39	43.1	43.0	43.0	43.0	43.0	43.0	42.9	42.9	42.8	42.8	42.7	42.7	42.7	42.6	42.6	42.6	42.5	42.5	42.5	42.4
40	44.4	44.4	44.4	44.3	44.3	44.2	44.2	44.1	44.1	44.0	44.0	44.0	43.9	43.9	43.9	43.8	43.8	43.8	43.7	43.6
41	45.7	45.7	45.6	45.6	45.5	45.5	45.5	45.4	45.4	45.4	45.4	45.4	45.3	45.3	45.3	45.2	45.2	45.1	45.1	45.0
42	47.1	47.0	47.0	46.9	46.9	46.9	46.8	46.8	46.7	46.7	46.7	46.6	46.6	46.6	46.5	46.5	46.4	46.4	46.4	46.3
43	48.4	48.4	48.4	48.3	48.3	48.2	48.2	48.2	48.1	48.1	48.0	48.0	48.0	47.9	47.9	47.8	47.8	47.8	47.7	47.7
44	49.8	49.8	49.7	49.7	49.6	49.6	49.6	49.5	49.5	49.4	49.4	49.4	49.3	49.3	49.3	49.2	49.2	49.0	49.0	49.0

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C	Wet-bulb depression, degrees Celsius																			
	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9
18	18.2	18.2	18.1	18.1	18.1															
19	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.1											
20	20.3	20.3	20.3	20.3	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.1	20.1						
21	21.4	21.4	21.4	21.4	21.3	21.3	21.3	21.3	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.1	21.1		
22	22.5	22.5	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.3	22.3	22.3	22.3	22.3	22.2	22.2	22.2	22.2	22.2
23	23.6	23.6	23.6	23.6	23.5	23.5	23.5	23.5	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.3	23.3	23.3	23.3
24	24.7	24.7	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.5	24.5	24.5	24.5	24.4	24.4	24.4	24.4	24.4	24.4
25	25.8	25.8	25.8	25.8	25.7	25.7	25.7	25.7	25.7	25.7	25.6	25.6	25.6	25.6	25.6	25.6	25.5	25.5	25.5	25.5
26	26.9	26.9	26.8	26.8	26.8	26.8	26.7	26.7	26.7	26.7	26.7	26.7	26.6	26.6	26.6	26.6	26.6	26.6	26.5	26.5
27	28.1	28.0	28.0	28.0	28.0	28.0	28.0	27.9	27.9	27.9	27.9	27.8	27.8	27.8	27.8	27.8	27.8	27.7	27.7	27.7
28	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8
29	30.3	30.3	30.3	30.3	30.3	30.2	30.2	30.2	30.2	30.1	30.1	30.1	30.1	30.0	30.0	30.0	30.0	30.0	29.9	29.9
30	31.5	31.5	31.5	31.4	31.4	31.4	31.4	31.4	31.3	31.3	31.3	31.3	31.2	31.2	31.2	31.2	31.1	31.1	31.0	31.0
31	32.7	32.7	32.6	32.6	32.6	32.6	32.5	32.5	32.5	32.4	32.4	32.4	32.4	32.3	32.3	32.3	32.3	32.3	32.2	32.2
32	33.8	33.8	33.8	33.8	33.8	33.7	33.7	33.6	33.6	33.6	33.6	33.6	33.5	33.5	33.5	33.5	33.4	33.4	33.4	33.4
33	35.0	35.0	34.9	34.9	34.9	34.9	34.9	34.8	34.8	34.8	34.8	34.8	34.7	34.7	34.7	34.6	34.6	34.6	34.6	34.6
34	36.2	36.2	36.2	36.1	36.1	36.0	36.0	36.0	36.0	36.0	35.9	35.9	35.9	35.9	35.9	35.8	35.8	35.8	35.7	35.7
35	37.4	37.4	37.4	37.3	37.3	37.3	37.2	37.2	37.2	37.2	37.2	37.1	37.1	37.0	37.0	37.0	37.0	37.0	36.9	36.9
36	38.7	38.6	38.6	38.5	38.5	38.5	38.4	38.4	38.4	38.4	38.4	38.3	38.3	38.2	38.2	38.2	38.2	38.2	38.1	38.1
37	39.9	39.8	39.8	39.8	39.8	39.8	39.7	39.7	39.6	39.6	39.6	39.5	39.5	39.5	39.4	39.4	39.4	39.4	39.4	39.3
38	41.2	41.1	41.1	41.0	41.0	41.0	40.9	40.9	40.8	40.8	40.8	40.8	40.8	40.7	40.7	40.7	40.6	40.6	40.5	40.5
39	42.4	42.4	42.4	42.4	42.3	42.3	42.2	42.2	42.1	42.1	42.1	42.0	42.0	41.9	41.9	41.9	41.8	41.8	41.8	41.8
40	43.6	43.6	43.6	43.6	43.6	43.6	43.5	43.5	43.4	43.4	43.3	43.3	43.3	43.2	43.2	43.2	43.1	43.1	43.1	43.0
41	45.0	45.0	44.9	44.9	44.9	44.8	44.8	44.8	44.7	44.7	44.6	44.6	44.6	44.5	44.5	44.5	44.4	44.4	44.4	44.3
42	46.3	46.3	46.2	46.2	46.1	46.1	46.1	46.0	46.0	46.0	45.9	45.9	45.8	45.8	45.8	45.7	45.7	45.7	45.6	45.6
43	47.7	47.6	47.6	47.6	47.4	47.4	47.3	47.3	47.3	47.2	47.2	47.2	47.1	47.1	47.1	47.0	47.0	47.0	46.9	46.9
44	48.9	48.9	48.9	48.8	48.8	48.8	48.7	48.7	48.6	48.6	48.6	48.5	48.5	48.5	48.4	48.4	48.4	48.2	48.2	48.2

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C.	Wet-bulb depression, degrees Celsius																		
	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9
22	22.2	22.2	22.2																	
23	23.3	23.3	23.2	23.2	23.2	23.2	23.2	23.2												
24	24.3	24.3	24.3	24.3	24.3	24.3	24.2	24.2	24.2	24.2	24.2	24.2								
25	25.4	25.4	25.4	25.4	25.4	25.4	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.2	25.2	25.2	25.2			
26	26.5	26.5	26.5	26.5	26.5	26.5	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.3	26.3	26.3	26.3	26.3	26.2	26.2
27	27.7	27.7	27.6	27.6	27.6	27.6	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.4	27.4	27.4	27.4	27.4	27.3	27.3
28	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.4	28.4	28.4
29	29.9	29.9	29.9	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.5	29.5
30	31.0	31.0	31.0	31.0	31.0	31.0	30.9	30.9	30.9	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.7	30.7	30.7	30.6
31	32.2	32.2	32.2	32.1	32.1	32.1	32.1	32.1	32.0	32.0	32.0	32.0	32.0	31.9	31.9	31.8	31.8	31.8	31.8	31.8
32	33.4	33.3	33.3	33.3	33.2	33.2	33.2	33.2	33.2	33.1	33.1	33.1	33.1	33.1	33.0	33.0	33.0	33.0	33.0	32.9
33	34.5	34.5	34.4	34.4	34.4	34.4	34.4	34.3	34.3	34.3	34.3	34.3	34.2	34.2	34.2	34.1	34.1	34.1	34.1	34.1
34	35.7	35.7	35.7	35.6	35.6	35.5	35.5	35.5	35.5	35.5	35.5	35.4	35.4	35.3	35.3	35.3	35.3	35.3	35.3	35.2
35	36.9	36.8	36.8	36.8	36.8	36.8	36.7	36.7	36.7	36.6	36.6	36.6	36.6	36.6	36.5	36.5	36.5	36.4	36.4	36.4
36	38.1	38.0	38.0	38.0	38.0	38.0	37.9	37.9	37.9	37.8	37.8	37.8	37.7	37.7	37.7	37.7	37.7	37.6	37.6	37.6
37	39.3	39.3	39.2	39.2	39.1	39.1	39.1	39.1	39.1	39.1	39.0	39.0	38.9	38.9	38.9	38.8	38.8	38.8	38.8	38.8
38	40.5	40.5	40.4	40.4	40.4	40.4	40.4	40.3	40.3	40.3	40.2	40.2	40.2	40.1	40.1	40.1	40.0	40.0	40.0	40.0
39	41.8	41.8	41.7	41.7	41.6	41.6	41.6	41.5	41.5	41.5	41.4	41.4	41.4	41.3	41.3	41.3	41.2	41.2	41.2	41.2
40	43.0	42.9	42.9	42.9	42.8	42.8	42.8	42.7	42.7	42.7	42.6	42.6	42.6	42.6	42.6	42.6	42.5	42.5	42.5	42.4
41	44.3	44.2	44.2	44.2	44.1	44.1	44.1	44.0	44.0	44.0	43.9	43.9	43.9	43.8	43.8	43.8	43.7	43.7	43.7	43.6
42	45.6	45.5	45.5	45.5	45.4	45.4	45.4	45.3	45.3	45.3	45.2	45.2	45.2	45.1	45.1	45.1	45.0	45.0	45.0	44.9
43	46.8	46.8	46.8	46.7	46.7	46.7	46.6	46.6	46.6	46.5	46.5	46.5	46.4	46.4	46.4	46.3	46.3	46.3	46.2	46.2
44	48.1	48.1	48.1	48.0	48.0	48.0	47.9	47.9	47.9	47.8	47.8	47.8	47.7	47.7	47.7	47.6	47.6	47.6	47.4	47.4

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp ° C.	Wet-bulb depression, degrees Celsius																			
	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9
26	26.2	26.2																		
27	27.3	27.3	27.2	27.2	27.2	27.2	27.2													
28	28.4	28.4	28.4	28.4	28.4	28.3	28.3	28.3	28.3	28.3	28.2	28.2	28.2							
29	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2			
30	30.6	30.6	30.6	30.6	30.6	30.6	30.5	30.5	30.5	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.3	30.3	30.2
31	31.8	31.8	31.8	31.7	31.7	31.6	31.6	31.6	31.6	31.6	31.6	31.5	31.5	31.5	31.5	31.5	31.4	31.4	31.4	31.4
32	32.9	32.8	32.8	32.8	32.8	32.8	32.8	32.7	32.7	32.7	32.7	32.7	32.6	32.6	32.6	32.6	32.6	32.6	32.5	32.5
33	34.0	34.0	34.0	34.0	34.0	34.0	33.9	33.9	33.9	33.8	33.8	33.8	33.8	33.8	33.7	33.7	33.7	33.7	33.7	33.7
34	35.2	35.2	35.2	35.2	35.1	35.1	35.1	35.0	35.0	35.0	35.0	35.0	34.9	34.9	34.9	34.8	34.8	34.8	34.8	34.8
35	36.4	36.4	36.3	36.3	36.3	36.2	36.2	36.2	36.2	36.2	36.2	36.1	36.1	36.1	36.0	36.0	36.0	36.0	36.0	36.0
36	37.5	37.5	37.5	37.4	37.4	37.4	37.4	37.4	37.4	37.3	37.3	37.3	37.2	37.2	37.2	37.2	37.2	37.2	37.1	37.1
37	38.8	38.7	38.7	38.7	38.6	38.6	38.6	38.5	38.5	38.5	38.4	38.4	38.4	38.4	38.4	38.4	38.3	38.3	38.3	38.2
38	40.0	39.9	39.9	39.9	39.8	39.8	39.8	39.7	39.7	39.7	39.6	39.6	39.6	39.5	39.5	39.5	39.5	39.5	39.5	39.5
39	41.2	41.2	41.1	41.1	41.1	41.0	41.0	41.0	40.9	40.9	40.9	40.8	40.8	40.8	40.7	40.7	40.7	40.6	40.6	40.6
40	42.4	42.4	42.3	42.3	42.3	42.2	42.2	42.2	42.1	42.1	42.1	42.0	42.0	42.0	41.9	41.9	41.9	41.8	41.8	41.8
41	43.6	43.6	43.5	43.5	43.4	43.4	43.4	43.4	43.3	43.3	43.3	43.2	43.2	43.2	43.2	43.1	43.1	43.1	43.0	43.0
42	44.9	44.9	44.8	44.8	44.8	44.7	44.7	44.7	44.6	44.6	44.6	44.5	44.5	44.5	44.5	44.4	44.4	44.4	44.3	44.3
43	46.2	46.0	46.0	46.0	46.0	45.9	45.9	45.9	45.8	45.8	45.8	45.7	45.7	45.7	45.6	45.6	45.6	45.6	45.5	45.5
44	47.4	47.3	47.3	47.3	47.2	47.2	47.2	47.2	47.1	47.1	47.1	47.0	47.0	47.0	46.9	46.9	46.9	46.8	46.8	46.8

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C.	Wet-bulb depression, degrees Celsius																			
	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9
30	30.2	30.2																		
31	31.4	31.4	31.3	31.3	31.3	31.3	31.3													
32	32.5	32.4	32.4	32.4	32.4	32.4	32.4	32.3	32.3	32.3	32.3	32.3	32.3							
33	33.6	33.6	33.6	33.5	33.5	33.5	33.5	33.5	33.4	33.4	33.4	33.4	33.4	33.4	33.3	33.3	33.3			
34	34.8	34.7	34.7	34.7	34.6	34.6	34.6	34.6	34.6	34.6	34.5	34.5	34.5	34.5	34.5	34.5	34.4	34.4	34.4	34.4
35	35.9	35.9	35.9	35.8	35.8	35.8	35.8	35.8	35.8	35.7	35.7	35.7	35.6	35.6	35.6	35.5	35.5	35.5	35.5	35.5
36	37.1	37.0	37.0	37.0	36.9	36.9	36.9	36.9	36.9	36.9	36.8	36.8	36.8	36.7	36.7	36.7	36.7	36.6	36.6	36.6
37	38.2	38.2	38.2	38.2	38.2	38.1	38.1	38.1	38.0	38.0	38.0	37.9	37.9	37.9	37.9	37.8	37.8	37.8	37.8	37.8
38	39.4	39.4	39.4	39.3	39.3	39.3	39.2	39.2	39.2	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.0	39.0	39.0	38.9
39	40.6	40.6	40.6	40.5	40.5	40.5	40.5	40.4	40.4	40.4	40.3	40.3	40.3	40.2	40.2	40.2	40.2	40.1	40.1	40.1
40	41.8	41.7	41.7	41.7	41.6	41.6	41.6	41.6	41.6	41.6	41.5	41.5	41.5	41.5	41.4	41.4	41.4	41.3	41.3	41.3
41	43.0	42.9	42.9	42.9	42.8	42.8	42.8	42.7	42.7	42.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.4	42.4
42	44.3	44.2	44.2	44.2	44.2	44.0	44.0	44.0	44.0	44.0	44.0	44.0	43.8	43.8	43.8	43.7	43.7	43.7	43.7	43.6
43	45.5	45.4	45.4	45.4	45.4	45.3	45.3	45.3	45.2	45.2	45.2	45.2	45.1	45.1	45.1	45.0	45.0	45.0	45.0	44.8
44	46.8	46.6	46.6	46.6	46.5	46.5	46.5	46.5	46.4	46.4	46.4	46.4	46.3	46.3	46.3	46.2	46.2	46.2	46.2	46.1

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C.	Wet-bulb depression, degrees Celsius																		
	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9
34	34.3	34.3	34.3																	
35	35.5	35.4	35.4	35.4	35.4	35.3	35.3	35.3												
36	36.6	36.6	36.6	36.5	36.5	36.5	36.4	36.4	36.4	36.4	36.4	36.4	36.4							
37	37.8	37.7	37.7	37.7	37.7	37.6	37.6	37.6	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.4	37.4	37.4	37.4	
38	38.9	38.9	38.9	38.8	38.8	38.8	38.7	38.7	38.7	38.7	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.5	38.5	38.5
39	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	39.8	39.8	39.8	39.7	39.7	39.7	39.7	39.6	39.6
40	41.3	41.2	41.2	41.2	41.1	41.1	41.1	41.1	41.0	41.0	41.0	41.0	40.9	40.9	40.9	40.9	40.8	40.8	40.8	40.7
41	42.4	42.4	42.4	42.4	42.4	42.3	42.3	42.3	42.3	42.2	42.2	42.2	42.2	42.1	42.1	42.1	42.0	42.0	42.0	42.0
42	43.6	43.6	43.5	43.5	43.5	43.5	43.4	43.4	43.4	43.4	43.3	43.3	43.3	43.3	43.2	43.2	43.2	43.1	43.1	43.1
43	44.8	44.8	44.7	44.7	44.7	44.7	44.6	44.6	44.6	44.6	44.5	44.5	44.5	44.5	44.4	44.4	44.4	44.4	44.3	44.3
44	46.1	46.1	46.1	46.0	46.0	46.0	46.0	45.8	45.8	45.8	45.8	45.7	45.7	45.7	45.7	45.6	45.6	45.6	45.5	45.5

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-2. *Virtual Temperature (Degrees Celsius)—Continued*

Air temp °C	Wet-bulb depression, degrees Celsius																			
	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9
38	38.4	38.4	38.4	38.4																
39	39.6	39.6	39.5	39.5	39.5	39.5	39.4	39.4	39.4											
40	40.7	40.7	40.7	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.5	40.5	40.5	40.5					
41	41.9	41.9	41.9	41.9	41.8	41.8	41.8	41.8	41.7	41.7	41.7	41.7	41.6	41.6	41.6	41.6	41.5	41.5	41.5	41.5
42	43.1	43.0	43.0	43.0	43.0	42.9	42.9	42.9	42.9	42.8	42.8	42.8	42.8	42.7	42.7	42.7	42.7	42.6	42.6	42.6
43	44.3	44.2	44.2	44.2	44.2	44.2	44.1	44.1	44.1	44.1	44.0	44.0	44.0	44.0	43.9	43.9	43.9	43.9	43.8	43.8
44	45.5	45.5	45.4	45.4	45.4	45.4	45.3	45.3	45.3	45.3	45.2	45.2	45.2	45.2	45.2	45.0	45.0	45.0	45.0	44.9

Air temp °C	Wet-bulb depression, degrees Celsius																			
	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9
★42	42.6	42.5	42.5	42.5	42.5	42.5														
43	43.8	43.8	43.8	43.6	43.6	43.6	43.6	43.5	43.5	43.5	43.5									
44	44.9	44.9	44.9	44.8	44.8	44.8	44.8	44.8	44.7	44.7	44.7									

Enter table with air temperature to nearest tenth of a degree and wet-bulb depression to nearest tenth of a degree. Interpolate as necessary.

Table 2-3. *Standard Conditions at Ballistic Zone Midpoints*

Zone limits (meters)	Zone no.	Midpoint height (meters)	Density (gms/m³)	Temperature °C	Temperature °K
Surface	00	0	1,225.0	15.0	288.2
0-200	01	100	1,213.3	14.4	287.5
200-500	02	350	1,184.4	12.7	285.9
500-1,000	03	750	1,139.2	10.1	283.3
1,000-1,500	04	1,250	1,084.6	6.9	280.0
1,500-2,000	05	1,750	1,032.0	3.6	276.8
2,000-3,000	06	2,500	956.9	-1.3	271.9
3,000-4,000	07	3,500	863.2	-7.7	265.4
4,000-5,000	08	4,500	776.8	-14.3	258.9
5,000-6,000	09	5,500	697.1	-20.8	252.4
6,000-8,000	10	7,000	589.5	-30.5	242.7
8,000-10,000	11	9,000	466.4	-43.5	229.7
10,000-12,000	12	11,000	363.9	-54.9	218.3
12,000-14,000	13	13,000	265.5	-56.5	216.7
14,000-16,000	14	15,000	193.7	-56.5	216.7
16,000-18,000	15	17,000	141.3	-56.5	216.7

Midpoint values extracted from US Standard Atmosphere, 1976, National Oceanic and Atmospheric Administration.

Table 2-4. *Standard Conditions at Computer Zone Midpoints (first 5 zones are the same as ballistic midpoints)*

Zone limits (meters)	Zone no.	Midpoint height (meters)	Pressure (mb)	Temperature °C	Temperature °K
Surface	00	0	1013	15.0	288.2
0-200	01	100	1001	14.4	287.5
200-500	02	350	0972	12.7	285.9
500-1,000	03	750	0926	10.1	283.3
1,000-1,500	04	1,250	0872	6.9	280.0
1,500-2,000	05	1,750	0820	3.6	276.8
2,000-2,500	06	2,250	0771	0.4	273.5
2,500-3,000	07	2,750	0724	-2.9	270.3
3,000-3,500	08	3,250	0679	-6.1	267.0
3,500-4,000	09	3,750	0637	-9.4	263.8
4,000-4,500	10	4,250	0597	-12.6	260.5
4,500-5,000	11	4,750	0558	-15.9	257.3
5,000-6,000	12	5,500	0505	-20.8	252.4
6,000-7,000	13	6,500	0440	-27.3	245.9
7,000-8,000	14	7,500	0383	-33.8	239.4
8,000-9,000	15	8,500	0331	-40.3	232.9
9,000-10,000	16	9,500	0285	-46.8	226.4
10,000-11,000	17	10,500	0245	-53.3	219.9
11,000-12,000	18	11,500	0209	-56.5	216.7
12,000-13,000	19	12,500	0179	-56.5	216.7
13,000-14,000	20	13,500	0153	-56.5	216.7
14,000-15,000	21	14,500	0130	-56.5	216.7
15,000-16,000	22	15,500	0111	-56.5	216.7
16,000-17,000	23	16,500	0095	-56.5	216.7
17,000-18,000	24	17,500	0081	-56.5	216.7
18,000-19,000	25	18,500	0069	-56.5	216.7
19,000-20,000	26	19,500	0059	-56.5	216.7

Midpoint values are in agreement with STANAG 4061 Edition 3, QSTAG 332, STANAG 4082 Edition 1, and QSTAG 252.

SECTION II
TABLES FOR TYPE 3 BALLISTIC MESSAGES FOR SURFACE-TO-SURFACE TRAJECTORIES

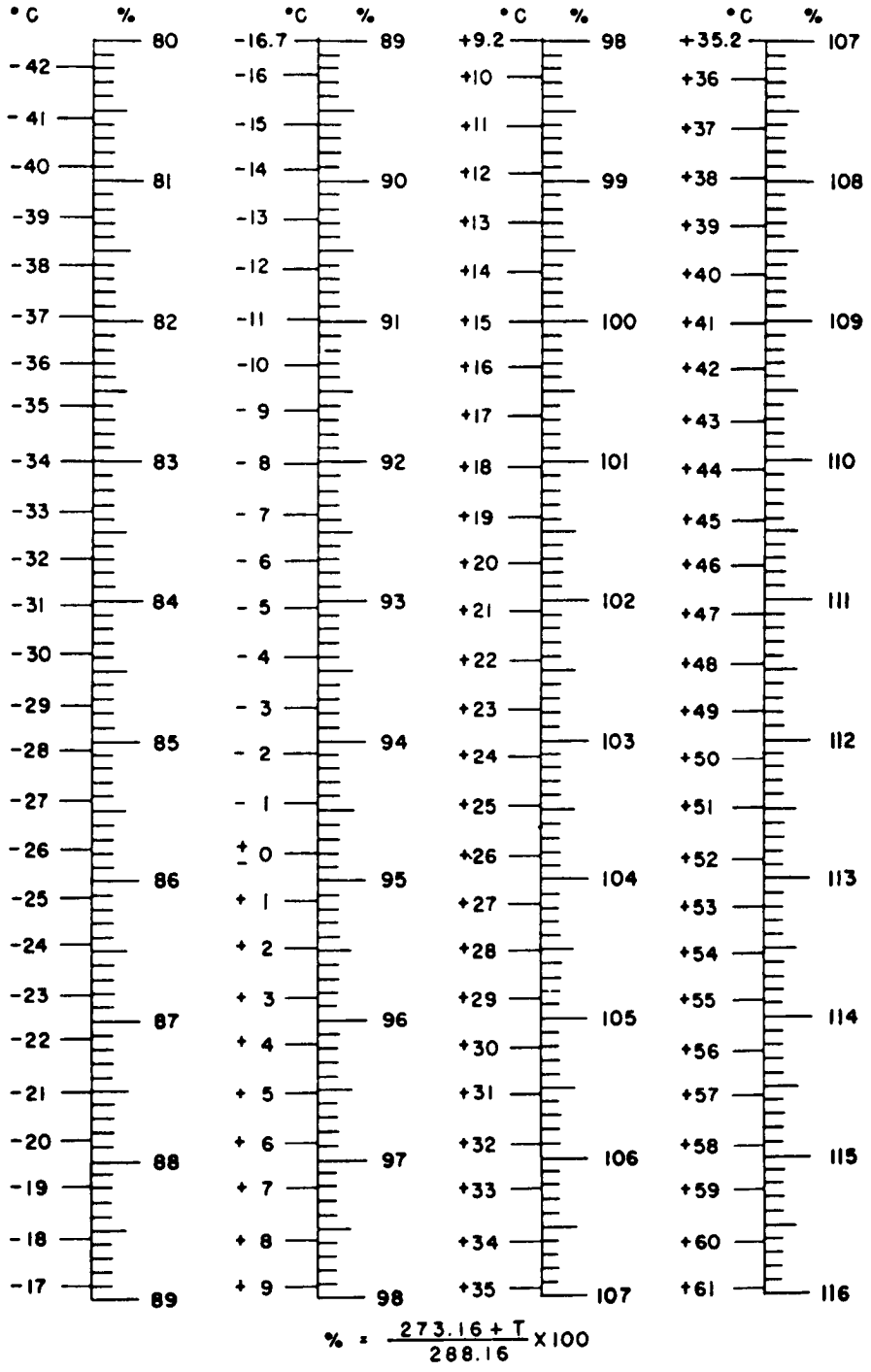
2-7. General

The tables and charts in this section contain the weighting factors and the weighted quantities for density, winds, and temperatures pertaining to all artillery weapons firing surface-to-surface.

2-8. Surface Temperature, Percent of Standard

The conversion of surface temperature to percent of standard surface temperature is accomplished by use of chart 2-3.

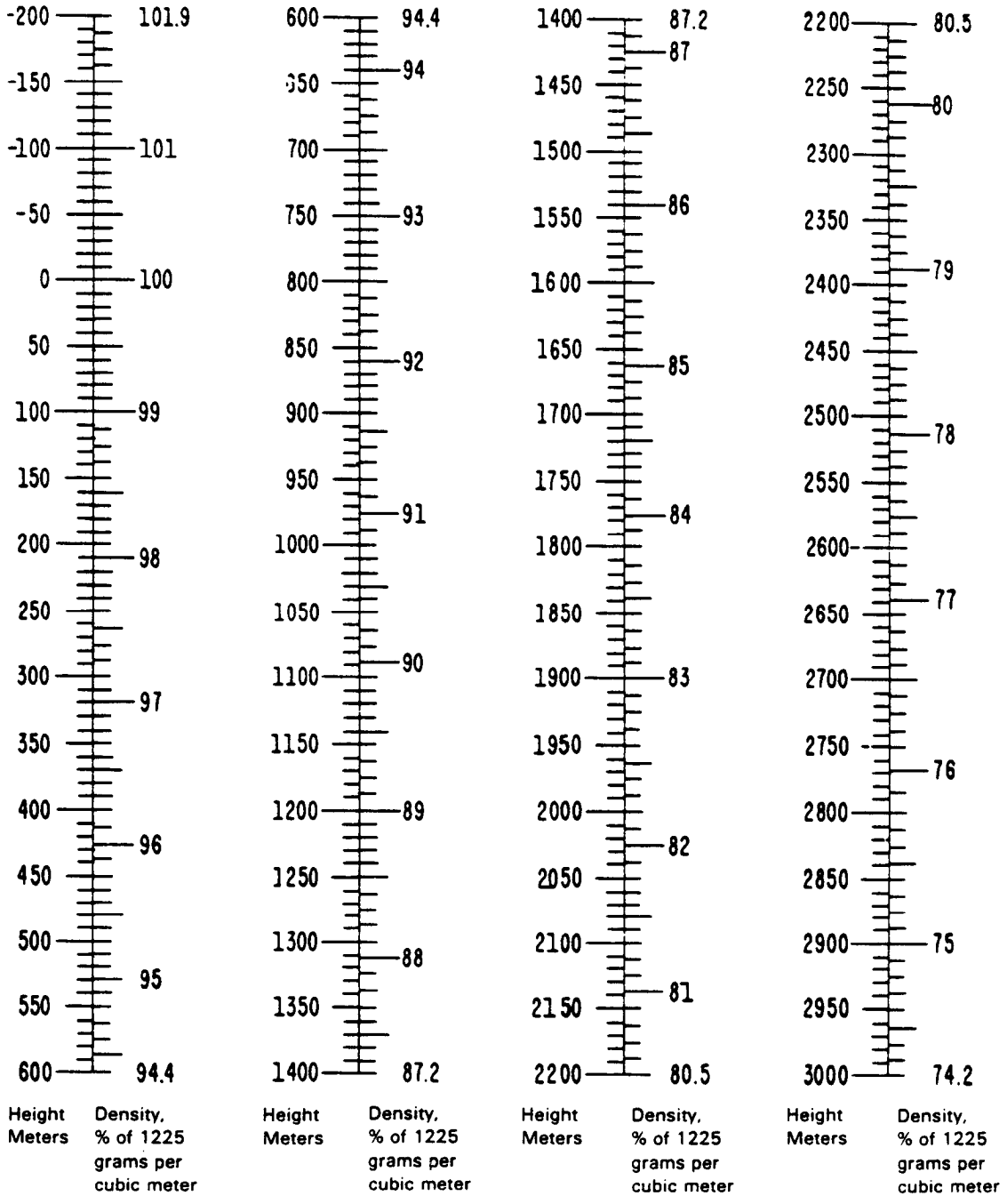
Chart 2-3. *Surface Temperature (Percent of Standards (288.16K.))*



2-9. Mean Surface Density

The percent of standard mean surface density for a particular height in meters may be determined from chart 2-4.

Chart 2-4. *Mean Surface Density (Percent of Standard)*



Enter station height to nearest 10 meters, read surface density to nearest .1 percent. Chart is basd on ICAO atmosphere.

Table 2-5. *True Surface Density (Percent of Standard)*

Pressure, millibars	Virtual temperature, degrees Celsius										
	-50.0	-49.9	-49.8	-49.7	-49.6	-49.5	-49.4	-49.3	-49.2	-49.1	-49.0
700	89. 2	89. 2	89. 1	89. 1	89. 1	89. 0	89. 0	88. 9	88. 9	88. 9	88. 8
710	90. 5	90. 4	90. 4	90. 4	90. 3	90. 3	90. 2	90. 2	90. 2	90. 1	90. 1
720	91. 8	91. 7	91. 7	91. 6	91. 6	91. 6	91. 5	91. 5	91. 4	91. 4	91. 3
730	93. 0	93. 0	92. 9	92. 9	92. 9	92. 8	92. 8	92. 7	92. 7	92. 7	92. 6
740	94. 3	94. 3	94. 2	94. 2	94. 1	94. 1	94. 1	94. 0	94. 0	93. 9	93. 9
750	95. 6	95. 5	95. 5	95. 5	95. 4	95. 4	95. 3	95. 3	95. 2	95. 2	95. 2
760	96. 9	96. 8	96. 8	96. 7	96. 7	96. 6	96. 6	96. 6	96. 5	96. 5	96. 4
770	98. 1	98. 1	98. 0	98. 0	98. 0	97. 9	97. 9	97. 8	97. 8	97. 7	97. 7
780	99. 4	99. 4	99. 3	99. 3	99. 2	99. 2	99. 1	99. 1	99. 0	99. 0	99. 0
790	100. 7	100. 6	100. 6	100. 5	100. 5	100. 5	100. 4	100. 4	100. 3	100. 3	100. 2
800	102. 0	101. 9	101. 9	101. 8	101. 8	101. 7	101. 7	101. 6	101. 6	101. 5	101. 5
810	103. 2	103. 2	103. 1	103. 1	103. 0	103. 0	103. 0	102. 9	102. 9	102. 8	102. 8
820	104. 5	104. 5	104. 4	104. 4	104. 3	104. 3	104. 2	104. 2	104. 1	104. 1	104. 0
830	105. 8	105. 7	105. 7	105. 6	105. 6	105. 5	105. 5	105. 5	105. 4	105. 4	105. 3
840	107. 1	107. 0	107. 0	106. 9	106. 9	106. 8	106. 8	106. 7	106. 7	106. 6	106. 6
850	108. 3	108. 3	108. 2	108. 2	108. 1	108. 1	108. 0	108. 0	107. 9	107. 9	107. 8
860	109. 6	109. 6	109. 5	109. 5	109. 4	109. 4	109. 3	109. 3	109. 2	109. 2	109. 1
870	110. 9	110. 8	110. 8	110. 7	110. 7	110. 6	110. 6	110. 5	110. 5	110. 4	110. 4
880	112. 2	112. 1	112. 1	112. 0	112. 0	111. 9	111. 9	111. 8	111. 8	111. 7	111. 7
890	113. 4	113. 4	113. 3	113. 3	113. 2	113. 2	113. 1	113. 1	113. 0	113. 0	112. 9
900	114. 7	114. 7	114. 6	114. 5	114. 5	114. 4	114. 4	114. 3	114. 3	114. 2	114. 2
910	116. 0	115. 9	115. 9	115. 8	115. 8	115. 7	115. 7	115. 6	115. 6	115. 5	115. 5
920	117. 3	117. 2	117. 1	117. 1	117. 0	117. 0	116. 9	116. 9	116. 8	116. 8	116. 7
930	118. 5	118. 5	118. 4	118. 4	118. 3	118. 3	118. 2	118. 2	118. 1	118. 0	118. 0
940	119. 8	119. 7	119. 7	119. 6	119. 6	119. 5	119. 5	119. 4	119. 4	119. 3	119. 3
950	121. 1	121. 0	121. 0	120. 9	120. 9	120. 8	120. 7	120. 7	120. 6	120. 6	120. 5
960	122. 3	122. 3	122. 2	122. 2	122. 1	122. 1	122. 0	122. 0	121. 9	121. 9	121. 8
970	123. 6	123. 6	123. 5	123. 5	123. 4	123. 3	123. 3	123. 2	123. 2	123. 1	123. 1
980	124. 9	124. 8	124. 8	124. 7	124. 7	124. 6	124. 6	124. 5	124. 5	124. 4	124. 3
990	126. 2	126. 1	126. 1	126. 0	125. 9	125. 9	125. 8	125 8	125. 7	125. 7	125. 6
1, 000	127. 4	127. 4	127. 3	127. 3	127. 2	127. 2	127. 1	127. 0	127. 0	126. 9	126. 9
1, 010	128. 7	128. 7	128. 6	128. 5	128. 5	128. 4	128. 4	128. 3	128. 3	128. 2	128. 1
1, 020	130. 0	129. 9	129. 9	129. 8	129. 8	129. 7	129. 6	129. 6	129. 5	129. 5	129. 4
1, 030	131. 3	131. 2	131. 2	131. 1	131. 0	131. 0	130. 9	130. 9	130. 8	130. 7	130. 7
1, 040	132. 5	132. 5	132. 4	132. 4	132. 3	132. 2	132. 2	132. 1	132. 1	132. 0	132. 0
1, 050	133. 8	133. 8	133. 7	133. 6	133. 6	133. 5	133. 5	133. 4	133. 3	133. 3	133. 2
1, 060	135. 1	135. 0	135. 0	134. 9	134. 9	134. 8	134. 7	134. 7	134. 6	134. 6	134. 5
1, 070	136. 4	136. 3	136. 2	136. 2	136. 1	136. 1	136. 0	135. 9	135. 9	135. 8	135. 8
1, 080	137. 6	137. 6	137. 5	137. 5	137. 4	137. 3	137. 3	137. 2	137. 2	137. 1	137. 0
1, 090	138. 9	138. 9	138. 8	138. 7	138. 7	138. 6	138. 5	138. 5	138. 4	138. 4	138. 3
1, 100	140. 2	140. 1	140. 1	140. 0	139. 9	139. 9	139. 8	139. 8	139. 7	139. 6	139. 6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−49.0	−48.9	−48.8	−48.7	−48.6	−48.5	−48.4	−48.3	−48.2	−48.1	−48.0
700	88.8	88.8	88.7	88.7	88.7	88.6	88.6	88.5	88.5	88.5	88.4
710	90.1	90.0	90.0	90.0	89.9	89.9	89.8	89.8	89.8	89.7	89.7
720	91.3	91.3	91.3	91.2	91.2	91.1	91.1	91.1	91.0	91.0	90.9
730	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.3	92.3	92.2	92.2
740	93.9	93.8	93.8	93.8	93.7	93.7	93.6	93.6	93.6	93.5	93.5
750	95.2	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
760	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.1	96.1	96.0	96.0
770	97.7	97.6	97.6	97.6	97.5	97.5	97.4	97.4	97.3	97.3	97.3
780	99.0	98.9	98.9	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.5
790	100.2	100.2	100.1	100.1	100.1	100.0	100.0	99.9	99.9	99.8	99.8
800	101.5	101.5	101.4	101.4	101.3	101.3	101.2	101.2	101.1	101.1	101.1
810	102.8	102.7	102.7	102.6	102.6	102.5	102.5	102.5	102.4	102.4	102.3
820	104.0	104.0	103.9	103.9	103.9	103.8	103.8	103.7	103.7	103.6	103.6
830	105.3	105.3	105.2	105.2	105.1	105.1	105.0	105.0	104.9	104.9	104.8
840	106.6	106.5	106.5	106.4	106.4	106.3	106.3	106.2	106.2	106.2	106.1
850	107.8	107.8	107.8	107.7	107.7	107.6	107.6	107.5	107.5	107.4	107.4
860	109.1	109.1	109.0	109.0	108.9	108.9	108.8	108.8	108.7	108.7	108.6
870	110.4	110.3	110.3	110.2	110.2	110.1	110.1	110.0	110.0	109.9	109.9
880	111.7	111.6	111.6	111.5	111.5	111.4	111.4	111.3	111.3	111.2	111.2
890	112.9	112.9	112.8	112.8	112.7	112.7	112.6	112.6	112.5	112.5	112.4
900	114.2	114.1	114.1	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
910	115.5	115.4	115.4	115.3	115.3	115.2	115.2	115.1	115.0	115.0	114.9
920	116.7	116.7	116.6	116.6	116.5	116.5	116.4	116.4	116.3	116.3	116.2
930	118.0	117.9	117.9	117.8	117.8	117.7	117.7	117.6	117.6	117.5	117.5
940	119.3	119.2	119.2	119.1	119.1	119.0	118.9	118.9	118.8	118.8	118.7
950	120.5	120.5	120.4	120–4	120.3	120.3	120.2	120.2	120.1	120.1	120.0
960	121.8	121.7	121.7	121.6	121.6	121.5	121.5	121.4	121.4	121.3	121.3
970	123.1	123.0	123.0	122.9	122.9	122.8	122.7	122.7	122.6	122.6	122.5
980	124.3	124.3	124.2	124.2	124.1	124.1	124.0	124.0	123.9	123.8	123.8
990	125.6	125.6	125.5	125.4	125.4	125.3	125.3	125.2	125.2	125.1	125.1
1,000	126.9	126.8	126.8	126.7	126.7	126.6	126.5	126.5	126.4	126.4	126.3
1,010	128.1	128.1	128.0	128.0	127.9	127.9	127.8	127.7	127.7	127.6	127.6
1,020	129.4	129.4	129.3	129.2	129.2	129.1	129.1	129.0	129.0	128.9	128.8
1,030	130.7	130.6	130.6	130.5	130.5	130.4	130.3	130.3	130.2	130.2	130.1
1,040	132.0	131.9	131.8	131.8	131.7	131.7	131.6	131.5	131.5	131.4	131.4
1,050	133.2	133.2	133.1	133.0	133.0	132.9	132.9	132.8	132.7	132.7	132.6
1,060	134.5	134.4	134.4	134.3	134.3	134.2	134.1	134.1	134.0	134.0	133.9
1,070	135.8	135.7	135.6	135.6	135.5	135.5	135.4	135.3	135.3	135.2	135.2
1,080	137.0	137.0	136.9	136.8	136.8	136.7	136.7	136.6	136.5	136.5	136.4
1,090	138.3	138.2	138.2	138.1	138.1	138.0	137.9	137.9	137.8	137.7	137.7
1,100	139.6	139.5	139.4	139.4	139.3	139.3	139.2	139.1	139.1	139.0	138.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−48.0	−47.9	−47.8	−47.7	−47.6	−47.5	−47.4	−47.3	−47.2	−47.1	−47.0
700	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.1	88.1	88.1	88.0
710	89.7	89.6	89.6	89.6	89.5	89.5	89.4	89.4	89.4	89.3	89.3
720	90.9	90.9	90.9	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.5
730	92.2	92.2	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.8	91.8
740	93.5	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.1	93.1	93.1
750	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.4	94.4	94.4	94.3
760	96.0	96.0	95.9	95.9	95.8	95.8	95.7	95.7	95.7	95.6	95.6
770	97.3	97.2	97.2	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.8
780	98.5	98.5	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.1	98.1
790	99.8	99.7	99.7	99.7	99.6	99.6	99.5	99.5	99.4	99.4	99.3
800	101.1	101.0	101.0	100.9	100.9	100.8	100.8	100.7	100.7	100.7	100.6
810	102.3	102.3	102.2	102.2	102.1	102.1	102.0	102.0	102.0	101.9	101.9
820	103.6	103.5	103.5	103.4	103.4	103.3	103.3	103.3	103.2	103.2	103.1
830	104.8	104.8	104.7	104.7	104.7	104.6	104.6	104.5	104.5	104.4	104.4
840	106.1	106.1	106.0	106.0	105.9	105.9	105.8	105.8	105.7	105.7	105.6
850	107.4	107.3	107.3	107.2	107.2	107.1	107.1	107.0	107.0	106.9	106.9
860	108.6	108.6	108.5	108.5	108.4	108.4	108.3	108.3	108.2	108.2	108.2
870	109.9	109.8	109.8	109.7	109.7	109.7	109.6	109.6	109.5	109.5	109.4
880	111.2	111.1	111.1	111.0	111.0	110.9	110.9	110.8	110.8	110.7	110.7
890	112.4	112.4	112.3	112.3	112.2	112.2	112.1	112.1	112.0	112.0	111.9
900	113.7	113.6	113.6	113.5	113.5	113.4	113.4	113.3	113.3	113.2	113.2
910	114.9	114.9	114.8	114.8	114.7	114.7	114.6	114.6	114.5	114.5	114.4
920	116.2	116.2	116.1	116.1	116.0	116.0	115.9	115.8	115.8	115.7	115.7
930	117.5	117.4	117.4	117.3	117.3	117.2	117.2	117.1	117.1	117.0	117.0
940	118.7	118.7	118.6	118.6	118.5	118.5	118.4	118.4	118.3	118.3	118.2
950	120.0	119.9	119.9	119.8	119.8	119.7	119.7	119.6	119.6	119.5	119.5
960	121.3	121.2	121.2	121.1	121.0	121.0	120.9	120.9	120.8	120.8	120.7
970	122.5	122.5	122.4	122.4	122.3	122.3	122.2	122.1	122.1	122.0	122.0
980	123.8	123.7	123.7	123.6	123.6	123.5	123.5	123.4	123.3	123.3	123.2
990	125.1	125.0	124.9	124.9	124.8	124.8	124.7	124.7	124.6	124.6	124.5
1,000	126.3	126.3	126.2	126.1	126.1	126.0	126.0	125.9	125.9	125.8	125.8
1,010	127.6	127.5	127.5	127.4	127.4	127.3	127.2	127.2	127.1	127.1	127.0
1,020	128.8	128.8	128.7	128.7	128.6	128.6	128.5	128.4	128.4	128.3	128.3
1,030	130.1	130.0	130.0	129.9	129.9	129.8	129.8	129.7	129.6	129.6	129.5
1,040	131.4	131.3	131.3	131.2	131.1	131.1	131.0	131.0	130.9	130.8	130.8
1,050	132.6	132.6	132.5	132.5	132.4	132.3	132.3	132.2	132.2	132.1	132.0
1,060	133.9	133.8	133.8	133.7	133.7	133.6	133.5	133.5	133.4	133.4	133.3
1,070	135.2	135.1	135.0	135.0	134.9	134.9	134.8	134.7	134.7	134.6	134.6
1,080	136.4	136.4	136.3	136.2	136.2	136.1	136.1	136.0	135.9	135.9	135.8
1,090	137.7	137.6	137.6	137.5	137.4	137.4	137.3	137.3	137.2	137.1	137.1
1,100	138.9	138.9	138.8	138.8	138.7	138.6	138.6	138.5	138.5	138.4	138.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−47.0	−46.9	−46.8	−46.7	−46.6	−46.5	−46.4	−46.3	−46.2	−46.1	−46.0
700	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.7	87.7	87.6
710	89.3	89.2	89.2	89.2	89.1	89.1	89.0	89.0	89.0	88.9	88.9
720	90.5	90.5	90.5	90.4	90.4	90.3	90.3	90.3	90.2	90.2	90.1
730	91.8	91.8	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.4	91.4
740	93.1	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.7	92.7	92.6
750	94.3	94.3	94.2	94.2	94.1	94.1	94.1	94.0	94.0	93.9	93.9
760	95.6	95.5	95.5	95.4	95.4	95.4	95.3	95.3	95.2	95.2	95.2
770	96.8	96.8	96.7	96.7	96.7	96.6	96.6	96.5	96.5	96.4	96.4
780	98.1	98.0	98.0	98.0	97.9	97.9	97.8	97.8	97.7	97.7	97.7
790	99.3	99.3	99.3	99.2	99.2	99.1	99.1	99.0	99.0	99.0	98.9
800	100.6	100.6	100.5	100.5	100.4	100.4	100.3	100.3	100.3	100.2	100.2
810	101.9	101.8	101.8	101.7	101.7	101.6	101.6	101.5	101.5	101.5	101.4
820	103.1	103.1	103.0	103.0	102.9	102.9	102.8	102.8	102.8	102.7	102.7
830	104.4	104.3	104.3	104.2	104.2	104.1	104.1	104.1	104.0	104.0	103.9
840	105.6	105.6	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2
850	106.9	106.8	106.8	106.8	106.7	106.7	106.6	106.6	106.5	106.5	106.4
860	108.2	108.1	108.1	108.0	108.0	107.9	107.9	107.8	107.8	107.7	107.7
870	109.4	109.4	109.3	109.3	109.2	109.2	109.1	109.1	109.0	109.0	108.9
880	110.7	110.6	110.6	110.5	110.5	110.4	110.4	110.3	110.3	110.2	110.2
890	111.9	111.9	111.8	111.8	111.7	111.7	111.6	111.6	111.5	111.5	111.4
900	113.2	113.1	113.1	113.0	113.0	112.9	112.9	112.8	112.8	112.7	112.7
910	114.4	114.4	114.3	114.3	114.2	114.2	114.1	114.1	114.0	114.0	113.9
920	115.7	115.6	115.6	115.5	115.5	115.4	115.4	115.3	115.3	115.2	115.2
930	117.0	116.9	116.9	116.8	116.7	116.7	116.6	116.6	116.5	116.5	116.4
940	118.2	118.2	118.1	118.1	118.0	118.0	117.9	117.8	117.8	117.7	117.7
950	119.5	119.4	119.4	119.3	119.3	119.2	119.2	119.1	119.0	119.0	118.9
960	120.7	120.7	120.6	120.6	120.5	120.5	120.4	120.4	120.3	120.2	120.2
970	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.4
980	123.2	123.2	123.1	123.1	123.0	123.0	122.9	122.9	122.8	122.8	122.7
990	124.5	124.4	124.4	124.3	124.3	124.2	124.2	124.1	124.1	124.0	124.0
1,000	125.8	125.7	125.6	125.6	125.5	125.5	125.4	125.4	125.3	125.3	125.2
1,010	127.0	127.0	126.9	126.8	126.8	126.7	126.7	126.6	126.6	126.5	126.5
1,020	128.3	128.2	128.2	128.1	128.0	128.0	127.9	127.9	127.8	127.8	127.7
1,030	129.5	129.5	129.4	129.4	129.3	129.2	129.2	129.1	129.1	129.0	129.0
1,040	130.8	130.7	130.7	130.6	130.6	130.5	130.4	130.4	130.3	130.3	130.2
1,050	132.0	132.0	131.9	131.9	131.8	131.8	131.7	131.6	131.6	131.5	131.5
1,060	133.3	133.2	133.2	133.1	133.1	133.0	132.9	132.9	132.8	132.8	132.7
1,070	134.6	134.5	134.4	134.4	134.3	134.3	134.2	134.1	134.1	134.0	134.0
1,080	135.8	135.8	135.7	135.6	135.6	135.5	135.5	135.4	135.3	135.3	135.2
1,090	137.1	137.0	137.0	136.9	136.8	136.8	136.7	136.7	136.6	136.5	136.5
1,100	138.3	138.3	138.2	138.1	138.1	138.0	138.0	137.9	137.8	137.8	137.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−46.0	−45.9	−45.8	−45.7	−45.6	−45.5	−45.4	−45.3	−45.2	−45.1	−45.0
700	87.6	87.6	87.6	87.5	87.5	87.4	87.4	87.4	87.3	87.3	87.3
710	88.9	88.9	88.8	88.8	88.7	88.7	88.7	88.6	88.6	88.5	88.5
720	90.1	90.1	90.1	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.7
730	91.4	91.4	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.0	91.0
740	92.6	92.6	92.6	92.5	92.5	92.4	92.4	92.4	92.3	92.3	92.2
750	93.9	93.9	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.5	93.5
760	95.2	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
770	96.4	96.4	96.3	96.3	96.2	96.2	96.1	96.1	96.1	96.0	96.0
780	97.7	97.6	97.6	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.2
790	98.9	98.9	98.8	98.8	98.7	98.7	98.6	98.6	98.6	98.5	98.5
800	100.2	100.1	100.1	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.7
810	101.4	101.4	101.3	101.3	101.2	101.2	101.1	101.1	101.1	101.0	101.0
820	102.7	102.6	102.6	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.2
830	103.9	103.9	103.8	103.8	103.7	103.7	103.6	103.6	103.6	103.5	103.5
840	105.2	105.1	105.1	105.0	105.0	104.9	104.9	104.8	104.8	104.8	104.7
850	106.4	106.4	106.3	106.3	106.2	106.2	106.1	106.1	106.0	106.0	106.0
860	107.7	107.6	107.6	107.5	107.5	107.4	107.4	107.3	107.3	107.2	107.2
870	108.9	108.9	108.8	108.8	108.7	108.7	108.6	108.6	108.5	108.5	108.4
880	110.2	110.1	110.1	110.0	110.0	109.9	109.9	109.8	109.8	109.7	109.7
890	111.4	111.4	111.3	111.3	111.2	111.2	111.1	111.1	111.0	111.0	110.9
900	112.7	112.6	112.6	112.5	112.5	112.4	112.4	112.3	112.3	112.2	112.2
910	113.9	113.9	113.8	113.8	113.7	113.7	113.6	113.6	113.5	113.5	113.4
920	115.2	115.1	115.1	115.0	115.0	114.9	114.9	114.8	114.8	114.7	114.7
930	116.4	116.4	116.3	116.3	116.2	116.2	116.1	116.1	116.0	116.0	115.9
940	117.7	117.6	117.6	117.5	117.5	117.4	117.4	117.3	117.3	117.2	117.2
950	118.9	118.9	118.8	118.8	118.7	118.7	118.6	118.6	118.5	118.5	118.4
960	120.2	120.1	120.1	120.0	120.0	119.9	119.9	119.8	119.8	119.7	119.7
970	121.4	121.4	121.3	121.3	121.2	121.2	121.1	121.1	121.0	121.0	120.9
980	122.7	122.6	122.6	122.5	122.5	122.4	122.4	122.3	122.3	122.2	122.2
990	124.0	123.9	123.8	123.8	123.7	123.7	123.6	123.6	123.5	123.5	123.4
1,000	125.2	125.1	125.1	125.0	125.0	124.9	124.9	124.8	124.8	124.7	124.7
1,010	126.5	126.4	126.3	126.3	126.2	126.2	126.1	126.1	126.0	126.0	125.9
1,020	127.7	127.6	127.6	127.5	127.5	127.4	127.4	127.3	127.3	127.2	127.1
1,030	129.0	128.9	128.8	128.8	128.7	128.7	128.6	128.6	128.5	128.4	128.4
1,040	130.2	130.2	130.1	130.0	130.0	129.9	129.9	129.8	129.8	129.7	129.6
1,050	131.5	131.4	131.3	131.3	131.2	131.2	131.1	131.1	131.0	130.9	130.9
1,060	132.7	132.7	132.6	132.5	132.5	132.4	132.4	132.3	132.2	132.2	132.1
1,070	134.0	133.9	133.8	133.8	133.7	133.7	133.6	133.6	133.5	133.4	133.4
1,080	135.2	135.2	135.1	135.0	135.0	134.9	134.9	134.8	134.7	134.7	134.6
1,090	136.5	136.4	136.4	136.3	136.2	136.2	136.1	136.1	136.0	135.9	135.9
1,100	137.7	137.7	137.6	137.5	137.5	137.4	137.4	137.3	137.2	137.2	137.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−45.0	−44.9	−44.8	−44.7	−44.6	−44.5	−44.4	−44.3	−44.2	−44.1	−44.0
700	87.3	87.2	87.2	87.1	87.1	87.1	87.0	87.0	86.9	86.9	86.9
710	88.5	88.5	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1
720	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.4	89.4	89.4
730	91.0	91.0	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.6	90.6
740	92.2	92.2	92.2	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.8
750	93.5	93.4	93.4	93.4	93.3	93.3	93.2	93.2	93.2	93.1	93.1
760	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.4	94.4	94.4	94.3
770	96.0	95.9	95.9	95.9	95.8	95.8	95.7	95.7	95.6	95.6	95.6
780	97.2	97.2	97.1	97.1	97.1	97.0	97.0	96.9	96.9	96.8	96.8
790	98.5	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.1	98.1	98.0
800	99.7	99.7	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.3	99.3
810	101.0	100.9	100.9	100.8	100.8	100.7	100.7	100.7	100.6	100.6	100.5
820	102.2	102.2	102.1	102.1	102.0	102.0	101.9	101.9	101.9	101.8	101.8
830	103.5	103.4	103.4	103.3	103.3	103.2	103.2	103.1	103.1	103.1	103.0
840	104.7	104.7	104.6	104.6	104.5	104.5	104.4	104.4	104.3	104.3	104.3
850	106.0	105.9	105.9	105.8	105.8	105.7	105.7	105.6	105.6	105.5	105.5
860	107.2	107.2	107.1	107.1	107.0	107.0	106.9	106.9	106.8	106.8	106.7
870	108.4	108.4	108.4	108.3	108.3	108.2	108.2	108.1	108.1	108.0	108.0
880	109.7	109.6	109.6	109.6	109.5	109.5	109.4	109.4	109.3	109.3	109.2
890	110.9	110.9	110.8	110.8	110.7	110.7	110.7	110.6	110.6	110.5	110.5
900	112.2	112.1	112.1	112.0	112.0	111.9	111.9	111.8	111.8	111.7	111.7
910	113.4	113.4	113.3	113.3	113.2	113.2	113.1	113.1	113.0	113.0	112.9
920	114.7	114.6	114.6	114.5	114.5	114.4	114.4	114.3	114.3	114.2	114.2
930	115.9	115.9	115.8	115.8	115.7	115.7	115.6	115.6	115.5	115.5	115.4
940	117.2	117.1	117.1	117.0	117.0	116.9	116.9	116.8	116.8	116.7	116.7
950	118.4	118.4	118.3	118.3	118.2	118.2	118.1	118.1	118.0	118.0	117.9
960	119.7	119.6	119.6	119.5	119.5	119.4	119.4	119.3	119.2	119.2	119.1
970	120.9	120.9	120.8	120.8	120.7	120.6	120.6	120.5	120.5	120.4	120.4
980	122.2	122.1	122.1	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6
990	123.4	123.4	123.3	123.2	123.2	123.1	123.1	123.0	123.0	122.9	122.9
1,000	124.7	124.6	124.5	124.5	124.4	124.4	124.3	124.3	124.2	124.2	124.1
1,010	125.9	125.8	125.8	125.7	125.7	125.6	125.6	125.5	125.5	125.4	125.4
1,020	127.1	127.1	127.0	127.0	126.9	126.9	126.8	126.8	126.7	126.6	126.6
1,030	128.4	128.3	128.3	128.2	128.2	128.1	128.1	128.0	127.9	127.9	127.8
1,040	129.6	129.6	129.5	129.5	129.4	129.4	129.3	129.2	129.2	129.1	129.1
1,050	130.9	130.8	130.8	130.7	130.7	130.6	130.5	130.5	130.4	130.4	130.3
1,060	132.1	132.1	132.0	132.0	131.9	131.8	131.8	131.7	131.7	131.6	131.6
1,070	133.4	133.3	133.3	133.2	133.1	133.1	133.0	133.0	132.9	132.9	132.8
1,080	134.6	134.6	134.5	134.4	134.4	134.3	134.3	134.2	134.2	134.1	134.0
1,090	135.9	135.8	135.8	135.7	135.6	135.6	135.5	135.5	135.4	135.3	135.3
1,100	137.1	137.1	137.0	136.9	136.9	136.8	136.8	136.7	136.6	136.6	136.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−44.0	−43.9	−43.8	−43.7	−43.6	−43.5	−43.4	−43.3	−43.2	−43.1	−43.0
700	86.9	86.8	86.8	86.8	86.7	86.7	86.6	86.6	86.6	86.5	86.5
710	88.1	88.1	88.0	88.0	88.0	87.9	87.9	87.8	87.8	87.8	87.7
720	89.4	89.3	89.3	89.2	89.2	89.2	89.1	89.1	89.0	89.0	89.0
730	90.6	90.6	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.2	90.2
740	91.8	91.8	91.8	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.4
750	93.1	93.0	93.0	93.0	92.9	92.9	92.8	92.8	92.8	92.7	92.7
760	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.0	94.0	94.0	93.9
770	95.6	95.5	95.5	95.4	95.4	95.4	95.3	95.3	95.2	95.2	95.1
780	96.8	96.8	96.7	96.7	96.6	96.6	96.5	96.5	96.5	96.4	96.4
790	98.0	98.0	98.0	97.9	97.9	97.8	97.8	97.7	97.7	97.7	97.6
800	99.3	99.2	99.2	99.2	99.1	99.1	99.0	99.0	98.9	98.9	98.9
810	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.2	100.2	100.1	100.1
820	101.8	101.7	101.7	101 6	101.6	101.5	101.5	101.5	101.4	101.4	101.3
830	103.0	103.0	102.9	102.9	102.8	102.8	102.7	102.7	102.7	102.6	102.6
840	104.3	104.2	104.2	104.1	104.1	104.0	104.0	103.9	103.9	103.8	103.8
850	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.1	105.1	105.0
860	106.7	106.7	106.6	106.6	106.5	106.5	106.5	106.4	106.4	106.3	106.3
870	108.0	107.9	107.9	107.8	107.8	107.7	107.7	107.6	107.6	107.6	107.5
880	109.2	109.2	109.1	109.1	109.0	109.0	108.9	108.9	108.8	108.8	108.7
890	110.5	110.4	11.04	110.3	110.3	110.2	110.2	110.1	110.1	110.0	110.0
900	111.7	111.7	111.6	111.6	111.5	111.5	111.4	111.4	111.3	111.3	111.2
910	112.9	112.9	112.8	112.8	112.7	112.7	112.6	112.6	112.5	112.5	112.4
920	114.2	114.1	114.1	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
930	115.4	115.4	115.3	115.3	115.2	115.2	115.1	115.1	115.0	115.0	114.9
940	116.7	116.6	116.6	116.5	116.5	116.4	116.4	116.3	116.3	116.2	116.2
950	117.9	117.9	117.8	117.8	117.7	117.6	117.6	117.5	117.5	117.4	117.4
960	119.1	119.1	119.0	119.0	118.9	118.9	118.8	118.8	118.7	118.7	118.6
970	120.4	120.3	120.3	120.2	120.2	120.1	120.1	120.0	120.0	119.9	119.9
980	121.6	121.6	121.5	121.5	121.4	121.4	121.3	121.3	121.2	121.2	121.1
990	122.9	122.8	122.8	122.7	122.7	122.6	122.5	122.5	122.4	122.4	122.3
1,000	124.1	124.1	124.0	123.9	123.9	123.8	123.8	123.7	123.7	123.6	123.6
1,010	125.4	125.3	125.2	125.2	125.1	125.1	125.0	125.0	124.9	124.9	124.8
1,020	126.6	126.5	126.5	126.4	126.4	126.3	126.3	126.2	126.2	126.1	126.0
1,030	127.8	127.8	127.7	127.7	127.6	127.6	127.5	127.4	127.4	127.3	127.3
1,040	129.1	129.0	129.0	128.9	128.8	128.8	128.7	128.7	128.6	128.6	128.5
1,050	130.3	130.3	130.2	130.1	130.1	130.0	130.0	129.9	129.9	129.8	129.7
1,060	131.6	131.5	131.4	131.4	131.3	131.3	131.2	131.2	131.1	131.0	131.0
1,070	132.8	132.7	132.7	132.6	132.6	132.5	132.5	132.4	132.3	132.3	132.2
1,080	134.0	134.0	133.9	133.9	133.8	133.7	133.7	133.6	133.6	133.5	133.5
1,090	135.3	135.2	135.2	135.1	135.0	135.0	134.9	134.9	134.8	134.7	134.7
1,100	136.5	136.5	136.4	136.3	136.3	136.2	136.2	136.1	136.0	136.0	135.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−43.0	−42.9	−42.8	−42.7	−42.6	−42.5	−42.4	−42.3	−42.2	−42.1	−42.0
700	86.5	86.5	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.1
710	87.7	87.7	87.7	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4
720	89.0	88.9	88.9	88.9	88.8	88.8	88.7	88.7	88.7	88.6	88.6
730	90.2	90.2	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9	89.8
740	91.4	91.4	91.4	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.0
750	92.7	92.6	92.6	92.6	92.5	92.5	92.4	92.4	92.4	92.3	92.3
760	93.9	93.9	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.5	93.5
770	95.1	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
780	96.4	96.3	96.3	96.3	96.2	96.2	96.1	96.1	96.0	96.0	96.0
790	97.6	97.6	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.2	97.2
800	98.9	98.8	98.8	98.7	98.7	98.6	98.6	98.6	98.5	98.5	98.4
810	100.1	100.0	100.0	100.0	99.9	99.9	99.8	99.8	99.7	99.7	99.7
820	101.3	101.3	101.2	101.2	101.2	101.1	101.1	101.0	101.0	100.9	100.9
830	102.6	102.5	102.5	102.4	102.4	102.3	102.3	102.3	102.2	102.2	102.1
840	103.8	103.8	103.7	103.7	103.6	103.6	103.5	103.5	103.4	103.4	103.4
850	105.0	105.0	104.9	104.9	104.9	104.8	104.8	104.7	104.7	104.6	104.6
860	106.3	106.2	106.2	106.1	106.1	106.0	106.0	105.9	105.9	105.9	105.8
870	107.5	107.5	107.4	107.4	107.3	107.3	107.2	107.2	107.1	107.1	107.0
880	108.7	108.7	108.6	108.6	108.6	108.5	108.5	108.4	108.4	108.3	108.3
890	110.0	109.9	109.9	109.8	109.8	109.7	109.7	109.6	109.6	109.5	109.5
900	111.2	111.2	111.1	111.1	111.0	111.0	110.9	110.9	110.8	110.8	110.7
910	112.4	112.4	112.4	112.3	112.3	112.2	112.2	112.1	112.1	112.0	112.0
920	113.7	113.6	113.6	113.5	113.5	113.4	113.4	113.3	113.3	113.2	113.2
930	114.9	114.9	114.8	114.8	114.7	114.7	114.6	114.6	114.5	114.5	114.4
940	116.2	116.1	116.1	116.0	116.0	115.9	115.9	115.8	115.8	115.7	115.7
950	117.4	117.3	117.3	117.2	117.2	117.1	117.1	117.0	117.0	116.9	116.9
960	118.6	118.6	118.5	118.5	118.4	118.4	118.3	118.3	118.2	118.2	118.1
870	119.9	119.8	119.8	119.7	119.7	119.6	119.6	119.5	119.4	119.4	119.3
980	121.1	121.0	121.0	120.9	120.9	120.8	120.8	120.7	120.7	120.6	120.6
990	122.3	122.3	122.2	122.2	122.1	122.1	122.0	122.0	121.9	121.9	121.8
1,000	123.6	123.5	123.5	123.4	123.4	123.3	123.2	123.2	123.1	123.1	123.0
1,010	124.8	124.8	124.7	124.6	124.6	124.5	124.5	124.4	124.4	124.3	124.3
1,020	126.0	126.0	125.9	125.9	125.8	125.8	125.7	125.7	125.6	125.6	125.5
1,030	127.3	127.2	127.2	127.1	127.1	127.0	126.9	126.9	126.8	126.8	126.7
1,040	128.5	128.5	128.4	128.3	128.3	128.2	128.2	128.1	128.1	128.0	128.0
1,050	129.7	129.7	129.6	129.6	129.5	129.5	129.4	129.4	129.3	129.2	129.2
1,060	131.0	130.9	130.9	130.8	130.8	130.7	130.6	130.6	130.5	130.5	130.4
1,070	132.2	132.2	132.1	132.0	132.0	131.9	131.9	131.8	131.8	131.7	131.6
1,080	133.5	133.4	133.3	133.3	133.2	133.2	133.1	133.1	133.0	132.9	132.9
1,090	134.7	134.6	134.6	134.5	134.5	134.4	134.3	134.3	134.2	134.2	134.1
1,100	135.9	135.9	135.8	135.7	135.7	135.6	135.6	135.5	135.5	135.4	135.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−42.0	−41.9	−41.8	−41.7	−41.6	−41.5	−41.4	−41.3	−41.2	−41.1	−41.0
700	86.1	86.1	86.0	86.0	86.0	85.9	85.9	85.9	85.8	85.8	85.8
710	87.4	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.0	87.0
720	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3	88.2	88.2
730	89.8	89.8	89.7	89.7	89.7	89.6	89.6	89.5	89.5	89.5	89.4
740	91.0	91.0	91.0	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7
750	92.3	92.2	92.2	92.2	92.1	92.1	92.0	92.0	92.0	91.9	91.9
760	93.5	93.5	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.1	93.1
770	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.4	94.4	94.4	94.3
780	96.0	95.9	95.9	95.8	95.8	95.8	95.7	95.7	95.6	95.6	95.6
790	97.2	97.2	97.1	97.1	97.0	97.0	96.9	96.9	96.9	96.8	96.8
800	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.1	98.1	98.0	98.0
810	99.7	99.6	99.6	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.2
820	100.9	100.8	100.8	100.8	100.7	100.7	100.6	100.6	100.5	100.5	100.5
830	102.1	102.1	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.7	101.7
840	103.4	103.3	103.3	103.2	103.2	103.1	103.1	103.0	103.0	103.0	102.9
850	104.6	104.5	104.5	104.4	104.4	104.4	104.3	104.3	104.2	104.2	104.1
860	105.8	105.8	105.7	105.7	105.6	105.6	105.5	105.5	105.4	105.4	105.4
870	107.0	107.0	106.9	106.9	106.9	106.8	106.8	106.7	106.7	106.6	106.6
880	108.3	108.2	108.2	108.1	108.1	108.0	108.0	107.9	107.9	107.9	107.8
890	109.5	109.5	109.4	109.4	109.3	109.3	109.2	109.2	109.1	109.1	109.0
900	110.7	110.7	110.6	110.6	110.5	110.5	110.4	110.4	110.4	110.3	110.3
910	112.0	111.9	111.9	111.8	111.8	111.7	111.7	111.6	111.6	111.5	111.5
920	113.2	113.1	113.1	113.0	113.0	112.9	112.9	112.9	112.8	112.8	112.7
930	114.4	114.4	114.3	114.3	114.2	114.2	114.1	114.1	114.0	114.0	113.9
940	115.7	115.6	115.6	115.5	115.5	115.4	115.4	115.3	115.3	115.2	115.2
950	116.9	116.8	116.8	116.7	116.7	116.6	116.6	116.5	116.5	116.4	116.4
960	118.1	118.1	118.0	118.0	117.9	117.9	117.8	117.8	117.7	117.7	117.6
970	119.3	119.3	119.2	119.2	119.1	119.1	119.0	119.0	118.9	118.9	118.8
980	120.6	120.5	120.5	120.4	120.4	120.3	120.3	120.2	120.2	120.1	120.1
990	121.8	121.8	121.7	121.6	121.6	121.5	121.5	121.4	121.4	121.3	121.3
1,000	123.0	123.0	122.9	122.9	122.8	122.8	122.7	122.7	122.6	122.6	122.5
1,010	124.3	124.2	124.2	124.1	124.1	124.0	123.9	123.9	123.8	123.8	123.7
1,020	125.5	125.4	125.4	125.3	125.3	125.2	125.2	125.1	125.1	125.0	125.0
1,030	126.7	126.7	126.6	126.6	126.5	126.5	126.4	126.3	126.3	126.2	126.2
1,040	128.0	127.9	127.8	127.8	127.7	127.7	127.6	127.6	127.5	127.5	127.4
1,050	129.2	129.1	129.1	129.0	129.0	128.9	128.9	128.8	128.7	128.7	128.6
1,060	130.4	130.4	130.3	130.2	130.2	130.1	130.1	130.0	130.0	129.9	129.9
1,070	131.6	131.6	131.5	131.5	131.4	131.4	131.3	131.3	131.2	131.1	131.1
1,080	132.9	132.8	132.8	132.7	132.6	132.6	132.5	132.5	132.4	132.4	132.3
1,090	134.1	134.1	134.0	133.9	133.9	133.8	133.8	133.7	133.6	133.6	133.5
1,100	135.3	135.3	135.2	135.2	135.1	135.0	135.0	134.9	134.9	134.8	134.8

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−41.0	−40.9	−40.8	−40.7	−40.6	−40.5	−40.4	−40.3	−40.2	−40.1	−40.0
700	85.8	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5	85.4	85.4
710	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.6	86.6
720	88.2	88.2	88.1	88.1	88.0	88.0	88.0	87.9	87.9	87.9	87.8
730	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.1	89.1	89.0
740	90.7	90.6	90.6	90.5	90.5	90.5	90.4	90.4	90.3	90.3	90.3
750	91.9	91.8	91.8	91.8	91.7	91.7	91.6	91.6	91.6	91.5	91.5
760	93.1	93.1	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.7	92.7
770	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.0	94.0	94.0	93.9
780	95.6	95.5	95.5	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.1
790	96.8	96.7	96.7	96.7	96.6	96.6	96.5	96.5	96.4	96.4	96.4
800	98.0	98.0	97.9	97.9	97.8	97.8	97.7	97.7	97.7	97.6	97.6
810	99.2	99.2	99.1	99.1	99.1	99.0	99.0	98.9	98.9	98.8	98.8
820	100.5	100.4	100.4	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.0
830	101.7	101.6	101.6	101.5	101.5	101.5	101.4	101.4	101.3	101.3	101.2
840	102.9	102.9	102.8	102.8	102.7	102.7	102.6	102.6	102.6	102.5	102.5
850	104.1	104.1	104.0	104.0	104.0	103.9	103.9	103.8	103.8	103.7	103.7
860	105.4	105.3	105.3	105.2	105.2	105.1	105.1	105.0	105.0	104.9	104.9
870	106.6	106.5	106.5	106.4	106.4	106.4	106.3	106.3	106.2	106.2	106.1
880	107.8	107.8	107.7	107.7	107.6	107.6	107.5	107.5	107.4	107.4	107.3
890	109.0	109.0	108.9	108 9	108.8	108.8	108.7	108.7	108.7	108.6	108.6
900	110.3	110.2	110.2	110.1	110.1	110.0	110.0	109.9	109.9	109.8	109.8
910	111.5	111.4	111.4	111.3	111.3	111.2	111.2	111.1	111.1	111.1	111.0
920	112.7	112.7	112.6	112.6	112.5	112.5	112.4	112.4	112.3	112.3	112.2
930	113.9	113.9	113.8	113.8	113.7	113.7	113.6	113.6	113.5	113.5	113.4
940	115.2	115.1	115.1	115.0	115.0	114.9	114.9	114.8	114.8	114.7	114.7
950	116.4	116.3	116.3	116.2	116.2	116.1	116.1	116.0	116.0	115.9	115.9
960	117.6	117.6	117.5	117.5	117.4	117.4	117.3	117.3	117.2	117.2	117.1
970	118.8	118.8	118.7	118.7	118.6	118.6	118.5	118.5	118.4	118.4	118.3
980	120.1	120.0	120.0	119.9	119.8	119.8	119.7	119.7	119.6	119.6	119.5
990	121.3	121.2	121.2	121.1	121.1	121.0	121.0	120.9	120.9	120.8	120.8
1,000	122.5	122.5	122.4	122.3	122.3	122.2	122.2	122.1	122.1	122.0	122.0
1,010	123.7	123.7	123.6	123.6	123.5	123.5	123.4	123.4	123.3	123.3	123.2
1,020	125.0	124.9	124.8	124.8	124.7	124.7	124.6	124.6	124.5	124.5	124.4
1,030	126.2	126.1	126.1	126.0	126.0	125.9	125.9	125.8	125.7	125.7	125.6
1,040	127.4	127.4	127.3	127.2	127.2	127.1	127.1	127.0	127.0	126.9	126.9
1,050	128.6	128.6	128.5	128.5	128.4	128.4	128.3	128.2	128.2	128.1	128.1
1,060	129.9	129.8	129.7	129.7	129.6	129.6	129.5	129.5	129.4	129.4	129.3
1,070	131.1	131.0	131.0	130.9	130.9	130.8	130.7	130.7	130.6	130.6	130.5
1,080	132.3	132.2	132.2	132.1	132.1	132.0	132.0	131.9	131.9	131.8	131.7
1,090	133.5	133.5	133.4	133.4	133.3	133.2	133.2	133.1	133.1	133.0	133.0
1,100	134.8	134.7	134.6	134.6	134.5	134.5	134.4	134.4	134.3	134.2	134.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−40.0	−39.9	−39.8	−39.7	−39.6	−39.5	−39.4	−39.3	−39.2	−39.1	−39.0
700	85.4	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.0
710	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.3	86.3	86.3	86.2
720	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.4
730	89.0	89.0	89.0	88.9	88.9	88.9	88.8	88.8	88.7	88.7	88.7
740	90.3	90.2	90.2	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9
750	91.5	91.4	91.4	91.4	91.3	91.3	91.2	91.2	91.2	91.1	91.1
760	92.7	92.7	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.3	92.3
770	93.9	93.9	93.8	93.8	93.8	93.7	93.7	93.6	93.6	93.6	93.5
780	95.1	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
790	96.4	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.0	96.0	95.9
800	97.6	97.5	97.5	97.5	97.4	97.4	97.3	97.3	97.2	97.2	97.2
810	98.8	98.8	98.7	98.7	98.6	98.6	98.5	98.5	98.5	98.4	98.4
820	100.0	100.0	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.6	99.6
830	101.2	101.2	101.2	101.1	101.1	101.0	101.0	100.9	100.9	100.9	100.8
840	102.5	102.4	102.4	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.0
850	103.7	103.6	103.6	103.6	103.5	103.5	103.4	103.4	103.3	103.3	103.2
860	104.9	104.9	104.8	104.8	104.7	104.7	104.6	104.6	104.5	104.5	104.5
870	106.1	106.1	106.0	106.0	105.9	105.9	105.9	105.8	105.8	105.7	105.7
880	107.3	107.3	107.3	107.2	107.2	107.1	107.1	107.0	107.0	106.9	106.9
890	108.6	108.5	108.5	108.4	108.4	108.3	108.3	108.2	108.2	108.1	108.1
900	109.8	109.7	109.7	109.6	109.6	109.5	109.5	109.5	109.4	109.4	109.3
910	111.0	111.0	110.9	110.9	110.8	110.8	110.7	110.7	110.6	110.6	110.5
920	112.2	112.2	112.1	112.1	112.0	112.0	111.9	111.9	111.8	111.8	111.7
930	113.4	113.4	113.3	113.3	113.2	113.2	113.2	113.1	113.1	113.0	113.0
940	114.7	114.6	114.6	114.5	114.5	114.4	114.4	114.3	114.3	114.2	114.2
950	115.9	115.8	115.8	115.7	115.7	115.6	115.6	115.5	115.5	115.4	115.4
960	117.1	117.1	117.0	117.0	116.9	116.9	116.8	116.8	116.7	116.7	116.6
970	118.3	118.3	118.2	118.2	118.1	118.1	118.0	118.0	117.9	117.9	117.8
980	119.5	119.5	119.4	119.4	119.3	119.3	119.2	119.2	119.1	119.1	119.0
990	120.8	120.7	120.7	120.6	120.6	120.5	120.5	120.4	120.3	120.3	120.2
1,000	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.5
1,010	123.2	123.1	123.1	123.0	123.0	122.9	122.9	122.8	122.8	122.7	122.7
1,020	124.4	124.4	124.3	124.3	124.2	124.2	124.1	124.0	124.0	123.9	123.9
1,030	125.6	125.6	125.5	125.5	125.4	125.4	125.3	125.3	125.2	125.2	125.1
1,040	126.9	126.8	126.8	126.7	126.6	126.6	126.5	126.5	126.4	126.4	126.3
1,050	128.1	128.0	128.0	127.9	127.9	127.8	127.8	127.7	127.6	127.6	127.5
1,060	129.3	129.2	129.2	129.1	129.1	129.0	129.0	128.9	128.9	128.8	128.7
1,070	130.5	130.5	130.4	130.4	130.3	130.2	130.2	130.1	130.1	130.0	130.0
1,080	131.7	131.7	131.6	131.6	131.5	131.5	131.4	131.3	131.3	131.2	131.2
1,090	133.0	132.9	132.8	132.8	132.7	132.7	132.6	132.6	132.5	132.4	132.4
1,100	134.2	134.1	134.1	134.0	133.9	133.9	133.8	133.8	133.7	133.7	133.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−39.0	−38.9	−38.8	−38.7	−38.6	−38.5	−38.4	−38.3	−38.2	−38.1	−38.0
700	85.0	85.0	84.9	84.9	84.9	84.8	84.8	84.8	84.7	84.7	84.7
710	86.2	86.2	86.2	86.1	86.1	86.0	86.0	86.0	85.9	85.9	85.9
720	87.4	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1
730	88.7	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3
740	89.9	89.8	89.8	89.8	89.7	89.7	89.6	89.6	89.6	89.5	89.5
750	91.1	91.1	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.7	90.7
760	92.3	92.3	92.2	92.2	92.1	92.1	92.1	92.0	92.0	92.0	91.9
770	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.2	93.2	93.2	93.1
780	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.5	94.4	94.4	94.3
790	95.9	95.9	95.9	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.5
800	97.2	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.8	96.8	96.8
810	98.4	98.3	98.3	98.3	98.2	98.2	98.1	98.1	98.0	98.0	98.0
820	99.6	99.6	99.5	99.5	99.4	99.4	99.3	99.3	99.3	99.2	99.2
830	100.8	100.8	100.7	100.7	100.6	100.6	100.6	100.5	100.5	100.4	100.4
840	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.7	101.7	101.6	101.6
850	103.2	103.2	103.2	103.1	103.1	103.0	103.0	102.9	102.9	102.8	102.8
860	104.5	104.4	104.4	104.3	104.3	104.2	104.2	104.1	104.1	104.1	104.0
870	105.7	105.6	105.6	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2
880	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6	106.5	106.5	106.4
890	108.1	108.1	108.0	108.0	107.9	107.9	107.8	107.8	107.7	107.7	107.6
900	109.3	109.3	109.2	109.2	109.1	109.1	109.0	109.0	108.9	108.9	108.8
910	110.5	110.5	110.4	110.4	110.3	110.3	110.2	110.2	110.2	110.1	110.1
920	111.7	111.7	111.6	111.6	111.6	111.5	111.5	111.4	111.4	111.3	111.3
930	113.0	112.9	112.9	112.8	112.8	112.7	112.7	112.6	112.6	112.5	112.5
940	114.2	114.1	114.1	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
950	115.4	115.3	115.3	115.2	115.2	115.1	115.1	115.0	115.0	114.9	114.9
960	116.6	116.6	116.5	116.5	116.4	116.4	116.3	116.3	116.2	116.2	116.1
970	117.8	117.8	117.7	117.7	117.6	117.6	117.5	117.5	117.4	117.4	117.3
980	119.0	119.0	118.9	118.9	118.8	118.8	118.7	118.7	118.6	118.6	118.5
990	120.2	120.2	120.1	120.1	120.0	120.0	119.9	119.9	119.8	119.8	119.7
1,000	121.5	121.4	121.4	121.3	121.3	121.2	121.1	121.1	121.0	121.0	120.9
1,010	122.7	122.6	122.6	122.5	122.5	122.4	122.4	122.3	122.3	122.2	122.2
1,020	123.9	123.8	123.8	123.7	123.7	123.6	123.6	123.5	123.5	123.4	123.4
1,030	125.1	125.1	125.0	124.9	124.9	124.8	124.8	124.7	124.7	124.6	124.6
1,040	126.3	126.3	126.2	126.2	126.1	126.0	126.0	125.9	125.9	125.8	125.8
1,050	127.5	127.5	127.4	127.4	127.3	127.3	127.2	127.2	127.1	127.0	127.0
1,060	128.7	128.7	128.6	128.6	128.5	128.5	128.4	128.4	128.3	128.3	128.2
1,070	130.0	129.9	129.9	129.8	129.7	129.7	129.6	129.6	129.5	129.5	129.4
1,080	131.2	131.1	131.1	131.0	131.0	130.9	130.8	130.8	130.7	130.7	130.6
1,090	132.4	132.3	132.3	132.2	132.2	132.1	132.1	132.0	131.9	131.9	131.8
1,100	133.6	133.5	133.5	133.4	133.4	133.3	133.3	133.2	133.2	133.1	133.0

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−38.0	−37.9	−37.8	−37.7	−37.6	−37.5	−37.4	−37.3	−37.2	−37.1	−37.0
700	84.7	84.6	84.6	84.5	84.5	84.5	84.4	84.4	84.4	84.3	84.3
710	85.9	85.8	85.8	85.8	85.7	85.7	85.6	85.6	85.6	85.5	85.5
720	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.7	86.7
730	88.3	88.2	88.2	88.2	88.1	88.1	88.1	88.0	88.0	87.9	87.9
740	89.5	89.5	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.1
750	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.4	90.4	90.4	90.3
760	91.9	91.9	91.8	91.8	91.8	91.7	91.7	91.6	91.6	91.6	91.5
770	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.8	92.8	92.8	92.7
780	94.3	94.3	94.3	94.2	94.2	94.1	94.1	94.1	94.0	94.0	93.9
790	95.5	95.5	95.5	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.1
800	96.8	96.7	96.7	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.3
810	98.0	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.6	97.6	97.5
820	99.2	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.8	98.8	98.7
830	100.4	100.3	100.3	100.3	100.2	100.2	100.1	100.1	100.0	100.0	100.0
840	101.6	101.5	101.5	101.5	101.4	101.4	101.3	101.3	101.2	101.2	101.2
850	102.8	102.8	102.7	102.7	102.6	102.6	102.5	102.5	102.5	102.4	102.4
860	104.0	104.0	103.9	103.9	103.8	103.8	103.7	103.7	103.7	103.6	103.6
870	105.2	105.2	105.1	105.1	105.0	105.0	105.0	104.9	104.9	104.8	104.8
880	106.4	106.4	106.3	106.3	106.2	106.2	106.2	106.1	106.1	106.0	106.0
890	107.6	107.6	107.5	107.5	107.5	107.4	107.4	107.3	107.3	107.2	107.2
900	108.8	108.8	108.8	108.7	108.7	108.6	108.6	108.5	108.5	108.4	108.4
910	110.1	110.0	110.0	109.9	109.9	109.8	109.8	109.7	109.7	109.6	109.6
920	111.3	111.2	111.2	111.1	111.1	111.0	111.0	110.9	110.9	110.8	110.8
930	112.5	112.4	112.4	112.3	112.3	112.2	112.2	112.1	112.1	112.0	112.0
940	113.7	113.6	113.6	113.5	113.5	113.4	113.4	113.3	113.3	113.3	113.2
950	114.9	114.8	114.8	114.7	114.7	114.7	114.6	114.6	114.5	114.5	114.4
960	116.1	116.1	116.0	116.0	115.9	115.9	115.8	115.8	115.7	115.7	115.6
970	117.3	117.3	117.2	117.2	117.1	117.1	117.0	117.0	116.9	116.9	116.8
980	118.5	118.5	118.4	118.4	118.3	118.3	118.2	118.2	118.1	118.1	118.0
990	119.7	119.7	119.6	119.6	119.5	119.5	119.4	119.4	119.3	119.3	119.2
1,000	120.9	120.9	120.8	120.8	120.7	120.7	120.6	120.6	120.5	120.5	120.4
1,010	122.2	122.1	122.0	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6
1,020	123.4	123.3	123.3	123.2	123.2	123.1	123.0	123.0	122.9	122.9	122.8
1,030	124.6	124.5	124.5	124.4	124.4	124.3	124.3	124.2	124.1	124.1	124.0
1,040	125.8	125.7	125.7	125.6	125.6	125.5	125.5	125.4	125.4	125.3	125.2
1,050	127.0	126.9	126.9	126.8	126.8	126.7	126.7	126.6	126.6	126.5	126.5
1,060	128.2	128.1	128.1	128.0	128.0	127.9	127.9	127.8	127.8	127.7	127.7
1,070	129.4	129.4	129.3	129.2	129.2	129.1	129.1	129.0	129.0	128.9	128.9
1,080	130.6	130.6	130.5	130.5	130.4	130.3	130.3	130.2	130.2	130.1	130.1
1,090	131.8	131.8	131.7	131.7	131.6	131.5	131.5	131.4	131.4	131.3	131.3
1,100	133.0	133.0	132.9	132.9	132.8	132.8	132.7	132.6	132.6	132.5	132.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius									
	−37.0	−36.9	−36.8	−36.7	−36.6	−36.5	−36.4	−36.3	−36.2	−36.1	−36.0
700	84.3	84.3	84.2	84.2	84.2	84.1	84.1	84.0	84.0	84.0	83.9
710	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3	85.2	85.2	85.1
720	86.7	86.7	86.6	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.3
730	87.9	87.9	87.8	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.5
740	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.8	88.8	88.7
750	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0	89.9
760	91.5	91.5	91.4	91.4	91.4	91.3	91.3	91.3	91.2	91.2	91.1
770	92.7	92.7	92.7	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.3
780	93.9	93.9	93.9	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.5
790	95.1	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
800	96.3	96.3	96.3	96.2	96.2	96.1	96.1	96.1	96.0	96.0	95.9
810	97.5	97.5	97.5	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.1
820	98.7	98.7	98.7	98.6	98.6	98.5	98.5	98.5	98.4	98.4	98.3
830	100.0	99.9	99.9	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.5
840	101.2	101.1	101.1	101.0	101.0	100.9	100.9	100.9	100.8	100.8	100.7
850	102.4	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.0	102.0	101.9
860	103.6	103.5	103.5	103.4	103.4	103.4	103.3	103.3	103.2	103.2	103.1
870	104.8	104.7	104.7	104.6	104.6	104.6	104.5	104.5	104.4	104.4	104.3
880	106.0	105.9	105.9	105.8	105.8	105.8	105.7	105.7	105.6	105.6	105.5
890	107.2	107.1	107.1	107.0	107.0	107.0	106.9	106.9	106.8	106.8	106.7
900	108.4	108.3	108.3	108.3	108.2	108.2	108.1	108.1	108.0	108.0	107.9
910	109.6	109.5	109.5	109.5	109.4	109.4	109.3	109.3	109.2	109.2	109.1
920	110.8	110.8	110.7	110.7	110.6	110.6	110.5	110.5	110.4	110.4	110.3
930	112.0	112.0	111.9	111.9	111.8	111.8	111.7	111.7	111.6	111.6	111.5
940	113.2	113.2	113.1	113.1	113.0	113.0	112.9	112.9	112.8	112.8	112.7
950	114.4	114.4	114.3	114.3	114.2	114.2	114.1	114.1	114.0	114.0	113.9
960	115.6	115.6	115.5	115.5	115.4	115.4	115.3	115.3	115.2	115.2	115.1
970	116.8	116.8	116.7	116.7	116.6	116.6	116.5	116.5	116.4	116.4	116.3
980	118.0	118.0	117.9	117.9	117.8	117.8	117.7	117.7	117.6	117.6	117.5
990	119.2	119.2	119.1	119.1	119.0	119.0	118.9	118.9	118.8	118.8	118.7
1,000	120.4	120.4	120.3	120.3	120.2	120.2	120.1	120.1	120.0	120.0	119.9
1,010	121.6	121.6	121.5	121.5	121.4	121.4	121.3	121.3	121.2	121.2	121.1
1,020	122.8	122.8	122.7	122.7	122.6	122.6	122.5	122.5	122.4	122.4	122.3
1,030	124.0	124.0	123.9	123.9	123.8	123.8	123.7	123.7	123.6	123.6	123.5
1,040	125.2	125.2	125.1	125.1	125.0	125.0	124.9	124.9	124.8	124.8	124.7
1,050	126.5	126.4	126.3	126.3	126.2	126.2	126.1	126.1	126.0	126.0	125.9
1,060	127.7	127.6	127.5	127.5	127.4	127.4	127.3	127.3	127.2	127.2	127.1
1,070	128.9	128.8	128.8	128.7	128.6	128.6	128.5	128.5	128.4	128.4	128.3
1,080	130.1	130.0	130.0	129.9	129.8	129.8	129.7	129.7	129.6	129.6	129.5
1,090	131.3	131.2	131.2	131.1	131.0	131.0	130.9	130.9	130.8	130.8	130.7
1,100	132.5	132.4	132.4	132.3	132.2	132.2	132.1	132.1	132.0	132.0	131.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−36.0	−35.9	−35.8	−35.7	−35.6	−35.5	−35.4	−35.3	−35.2	−35.1	−35.0
700	83.9	83.9	83.9	83.8	83.8	83.8	83.7	83.7	83.7	83.6	83.6
710	85.1	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9	84.8	84.8
720	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0	86.0
730	87.5	87.5	87.5	87.4	87.4	87.4	87.3	87.3	87.2	87.2	87.2
740	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.4	88.4	88.4
750	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7	89.6	89.6	89.6
760	91.1	91.1	91.1	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8
770	92.3	92.3	92.3	92.2	92.2	92.1	92.1	92.1	92.0	92.0	91.9
780	93.5	93.5	93.5	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.1
790	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.5	94.4	94.4	94.3
800	95.9	95.9	95.9	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.5
810	97.1	97.1	97.1	97.0	97.0	96.9	96.9	96.8	96.8	96.8	96.7
820	98.3	98.3	98.3	98.2	98.2	98.1	98.1	98.0	98.0	98.0	97.9
830	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.2	99.2	99.2	99.1
840	100.7	100.7	100.7	100.6	100.6	100.5	100.5	100.4	100.4	100.4	100.3
850	101.9	101.9	101.8	101.8	101.8	101.7	101.7	101.6	101.6	101.6	101.5
860	103.1	103.1	103.0	103.0	103.0	102.9	102.9	102.8	102.8	102.7	102.7
870	104.3	104.3	104.2	104.2	104.2	104.1	104.1	104.0	104.0	103.9	103.9
880	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.1	105.1
890	106.7	106.7	106.6	106.6	106.6	106.5	106.5	106.4	106.4	106.3	106.3
900	107.9	107.9	107.8	107.8	107.7	107.7	107.7	107.6	107.6	107.5	107.5
910	109.1	109.1	109.0	109.0	108.9	108.9	108.9	108.8	108.8	108.7	108.7
920	110.3	110.3	110.2	110.2	110.1	110.1	110.1	110.0	110.0	109.9	109.9
930	111.5	111.5	111.4	111.4	111.3	111.3	111.2	111.2	111.2	111.1	111.1
940	112.7	112.7	112.6	112.6	112.5	112.5	112.4	112.4	112.3	112.3	112.3
950	113.9	113.9	113.8	113.8	113.7	113.7	113.6	113.6	113.5	113.5	113.4
960	115.1	115.1	115.0	115.0	114.9	114.9	114.8	114.8	114.7	114.7	114.6
970	116.3	116.3	116.2	116.2	116.1	116.1	116.0	116.0	115.9	115.9	115.8
980	117.5	117.5	117.4	117.4	117.3	117.3	117.2	117.2	117.1	117.1	117.0
990	118.7	118.7	118.6	118.6	118.5	118.5	118.4	118.4	118.3	118.3	118.2
1,000	119.9	119.9	119.8	119.8	119.7	119.7	119.6	119.6	119.5	119.5	119.4
1,010	121.1	121.1	121.0	121.0	120.9	120.9	120.8	120.8	120.7	120.7	120.6
1,020	122.3	122.3	122.2	122.2	122.1	122.1	122.0	122.0	121.9	121.9	121.8
1,030	123.5	123.5	123.4	123.4	123.3	123.3	123.2	123.2	123.1	123.1	123.0
1,040	124.7	124.7	124.6	124.6	124.5	124.5	124.4	124.4	124.3	124.2	124.2
1,050	125.9	125.9	125.8	125.8	125.7	125.7	125.6	125.5	125.5	125.4	125.4
1,060	127.1	127.1	127.0	127.0	126.9	126.9	126.8	126.7	126.7	126.6	126.6
1,070	128.3	128.3	128.2	128.2	128.1	128.0	128.0	127.9	127.9	127.8	127.8
1,080	129.5	129.5	129.4	129.4	129.3	129.2	129.2	129.1	129.1	129.0	129.0
1,090	130.7	130.7	130.6	130.6	130.5	130.4	130.4	130.3	130.3	130.2	130.2
1,100	131.9	131.9	131.8	131.7	131.7	131.6	131.6	131.5	131.5	131.4	131.4

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−35.0	−34.9	−34.8	−34.7	−34.6	−34.5	−34.4	−34.3	−34.2	−34.1	−34.0
700	83.6	83.6	83.5	83.5	83.5	83.4	83.4	83.3	83.3	83.3	83.2
710	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.4
720	86.0	85.9	85.9	85.9	85.8	85.8	85.8	85.7	85.7	85.7	85.6
730	87.2	87.1	87.1	87.1	87.0	87.0	87.0	86.9	86.9	86.8	86.8
740	88.4	88.3	88.3	88.3	88.2	88.2	88.1	88.1	88.1	88.0	88.0
750	89.6	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2
760	90.8	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.5	90.4	90.4
770	91.9	91.9	91.9	91.8	91.8	91.8	91.7	91.7	91.6	91.6	91.6
780	93.1	93.1	93.1	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.8
790	94.3	94.3	94.3	94.2	94.2	94.1	94.1	94.1	94.0	94.0	93.9
800	95.5	95.5	95.5	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.1
810	96.7	96.7	96.6	96.6	96.6	96.5	96.5	96.4	96.4	96.4	96.3
820	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.6	97.6	97.6	97.5
830	99.1	99.1	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.7	98.7
840	100.3	100.3	100.2	100.2	100.1	100.1	100.1	100.0	100.0	99.9	99.9
850	101.5	101.5	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.1	101.1
860	102.7	102.7	102.6	102.6	102.5	102.5	102.4	102.4	102.4	102.3	102.3
870	103.9	103.9	103.8	103.8	103.7	103.7	103.6	103.6	103.5	103.5	103.5
880	105.1	105.0	105.0	105.0	104.9	104.9	104.8	104.8	104.7	104.7	104.7
890	106.3	106.2	106.2	106.2	106.1	106.1	106.0	106.0	105.9	105.9	105.8
900	107.5	107.4	107.4	107.3	107.3	107.3	107.2	107.2	107.1	107.1	107.0
910	108.7	108.6	108.6	108.5	108.5	108.4	108.4	108.4	108.3	108.3	108.2
920	109.9	109.8	109.8	109.7	109.7	109.6	109.6	109.5	109.5	109.5	109.4
930	111.1	111.0	111.0	110.9	110.9	110.8	110.8	110.7	110.7	110.6	110.6
940	112.3	112.2	112.2	112.1	112.1	112.0	112.0	111.9	111.9	111.8	111.8
950	113.4	113.4	113.4	113.3	113.3	113.2	113.2	113.1	113.1	113.0	113.0
960	114.6	114.6	114.5	114.5	114.5	114.4	114.4	114.3	114.3	114.2	114.2
970	115.8	115.8	115.7	115.7	115.6	115.6	115.5	115.5	115.4	115.4	115.4
980	117.0	117.0	116.9	116.9	116.8	116.8	116.7	116.7	116.6	116.6	116.5
990	118.2	118.2	118.1	118.1	118.0	118.0	117.9	117.9	117.8	117.8	117.7
1,000	119.4	119.4	119.3	119.3	119.2	119.2	119.1	119.1	119.0	119.0	118.9
1,010	120.6	120.6	120.5	120.5	120.4	120.4	120.3	120.3	120.2	120.2	120.1
1,020	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.5	121.4	121.3	121.3
1,030	123.0	123.0	122.9	122.8	122.8	122.7	122.7	122.6	122.6	122.5	122.5
1,040	124.2	124.1	124.1	124.0	124.0	123.9	123.9	123.8	123.8	123.7	123.7
1,050	125.4	125.3	125.3	125.2	125.2	125.1	125.1	125.0	125.0	124.9	124.9
1,060	126.6	126.5	126.5	126.4	126.4	126.3	126.3	126.2	126.2	126.1	126.1
1,070	127.8	127.7	127.7	127.6	127.6	127.5	127.5	127.4	127.4	127.3	127.2
1,080	129.0	128.9	128.9	128.8	128.8	128.7	128.6	128.6	128.5	128.5	128.4
1,090	130.2	130.1	130.1	130.0	129.9	129.9	129.8	129.8	129.7	129.7	129.6
1,100	131.4	131.3	131.3	131.2	131.1	131.1	131.0	131.0	130.9	130.9	130.8

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−34.0	−33.9	−33.8	−33.7	−33.6	−33.5	−33.4	−33.3	−33.2	−33.1	−33.0
700	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0	83.0	82.9	82.9
710	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2	84.1	84.1	84.1
720	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3
730	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.5	86.5	86.4
740	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.7	87.7	87.7	87.6
750	89.2	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.8
760	90.4	90.3	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.0	90.0
770	91.6	91.5	91.5	91.5	91.4	91.4	91.3	91.3	91.3	91.2	91.2
780	92.8	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.4	92.4	92.4
790	93.9	93.9	93.9	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6
800	95.1	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
810	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.0	96.0	96.0	95.9
820	97.5	97.5	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.1	97.1
830	98.7	98.7	98.6	98.6	98.5	98.5	98.5	98.4	98.4	98.3	98.3
840	99.9	99.8	99.8	99.8	99.7	99.7	99.6	99.6	99.6	99.5	99.5
850	101.1	101.0	101.0	101.0	100.9	100.9	100.8	100.8	100.7	100.7	100.7
860	102.3	102.2	102.2	102.1	102.1	102.1	102.0	102.0	101.9	101.9	101.8
870	103.5	103.4	103.4	103.3	103.3	103.2	103.2	103.2	103.1	103.1	103.0
880	104.7	104.6	104.6	104.5	104.5	104.4	104.4	104.3	104.3	104.3	104.2
890	105.8	105.8	105.8	105.7	105.7	105.6	105.6	105.5	105.5	105.4	105.4
900	107.0	107.0	106.9	106.9	106.9	106.8	106.8	106.7	106.7	106.6	106.6
910	108.2	108.2	108.1	108.1	108.0	108.0	107.9	107.9	107.9	107.8	107.8
920	109.4	109.4	109.3	109.3	109.2	109.2	109.1	109.1	109.0	109.0	109.0
930	110.6	110.6	110.5	110.5	110.4	110.4	110.3	110.3	110.2	110.2	110.1
940	111.8	111.7	111.7	111.6	111.6	111.6	111.5	111.5	111.4	111.4	111.3
950	113.0	112.9	112.9	112.8	112.8	112.7	112.7	112.6	112.6	112.6	112.5
960	114.2	114.1	114.1	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
970	115.4	115.3	115.3	115.2	115.2	115.1	115.1	115.0	115.0	114.9	114.9
980	116.5	116.5	116.4	116.4	116.3	116.3	116.3	116.2	116.2	116.1	116.1
990	117.7	117.7	117.6	117.6	117.5	117.5	117.4	117.4	117.3	117.3	117.2
1,000	118.9	118.9	118.8	118.8	118.7	118.7	118.6	118.6	118.5	118.5	118.4
1,010	120.1	120.1	120.0	120.0	119.9	119.9	119.8	119.8	119.7	119.7	119.6
1,020	121.3	121.2	121.2	121.1	121.1	121.0	121.0	120.9	120.9	120.8	120.8
1,030	122.5	122.4	122.4	122.3	122.3	122.2	122.2	122.1	122.1	122.0	122.0
1,040	123.7	123.6	123.6	123.5	123.5	123.4	123.4	123.3	123.3	123.2	123.2
1,050	124.9	124.8	124.8	124.7	124.7	124.6	124.6	124.5	124.5	124.4	124.3
1,060	126.1	126.0	126.0	125.9	125.8	125.8	125.7	125.7	125.6	125.6	125.5
1,070	127.2	127.2	127.1	127.1	127.0	127.0	126.9	126.9	126.8	126.8	126.7
1,080	128.4	128.4	128.3	128.3	128.2	128.2	128.1	128.1	128.0	128.0	127.9
1,090	129.6	129.6	129.5	129.5	129.4	129.4	129.3	129.2	129.2	129.1	129.1
1,100	130.8	130.8	130.7	130.6	130.6	130.5	130.5	130.4	130.4	130.3	130.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−33.0	−32.9	−32.8	−32.7	−32.6	−32.5	−32.4	−32.3	−32.2	−32.1	−32.0
700	82.9	82.9	82.8	82.8	82.8	82.7	82.7	82.7	82.6	82.6	82.6
710	84.1	84.0	84.0	84.0	83.9	83.9	83.9	83.8	83.8	83.8	83.7
720	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.0	85.0	84.9	84.9
730	86.4	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1
740	87.6	87.6	87.6	87.5	87.5	87.4	87.4	87.4	87.3	87.3	87.3
750	88.8	88.8	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.4
760	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.7	89.7	89.7	89.6
770	91.2	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.8	90.8
780	92.4	92.3	92.3	92.3	92.2	92.2	92.1	92.1	92.1	92.0	92.0
790	93.6	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.2	93.2	93.2
800	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.5	94.4	94.4	94.3
810	95.9	95.9	95.8	95.8	95.8	95.7	95.7	95.6	95.6	95.6	95.5
820	97.1	97.1	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.7	96.7
830	98.3	98.2	98.2	98.2	98.1	98.1	98.0	98.0	98.0	97.9	97.9
840	99.5	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.1	99.1	99.1
850	100.7	100.6	100.6	100.5	100.5	100.5	100.4	100.4	100.3	100.3	100.2
860	101.8	101.8	101.8	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.4
870	103.0	103.0	102.9	102.9	102.9	102.8	102.8	102.7	102.7	102.6	102.6
880	104.2	104.2	104.1	104.1	104.0	104.0	104.0	103.9	103.9	103.8	103.8
890	105.4	105.4	105.3	105.3	105.2	105.2	105.1	105.1	105.0	105.0	105.0
900	106.6	106.5	106.5	106.5	106.4	106.4	106.3	106.3	106.2	106.2	106.1
910	107.8	107.7	107.7	107.6	107.6	107.5	107.5	107.5	107.4	107.4	107.3
920	109.0	108.9	108.9	108.8	108.8	108.7	108.7	108.6	108.6	108.5	108.5
930	110.1	110.1	110.0	110.0	110.0	109.9	109.9	109.8	109.8	109.7	109.7
940	111.3	111.3	111.2	111.2	111.1	111.1	111.0	111.0	111.0	110.9	110.9
950	112.5	112.5	112.4	112.4	112.3	112.3	112.2	112.2	112.1	112.1	112.0
960	113.7	113.6	113.6	113.5	113.5	113.5	113.4	113.4	113.3	113.3	113.2
970	114.9	114.8	114.8	114.7	114.7	114.6	114.6	114.5	114.5	114.4	114.4
980	116.1	116.0	116.0	115.9	115.9	115.8	115.8	115.7	115.7	115.6	115.6
990	117.2	117.2	117.1	117.1	117.0	117.0	116.9	116.9	116.9	116.8	116.8
1,000	118.4	118.4	118.3	118.3	118.2	118.2	118.1	118.1	118.0	118.0	117.9
1,010	119.6	119.6	119.5	119.5	119.4	119.4	119.3	119.3	119.2	119.2	119.1
1,020	120.8	120.7	120.7	120.6	120.6	120.5	120.5	120.4	120.4	120.3	120.3
1,030	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.5
1,040	123.2	123.1	123.1	123.0	123.0	122.9	122.9	122.8	122.8	122.7	122.7
1,050	124.3	124.3	124.2	124.2	124.1	124.1	124.0	124.0	123.9	123.9	123.8
1,060	125.5	125.5	125.4	125.4	125.3	125.3	125.2	125.2	125.1	125.1	125.0
1,070	126.7	126.7	126.6	126.6	126.5	126.5	126.4	126.3	126.3	126.2	126.2
1,080	127.9	127.8	127.8	127.7	127.7	127.6	127.6	127.5	127.5	127.4	127.4
1,090	129.1	129.0	129.0	128.9	128.9	128.8	128.8	128.7	128.7	128.6	128.5
1,100	130.3	130.2	130.2	130.1	130.1	130.0	129.9	129.9	129.8	129.8	129.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−32.0	−31.9	−31.8	−31.7	−31.6	−31.5	−31.4	−31.3	−31.2	−31.1	−31.0
700	82.6	82.5	82.5	82.4	82.4	82.4	82.3	82.3	82.3	82.2	82.2
710	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.4	83.4
720	84.9	84.9	84.8	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6
730	86.1	86.1	86.0	86.0	85.9	85.9	85.9	85.8	85.8	85.8	85.7
740	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.0	87.0	86.9	86.9
750	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1
760	89.6	89.6	89.6	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3
770	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.5	90.5	90.5	90.4
780	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.7	91.7	91.6	91.6
790	93.2	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.9	92.8	92.8
800	94.3	94.3	94.3	94.2	94.2	94.1	94.1	94.1	94.0	94.0	94.0
810	95.5	95.5	95.4	95.4	95.4	95.3	95.3	95.2	95.2	95.2	95.1
820	96.7	96.7	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.3	96.3
830	97.9	97.8	97.8	97.8	97.7	97.7	97.6	97.6	97.6	97.5	97.5
840	99.1	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.7	98.7	98.7
850	100.2	100.2	100.2	100.1	100.1	100.0	100.0	100.0	99.9	99.9	99.8
860	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.1	101.1	101.0	101.0
870	102.6	102.6	102.5	102.5	102.4	102.4	102.3	102.3	102.3	102.2	102.2
880	103.8	103.7	103.7	103.7	103.6	103.6	103.5	103.5	103.4	103.4	103.4
890	105.0	104.9	104.9	104.8	104.8	104.7	104.7	104.7	104.6	104.6	104.5
900	106.1	106.1	106.1	106.0	106.0	105.9	105.9	105.8	105.8	105.7	105.7
910	107.3	107.3	107.2	107.2	107.1	107.1	107.1	107.0	107.0	106.9	106.9
920	108.5	108.5	108.4	108.4	108.3	108.3	108.2	108.2	108.1	108.1	108.1
930	109.7	109.6	109.6	109.5	109.5	109.5	109.4	109.4	109.3	109.3	109.2
940	110.9	110.8	110.8	110.7	110.7	110.6	110.6	110.5	110.5	110.4	110.4
950	112.0	112.0	111.9	111.9	111.9	111.8	111.8	111.7	111.7	111.6	111.6
960	113.2	113.2	113.1	113.1	113.0	113.0	112.9	112.9	112.8	112.8	112.7
970	114.4	114.3	114.3	114.3	114.2	114.2	114.1	114.1	114.0	114.0	113.9
980	115.6	115.5	115.5	115.4	115.4	115.3	115.3	115.2	115.2	115.1	115.1
990	116.8	116.7	116.7	116.6	116.6	116.5	116.5	116.4	116.4	116.3	116.3
1,000	117.9	117.9	117.8	117.8	117.7	117.7	117.6	117.6	117.5	117.5	117.4
1,010	119.1	119.1	119.0	119.0	118.9	118.9	118.8	118.8	118.7	118.7	118.6
1,020	120.3	120.2	120.2	120.1	120.1	120.0	120.0	119.9	119.9	119.8	119.8
1,030	121.5	121.4	121.4	121.3	121.3	121.2	121.2	121.1	121.1	121.0	121.0
1,040	122.7	122.6	122.5	122.5	122.4	122.4	122.3	122.3	122.2	122.2	122.1
1,050	123.8	123.8	123.7	123.7	123.6	123.6	123.5	123.5	123.4	123.4	123.3
1,060	125.0	125.0	124.9	124.9	124.8	124.8	124.7	124.6	124.6	124.5	124.5
1,070	126.2	126.1	126.1	126.0	126.0	125.9	125.9	125.8	125.8	125.7	125.7
1,080	127.4	127.3	127.3	127.2	127.2	127.1	127.1	127.0	126.9	126.9	126.8
1,090	128.5	128.5	128.4	128.4	128.3	128.3	128.2	128.2	128.1	128.1	128.0
1,100	129.7	129.7	129.6	129.6	129.5	129.5	129.4	129.4	129.3	129.2	129.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−31.0	−30.9	−30.8	−30.7	−30.6	−30.5	−30.4	−30.3	−30.2	−30.1	−30.0
700	82.2	82.2	82.1	82.1	82.1	82.0	82.0	82.0	81.9	81.9	81.9
710	83.4	83.4	83.3	83.3	83.2	83.2	83.2	83.1	83.1	83.1	83.0
720	84.6	84.5	84.5	84.5	84.4	84.4	84.3	84.3	84.3	84.2	84.2
730	85.7	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5	85.4	85.4
740	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6
750	88.1	88.0	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.7
760	89.3	89.2	89.2	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9
770	90.4	90.4	90.4	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1
780	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.3	91.3	91.3	91.2
790	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.4	92.4
800	94.0	93.9	93.9	93.8	93.8	93.8	93.7	93.7	93.6	93.6	93.6
810	95.1	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
820	96.3	96.3	96.2	96.2	96.1	96.1	96.1	96.0	96.0	95.9	95.9
830	97.5	97.4	97.4	97.4	97.3	97.3	97.2	97.2	97.2	97.1	97.1
840	98.7	98.6	98.6	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.2
850	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.5	99.5	99.5	99.4
860	101.0	101.0	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.6	100.6
870	102.2	102.1	102.1	102.1	102.0	102.0	101.9	101.9	101.8	101.8	101.8
880	103.4	103.3	103.3	103.2	103.2	103.1	103.1	103.1	103.0	103.0	102.9
890	104.5	104.5	104.4	104.4	104.4	104.3	104.3	104.2	104.2	104.1	104.1
900	105.7	105.7	105.6	105.6	105.5	105.5	105.4	105.4	105.4	105.3	105.3
910	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6	106.5	106.5	106.4
920	108.1	108.0	108.0	107.9	107.9	107.8	107.8	107.7	107.7	107.7	107.6
930	109.2	109.2	109.1	109.1	109.0	109.0	109.0	108.9	108.9	108.8	108.8
940	110.4	110.4	110.3	110.3	110.2	110.2	110.1	110.1	110.0	110.0	109.9
950	111.6	111.5	111.5	111.4	111.4	111.3	111.3	111.3	111.2	111.2	111.1
960	112.7	112.7	112.7	112.6	112.6	112.5	112.5	112.4	112.4	112.3	112.3
970	113.9	113.9	113.8	113.8	113.7	113.7	113.6	113.6	113.5	113.5	113.5
980	115.1	115.1	115.0	115.0	114.9	114.9	114.8	114.8	114.7	114.7	114.6
990	116.3	116.2	116.2	116.1	116.1	116.0	116.0	115.9	115.9	115.8	115.8
1,000	117.4	117.4	117.4	117.3	117.3	117.2	117.2	117.1	117.1	117.0	117.0
1,010	118.6	118.6	118.5	118.5	118.4	118.4	118.3	118.3	118.2	118.2	118.1
1,020	119.8	119.7	119.7	119.6	119.6	119.5	119.5	119.5	119.4	119.4	119.3
1,030	121.0	120.9	120.9	120.8	120.8	120.7	120.7	120.6	120.6	120.5	120.5
1,040	122.1	122.1	122.0	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6
1,050	123.3	123.3	123.2	123.2	123.1	123.1	123.0	123.0	122.9	122.9	122.8
1,060	124.5	124.4	124.4	124.3	124.3	124.2	124.2	124.1	124.1	124.0	124.0
1,070	125.7	125.6	125.6	125.5	125.5	125.4	125.4	125.3	125.3	125.2	125.2
1,080	126.8	126.8	126.7	126.7	126.6	126.6	126.5	126.5	126.4	126.4	126.3
1,090	128.0	128.0	127.9	127.9	127.8	127.8	127.7	127.6	127.6	127.5	127.5
1,100	129.2	129.1	129.1	129.0	129.0	128.9	128.9	128.8	128.8	128.7	128.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−30.0	−29.9	−29.8	−29.7	−29.6	−29.5	−29.4	−29.3	−29.2	−29.1	−29.0
700	81.9	81.8	81.8	81.8	81.7	81.7	81.7	81.6	81.6	81.6	81.5
710	83.0	83.0	83.0	82.9	82.9	82.9	82.8	82.8	82.8	82.7	82.7
720	84.2	84.2	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9	83.9
730	85.4	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.0
740	86.6	86.5	86.5	86.4	86.4	86.4	86.3	86.3	86.3	86.2	86.2
750	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4
760	88.9	88.9	88.8	88.8	88.7	88.7	88.7	88.6	88.6	88.6	88.5
770	90.1	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7
780	91.2	91.2	91.2	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9
790	92.4	92.4	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.0
800	93.6	93.5	93.5	93.5	93.4	93.4	93.3	93.3	93.3	93.2	93.2
810	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.5	94.4	94.4	94.3
820	95.9	95.9	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.6	95.5
830	97.1	97.0	97.0	97.0	96.9	96.9	96.8	96.8	96.8	96.7	96.7
840	98.2	98.2	98.2	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.8
850	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.1	99.1	99.0	99.0
860	100.6	100.5	100.5	100.5	100.4	100.4	100.3	100.3	100.3	100.2	100.2
870	101.8	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.3
880	102.9	102.9	102.8	102.8	102.8	102.7	102.7	102.6	102.6	102.5	102.5
890	104.1	104.1	104.0	104.0	103.9	103.9	103.8	103.8	103.8	103.7	103.7
900	105.3	105.2	105.2	105.1	105.1	105.1	105.0	105.0	104.9	104.9	104.8
910	106.4	106.4	106.4	106.3	106.3	106.2	106.2	106.1	106.1	106.0	106.0
920	107.6	107.6	107.5	107.5	107.4	107.4	107.3	107.3	107.3	107.2	107.2
930	108.8	108.7	108.7	108.6	108.6	108.6	108.5	108.5	108.4	108.4	108.3
940	109.9	109.9	109.9	109.8	109.8	109.7	109.7	109.6	109.6	109.5	109.5
950	111.1	111.1	111.0	111.0	110.9	110.9	110.8	110.8	110.8	110.7	110.7
960	112.3	112.2	112.2	112.1	112.1	112.1	112.0	112.0	111.9	111.9	111.8
970	113.5	113.4	113.4	113.3	113.3	113.2	113.2	113.1	113.1	113.0	113.0
980	114.6	114.6	114.5	114.5	114.4	114.4	114.3	114.3	114.2	114.2	114.2
990	115.8	115.7	115.7	115.7	115.6	115.6	115.5	115.5	115.4	115.4	115.3
1,000	117.0	116.9	116.9	116.8	116.8	116.7	116.7	116.6	116.6	116.5	116.5
1,010	118.1	118.1	118.0	118.0	117.9	117.9	117.8	117.8	117.7	117.7	117.7
1,020	119.3	119.3	119.2	119.2	119.1	119.1	119.0	119.0	118.9	118.9	118.8
1,030	120.5	120.4	120.4	120.3	120.3	120.2	120.2	120.1	120.1	120.0	120.0
1,040	121.6	121.6	121.5	121.5	121.4	121.4	121.3	121.3	121.2	121.2	121.1
1,050	122.8	122.8	122.7	122.7	122.6	122.6	122.5	122.5	122.4	122.4	122.3
1,060	124.0	123.9	123.9	123.8	123.8	123.7	123.7	123.6	123.6	123.5	123.5
1,070	125.2	125.1	125.0	125.0	124.9	124.9	124.8	124.8	124.7	124.7	124.6
1,080	126.3	126.3	126.2	126.2	126.1	126.1	126.0	126.0	125.9	125.9	125.8
1,090	127.5	127.4	127.4	127.3	127.3	127.2	127.2	127.1	127.1	127.0	127.0
1,100	128.7	128.6	128.6	128.5	128.4	128.4	128.3	128.3	128.2	128.2	128.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−29.0	−28.9	−28.8	−28.7	−28.6	−28.5	−28.4	−28.3	−28.2	−28.1	−28.0
700	81.5	81.5	81.5	81.4	81.4	81.4	81.3	81.3	81.3	81.2	81.2
710	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5	82.4	82.4	82.4
720	83.9	83.8	83.8	83.8	83.7	83.7	83.7	83.6	83.6	83.6	83.5
730	85.0	85.0	85.0	84.9	84.9	84.9	84.8	84.8	84.8	84.7	84.7
740	86.2	86.2	86.1	96.1	86.1	96.0	86.0	85.9	95.9	85.9	85.8
750	87.4	87.3	87.3	98.3	87.2	97.2	87.1	87.1	87.1	87.0	87.0
760	88.5	88.5	88.5	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2
770	89.7	89.7	89.6	89.6	89.5	89.5	89.5	89.4	89.4	89.4	89.3
780	90.9	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.6	90.5	90.5
790	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.7	91.7	91.6
800	93.2	93.1	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.8	92.8
810	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.0	94.0	94.0
820	95.5	95.5	95.4	95.4	95.4	95.3	95.3	95.2	95.2	95.2	95.1
830	96.7	96.6	96.6	96.6	96.5	96.5	96.4	96.4	96.4	96.3	96.3
840	97.8	97.8	97.8	97.7	97.7	97.6	97.6	97.6	97.5	97.5	97.4
850	99.0	99.0	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.6	98.6
860	100.2	100.1	100.1	100.1	100.0	100.0	99.9	99.9	99.8	99.8	99.8
870	101.3	101.3	101.3	101.2	101.2	101.1	101.1	101.1	101.0	101.0	100.9
880	102.5	102.5	102.4	102.4	102.3	102.3	102.3	102.2	102.2	102.1	102.1
890	103.7	103.6	103.6	103.5	103.5	103.5	103.4	103.4	103.3	103.3	103.2
900	104.8	104.8	104.8	104.7	104.7	104.6	104.6	104.5	104.5	104.5	104.4
910	106.0	106.0	105.9	105.9	105.8	105.8	105.7	105.7	105.7	105.6	105.6
920	107.2	107.1	107.1	107.0	107.0	106.9	106.9	106.9	106.8	106.8	106.7
930	108.3	108.3	108.2	108.2	108.2	108.1	108.1	108.0	108.0	107.9	107.9
940	109.5	109.5	109.4	109.4	109.3	109.3	190.2	109.2	109.1	109.1	109.0
950	110.7	110.6	110.6	110.5	110.5	110.4	110.4	110.3	110.3	110.3	110.2
960	111.8	111.8	111.7	111.7	111.6	111.6	111.6	111.5	111.5	111.4	111.4
970	113.0	112.9	112.9	112.9	112.8	112.8	112.7	112.7	112.6	112.6	112.5
980	114.2	114.1	114.1	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
990	115.3	115.3	115.2	115.2	115.1	115.1	115.1	115.0	115.0	114.9	114.9	114.9
1,000	116.5	116.4	116.4	116.3	116.3	116.2	116.2	116.2	116.1	116.1	116.0
1,010	117.7	117.6	117.6	117.5	117.5	117.4	117.4	117.3	117.3	117.2	117.2
1,020	118.8	118.8	118.7	118.7	118.6	118.6	118.5	118.5	118.4	118.4	118.3
1,030	120.0	119.9	119.9	119.8	119.8	119.7	119.7	119.6	119.6	119.5	119.5
1,040	121.1	121.1	121.0	121.0	120.9	120.9	120.8	120.8	120.7	120.7	120.7
1,050	122.3	122.3	122.2	122.2	122.1	122.1	122.0	122.0	121.9	121.9	121.8
1,060	123.5	123.4	123.4	123.3	123.3	123.2	123.2	132.1	123.1	123.0	123.0
1,070	124.6	124.6	124.5	124.5	124.4	124.4	124.3	124.3	124.2	124.2	124.1
1,080	125.8	125.8	125.7	125.6	125.6	125.5	125.5	125.4	125.4	125.3	125.3
1,090	127.0	126.9	126.9	126.8	126.8	126.7	126.7	126.6	126.6	126.5	126.5
1,100	128.1	128.1	128.0	128.0	127.9	127.9	127.8	127.8	127.7	127.7	127.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−28.0	−27.9	−27.8	−27.7	−27.6	−27.5	−27.4	−27.3	−27.2	−27.1	−27.0
700	81.2	81.2	81.1	81.1	81.1	81.0	81.0	81.0	80.9	80.9	80.9
710	82.4	82.3	82.3	82.3	82.2	82.2	82.2	82.1	82.1	82.1	82.0
720	83.5	83.5	83.5	83.4	83.4	83.4	83.3	83.3	83.3	83.2	83.2
730	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.4	84.4	84.4	84.3
740	85.8	85.8	85.8	85.7	85.7	85.7	85.6	85.6	85.6	85.5	85.5
750	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.7
760	88.2	88.1	88.1	88.1	88.0	88.0	87.9	87.9	87.9	87.8	87.8
770	89.3	89.3	89.3	89.2	89.2	89.1	89.1	89.1	89.0	89.0	89.0
780	90.5	90.4	90.4	90.4	90.3	90.3	90.3	90.2	90.2	90.2	90.1
790	91.6	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.3	91.3	91.3
800	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.5	92.5	92.5	92.4
810	94.0	93.9	93.9	93.8	93.8	93.8	93.7	93.7	93.7	93.6	93.6
820	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
830	96.3	96.2	96.2	96.2	96.1	96.1	96.0	96.0	96.0	95.9	95.9
840	97.4	97.4	97.4	97.3	97.3	97.2	97.2	97 2	97.1	97.1	97.0
850	98.6	98.6	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.2	98.2
860	99.8	99.7	99.7	99.6	99.6	99.6	99.5	99.5	99.4	99.4	99.4
870	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.6	100.6	100.6	100.5
880	102.1	102.0	102.0	102.0	101.9	101.9	101.8	101.8	101.8	101.7	101.7
890	103.2	103.2	103.2	103.1	103.1	103.0	103.0	103.0	102.9	102.9	102.8
900	104.4	104.4	104.3	104.3	104.2	104.2	104.2	104.1	104.1	104.0	104.0
910	105.6	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.1
920	106.7	106.7	106.6	106.6	106.6	106.5	106.5	106.4	106.4	106.3	106.3
930	107.9	107.8	107.8	107.8	107.7	107.7	107.6	107.6	107.5	107.5	107.5
940	109.0	109.0	109.0	108.9	108.9	108.8	108.8	108.7	108.7	108.7	108.6
950	110.2	110.2	110.1	110.1	110.0	110.0	109.9	109.9	109.9	109.8	109.8
960	111.4	111.3	111.3	111.2	111.2	111.1	111.1	111.1	111.0	111.0	110.9
970	112.5	112.5	112.4	112.4	112.3	112.3	112.3	112.2	112.2	112.1	112.1
980	113.7	113.6	113.6	113.6	113.5	113.5	113.4	113.4	113.3	113.3	113.2
990	114.9	114.8	114.8	114.7	114.7	114.6	114.6	114.5	114.5	114.4	114.4
1,000	116.0	116.0	115.9	115.9	115.8	115.8	115.7	115.7	115.6	115.6	115.5
1,010	117.2	117.1	117.1	117.0	117.0	116.9	116.9	116.8	116.8	116.7	116.7
1,020	118.3	118.3	118.2	118.2	118.1	118.1	118.0	118.0	117.9	117.9	117.8
1,030	119.5	119.4	119.4	119.3	119.3	119.2	119.2	119.2	119.1	119.1	119.0
1,040	120.7	120.6	120.6	120.5	120.5	120.4	120.4	120.3	120.3	120.2	120.2
1,050	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.5	121.4	121.4	121.3
1,060	123.0	122.9	122.9	122.8	122.8	122.7	122.7	122.6	122.6	122.5	122.5
1,070	124.1	124.1	124.0	124.0	123.9	123.9	123.8	123.8	123.7	123.7	123.6
1,080	125.3	125.2	125.2	125.1	125.1	125.0	125.0	124.9	124.9	124.8	124.8
1,090	126.5	126.4	126.3	126.3	126.2	126.2	126.1	126.1	126.0	126.0	125.9
1,100	127.6	127.6	127.5	127.5	127.4	127.4	127.3	127.2	127.2	127.1	127.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−27.0	−26.9	−26.8	−26.7	−26.6	−26.5	−26.4	−26.3	−26.2	−26.1	−26.0
700	80.9	80.8	80.8	80.8	80.7	80.7	80.7	80.6	80.6	80.6	80.5
710	82.0	82.0	82.0	81.9	81.9	81.9	81.8	81.8	81.8	81.7	81.7
720	83.2	83.2	83.1	83.1	83.0	83.0	83.0	82.9	82.9	82.9	82.8
730	84.3	84.3	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.0	84.0
740	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3	85.2	85.2	85.1
750	86.7	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.4	86.3	86.3
760	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5
770	89.0	88.9	88.9	88.9	88.8	88.8	88.7	88.7	88.7	88.6	88.6
780	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.8
790	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.0	91.0	90.9	90.9
800	92.4	92.4	92.4	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1
810	93.6	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.2	93.2
820	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.5	94.4	94.4	94.4
830	95.9	95.9	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.5	95.5
840	97.0	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.7	96.7	96.7
850	98.2	98.2	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.8	97.8
860	99.4	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.0	99.0	99.0
870	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.2	100.2	100.2	100.1
880	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.3	101.3	101.3
890	102.8	102.8	102.7	102.7	102.7	102.6	102.6	102.5	102.5	102.5	102.4
900	104.0	103.9	103.9	103.9	103.8	103.8	103.7	103.7	103.6	103.6	103.6
910	105.1	105.1	105.1	105.0	105.0	104.9	104.9	104.8	104.8	104.8	104.7
920	106.3	106.3	106.2	106.2	106.1	106.1	106.0	106.0	106.0	105.9	105.9
930	107.5	107.4	107.4	107.3	107.3	107.2	107.2	107.1	107.1	107.1	107.0
940	108.6	108.6	108.5	108.5	108.4	108.4	108.3	108.3	108.3	108.2	108.2
950	109.8	109.7	109.7	109.6	109.6	109.5	109.5	109.5	109.4	109.4	109.3
960	110.9	110.9	110.8	110.8	110.7	110.7	110.6	110.6	110.6	110.5	110.5
970	112.1	112.0	112.0	111.9	111.9	111.8	111.8	111.8	111.7	111.7	111.6
980	113.2	113.2	113.1	113.1	113.0	113.0	113.0	112.9	112.9	112.8	112.8
990	114.4	114.3	114.3	114.2	114.2	114.2	114.1	114.1	114.0	114.0	113.9
1,000	115.5	115.5	115.4	115.4	115.4	115.3	115.3	115.2	115.2	115.1	115.1
1,010	116.7	116.6	116.6	116.6	116.5	116.5	116.4	116.4	116.3	116.3	116.2
1,020	117.8	117.8	117.8	117.7	117.7	117.6	117.6	117.5	117.5	117.4	117.4
1,030	119.0	119.0	118.9	118.9	118.8	118.8	118.7	118.7	118.6	118.6	118.5
1,040	120.2	120.1	120.1	120.0	120.0	119.9	119.9	119.8	119.8	119.7	119.7
1,050	121.3	121.3	121.2	121.2	121.1	121.1	121.0	121.0	120.9	120.9	120.8
1,060	122.5	122.4	122.4	122.3	122.3	122.2	122.2	122.1	122.1	122.0	122.0
1,070	123.6	123.6	123.5	123.5	123.4	123.4	123.3	123.3	123.2	123.2	123.1
1,080	124.8	124.7	124.7	124.6	124.6	124.5	124.5	124.4	124.4	124.3	124.3
1,090	125.9	125.9	125.8	125.8	125.7	125.7	125.6	125.6	135.5	125.5	125.4
1,100	127.1	127.0	127.0	126.9	126.9	126.8	126.8	126.7	126.7	216.6	126.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−26.0	−25.9	−25.8	−25.7	−25.6	−25.5	−25.4	−25.3	−25.2	−25.1	−25.0
700	80.5	80.5	80.5	80.4	80.4	80.4	80.4	80.3	80.3	80.3	80.2
710	81.7	81.7	81.6	81.6	81.6	81.5	81.5	81.5	81.4	81.4	81.4
720	82.8	82.8	82.8	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5
730	84.0	84.0	83.9	83.9	83.9	83.8	83.8	83.8	83.7	83.7	83.7
740	85.1	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9	84.8	84.8
750	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0	86.0	86.0
760	87.5	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1
770	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3	88.2
780	89.8	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.5	89.4	89.4
790	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.6	90.6	90.6	90.5
800	92.1	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.7	91.7
810	93.2	93.2	93.1	93.1	93.1	93.0	93.0	92.9	92.9	92.9	92.8
820	94.4	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1	94.0	94.0
830	95.5	95.5	95.4	95.4	95.4	95.3	95.3	95.2	95.2	95.2	95.1
840	96.7	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.3	96.3	96.3
850	97.8	97.8	97.7	97.7	97.6	97.6	97.6	97.5	97.5	97.5	97.4
860	99.0	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.6	98.6	98.6
870	100.1	100.1	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.7	99.7
880	101.3	101.2	101.2	101.1	101.1	101.1	101.0	101.0	100.9	100.9	100.9
890	102.4	102.4	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.0	102.0
900	103.6	103.5	103.5	103.4	103.4	103.4	103.3	103.3	103.2	103.2	103.1
910	104.7	104.7	104.6	104.6	104.5	104.5	104.5	104.4	104.4	104.3	104.3
920	105.9	105.8	105.8	105.7	105.7	105.7	105.6	105.6	105.5	105.5	105.4
930	107.0	107.0	106.9	106.9	106.8	106.8	106.8	106.7	106.7	106.6	106.6
940	108.2	108.1	108.1	108.0	108.0	107.9	107.9	107.9	107.8	107.8	107.7
950	109.3	109.3	109.2	109.2	109.1	109.1	109.1	109.0	109.0	108.9	108.9
960	110.5	110.4	110.4	110.3	110.3	110.2	110.2	110.2	110.1	110.1	110.0
970	111.6	111.6	111.5	111.5	111.4	111.4	111.3	111.3	111.3	111.2	111.2
980	112.8	112.7	112.7	112.6	112.6	112.5	112.5	112.5	112.4	112.4	112.3
990	113.9	113.9	113.8	113.8	113.7	113.7	113.6	113.6	113.6	113.5	113.5
1,000	115.1	115.0	115.0	114.9	114.9	114.8	114.8	114.7	114.7	114.7	114.6
1,010	116.2	116.2	116.1	116.1	116.0	116.0	115.9	115.9	115.8	115.8	115.8
1,020	117.4	117.3	117.3	117.2	117.2	117.1	117.1	117.0	117.0	116.9	116.9
1,030	118.5	118.5	118.4	118.4	118.3	118.3	118.2	118.2	118.1	118.1	118.0
1,040	119.7	119.6	119.6	119.5	119.5	119.4	119.4	119.3	119.3	119.2	119.2
1,050	120.8	120.8	120.7	120.7	120.6	120.6	120.5	120.5	120.4	120.4	120.3
1,060	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.5
1,070	123.1	123.1	123.0	123.0	122.9	122.9	122.8	122.8	122.7	122.7	122.6
1,080	124.3	124.2	124.2	124.1	124.1	124.0	124.0	123.9	123.9	123.8	123.8
1,090	125.4	125.4	125.3	125.3	125.2	125.2	125.1	125.1	125.0	125.0	124.9
1,100	126.6	126.5	126.5	126.4	126.4	126.3	126.3	126.2	126.2	126.1	126.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−25.0	−24.9	−24.8	−24.7	−24.6	−24.5	−24.4	−24.3	−24.2	−24.1	−24.0
700	80.2	80.2	80.2	80.1	80.1	80.1	80.0	80.0	80.0	79.9	79.9
710	81.4	81.3	81.3	81.3	81.2	81.2	81.2	81.1	81.1	81.1	81.0
720	82.5	82.5	82.4	82.4	82.4	82.3	82.3	82.3	82.2	82.2	82.2
730	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.4	83.4	83.4	83.3
740	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5
750	86.0	85.9	85.9	85.8	85.8	85.8	85.7	85.7	85.7	85.6	85.6
760	87.1	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.7
770	88.2	88.2	88.2	88.1	88.1	88.1	88.0	88.0	88.0	87.9	87.9
780	89.4	89.4	89.3	89.3	89.2	89.2	89.2	89.1	89.1	89.1	89.0
790	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.2	90.2	90.2
800	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.4	91.3
810	92.8	92.8	92.8	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.5
820	94.0	93.9	93.9	93.9	93.8	93.8	93.7	93.7	93.7	93.6	93.6
830	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
840	96.3	96.2	96.2	96.2	96.1	96.1	96.0	96.0	96.0	95.9	95.9
850	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.1	97.1	97.1	97.0
860	98.6	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.2	98.2	98.2
870	99.7	99.7	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.3	99.3
880	100.9	100.8	100.8	100.7	100.7	100.7	100.6	100.6	100.5	100.5	100.5
890	102.0	102.0	101.9	101.9	101.8	101.8	101.8	101.7	101.7	101.6	101.6
900	103.1	103.1	103.1	103.0	103.0	102.9	102.9	102.9	102.8	102.8	102.7
910	104.3	104.3	104.2	104.2	104.1	104.1	104.0	104.0	104.0	103.9	103.9
920	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.1	105.1	105.1	105.0
930	106.6	106.5	106.5	106.5	106.4	106.4	106.3	106.3	106.2	106.2	106.2
940	107.7	107.7	107.6	107.6	107.6	107.5	107.5	107.4	107.4	107.3	107.3
950	108.9	108.8	108.8	108.7	108.7	108.7	108.6	108.6	108.5	108.5	108.4
960	110.0	110.0	109.9	109.9	109.8	109.8	109.8	109.7	109.7	109.6	109.6
970	111.2	111.1	111.1	111.0	111.0	110.9	110.9	110.9	110.8	110.8	110.7
980	112.3	112.3	112.2	112.2	112.1	112.1	112.0	112.0	112.0	111.9	111.9
990	113.5	113.4	113.4	113.3	113.3	113.2	113.2	113.1	113.1	113.1	113.0
1,000	114.6	114.6	114.5	114.5	114.4	114.4	114.3	114.3	114.2	114.2	114.1
1,010	115.8	115.7	115.7	115.6	115.6	115.5	115.5	115.4	115.4	115.3	115.3
1,020	116.9	116.9	116.8	116.8	116.7	116.7	116.6	116.6	116.5	116.5	116.4
1,030	118.0	118.0	118.0	117.9	117.9	117.8	117.8	117.7	117.7	117.6	117.6
1,040	119.2	119.1	119.1	119.0	119.0	119.0	118.9	118.9	118.8	118.8	118.7
1,050	120.3	120.3	120.2	120.2	120.1	120.1	120.0	120.0	120.0	119.9	119.9
1,060	121.5	121.4	121.4	121.3	121.3	121.2	121.2	121.1	121.1	121.0	121.0
1,070	122.6	122.6	122.5	122.5	122.4	122.4	122.3	122.3	122.2	122.2	122.1
1,080	123.8	123.7	123.7	123.6	123.6	123.5	123.5	123.4	123.4	123.3	123.3
1,090	124.9	124.9	124.8	124.8	124.7	124.7	124.6	124.6	124.5	124.5	124.4
1,100	126.1	126.0	126.0	125.9	125.9	125.8	125.8	125.7	125.7	125.6	125.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−24.0	−23.9	−23.8	−23.7	−23.6	−23.5	−23.4	−23.3	−23.2	−23.1	−23.0
700	79.9	79.9	79.8	79.8	79.8	79.7	79.7	79.7	79.6	79.6	79.6
710	81.0	81.0	81.0	80.9	80.9	80.9	80.8	80.8	80.8	80.8	80.7
720	82.2	82.2	82.1	82.1	82.1	82.0	82.0	82.0	81.9	81.9	81.9
730	83.3	83.3	83.3	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0
740	84.5	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2	84.2	84.1
750	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3
760	86.7	86.7	86.7	86.6	86.6	86.6	86.5	86.5	86.5	86.4	86.4
770	87.9	87.9	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.5
780	89.0	89.0	89.0	88.9	88.9	88.9	88.8	88.8	88.7	88.7	88.7
790	90.2	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.8	89.8
800	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.0	91.0	90.9
810	92.5	92.4	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.1	92.1
820	93.6	93.6	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.2
830	94.7	94.7	94.7	94.6	94.6	94.5	94.5	94.5	94.4	94.4	94.4
840	95.9	95.8	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.5	95.5
850	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.6
860	98.2	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.8	97.8	97.8
870	99.3	99.3	99.2	99.2	99.1	99.1	99.1	99.0	99.0	98.9	98.9
880	100.5	100.4	100.4	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.0
890	101.6	101.6	101.5	101.5	101.4	101.4	101.3	101.3	101.3	101.2	101.2
900	102.7	102.7	102.7	102.6	102.6	102.5	102.5	102.4	102.4	102.4	102.3
910	103.9	103.8	103.8	103.8	103.7	103.7	103.6	103.6	103.5	103.5	103.5
920	105.0	105.0	104.9	104.9	104.8	104.8	104.8	104.7	104.7	104.6	104.6
930	106.2	106.1	106.1	106.0	106.0	105.9	105.9	105.9	105.8	105.8	105.7
940	107.3	107.3	107.2	107.2	107.1	107.1	107.0	107.0	107.0	106.9	106.9
950	108.4	108.4	108.4	108.3	108.3	108.2	108.2	108.1	108.1	108.1	108.0
960	109.6	109.5	109.5	109.5	109.4	109.4	109.3	109.3	109.2	109.2	109.1
970	110.7	110.7	110.6	110.6	110.5	110.5	110.5	110.4	110.4	110.3	110.3
980	111.9	111.8	111.8	111.7	111.7	111.6	111.6	111.6	111.5	111.5	111.4
990	113.0	113.0	112.9	112.9	112.8	112.8	112.7	112.7	112.6	112.6	112.6
1,000	114.1	114.1	114.1	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
1,010	115.3	115.2	115.2	115.2	115.1	115.1	115.0	115.0	114.9	114.9	114.8
1,020	116.4	116.4	116.3	116.3	116.2	116.2	116.2	116.1	116.1	116.0	116.0
1,030	117.6	117.5	117.5	117.4	117.4	117.3	117.3	117.2	117.2	117.1	117.1
1,040	118.7	118.7	118.6	118.6	118.5	118.5	118.4	118.4	118.3	118.3	118.2
1,050	119.9	119.8	119.8	119.7	119.7	119.6	119.6	119.5	119.5	119.4	119.4
1,060	121.0	120.9	120.9	120.9	120.8	120.8	120.7	120.7	120.6	120.6	120.5
1,070	122.1	122.1	122.0	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6
1,080	123.3	123.2	123.2	123.1	123.1	123.1	123.0	123.0	122.9	122.9	122.8
1,090	124.4	124.4	124.3	124.3	124.2	124.2	124.2	124.1	124.1	124.0	123.9
1,100	125.6	125.5	125.5	125.4	125.4	125.3	125.3	125.2	125.2	125.1	125.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−23.0	−22.9	−22.8	−22.7	−22.6	−22.5	−22.4	−22.3	−22.2	−22.1	−22.0
700	79.6	79.5	79.5	79.5	79.5	79.4	79.4	79.4	79.3	79.3	79.3
710	80.7	80.7	80.7	80.6	80.6	80.6	80.5	80.5	80.5	80.4	80.4
720	81.9	81.8	81.8	81.8	81.7	81.7	81.7	81.6	81.6	81.6	81.5
730	83.0	83.0	82.9	82.9	82.9	82.8	82.8	82.8	82.7	82.7	82.7
740	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9	83.9	83.8	83.8
750	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.0	85.0	85.0	84.9
760	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1
770	87.5	87.5	87.5	87.4	87.4	87.4	87.3	87.3	87.3	87.2	87.2
780	88.7	88.6	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.3
790	89.8	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.5
800	90.9	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.6	90.6
810	92.1	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.7
820	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.9
830	94.4	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1	94.0	94.0
840	95.5	95.5	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1
850	96.6	96.6	96.6	96.5	96.5	96.4	96.4	96.4	96.3	96.3	96.2
860	97.8	97.7	97.7	97.7	97.6	97.6	97.5	97.5	97.5	97.4	97.4
870	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.6	98.6	98.6	98.5
880	100.0	100.0	100.0	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.6
890	101.2	101.1	101.1	101.1	101.0	101.0	100.9	100.9	100.9	100.8	100.8
900	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.0	102.0	102.0	101.9
910	103.5	103.4	103.4	103.3	103.3	103.3	103.2	103.2	103.1	103.1	103.0
920	104.6	104.6	104.5	104.5	104.4	104.4	104.3	104.3	104.3	104.2	104.2
930	105.7	105.7	105.6	105.6	105.6	105.5	105.5	105.4	105.4	105.4	105.3
940	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6	106.5	106.5	106.4
950	108.0	108.0	107.9	107.9	107.8	107.8	107.7	107.7	107.7	107.6	107.6
960	109.1	109.1	109.1	109.0	109.0	108.9	108.9	108.8	108.8	108.8	108.7
970	110.3	110.2	110.2	110.1	110.1	110.1	110.0	110.0	109.9	109.9	109.8
980	111.4	111.4	111.3	111.3	111.2	111.2	111.2	111.1	111.1	111.0	111.0
990	112.6	112.5	112.5	112.4	112.4	112.3	112.3	112.2	112.2	112.2	112.1
1,000	113.7	113.6	113.6	113.6	113.5	113.5	113.4	113.4	113.3	113.3	113.2
1,010	114.8	114.8	114.7	114.7	114.6	114.6	114.6	114.5	114.5	114.4	114.4
1,020	116.0	115.9	115.9	115.8	115.8	115.7	115.7	115.6	115.6	115.5	115.5
1,030	117.1	117.1	117.0	117.0	116.9	116.9	116.8	116.8	116.7	116.7	116.6
1,040	118.2	118.2	118.1	118.1	118.1	118.0	118.0	117.9	117.9	117.8	117.8
1,050	119.4	119.3	119.3	119.2	119.2	119.1	119.1	119.0	119.0	118.9	118.9
1,060	120.5	120.5	120.4	120.4	120.3	120.3	120.2	120.2	120.1	120.1	120.0
1,070	121.6	121.6	121.6	121.5	121.5	121.4	121.4	121.3	121.3	121.2	121.2
1,080	122.8	122.7	122.7	122.6	122.6	122.5	122.5	122.4	122.4	122.3	122.3
1,090	123.9	123.9	123.8	123.8	123.7	123.7	123.6	123.6	123.5	123.5	123.4
1,100	125.1	125.0	125.0	124.9	124.9	124.8	124.8	124.7	124.7	124.6	124.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−22.0	−21.9	−21.8	−21.7	−21.6	−21.5	−21.4	−21.3	−21.2	−21.1	−21.0
700	79.3	79.2	79.2	79.2	79.1	79.1	79.1	79.0	79.0	79.0	78.9
710	80.4	80.4	80.3	80.3	80.3	80.2	80.2	80.2	80.1	80.1	80.1
720	81.5	81.5	81.5	81.4	81.4	81.4	81.3	81.3	81.3	81.2	81.2
730	82.7	82.6	82.6	82.6	82.5	82.5	82.5	82.4	82.4	82.4	82.3
740	83.8	83.8	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5
750	84.9	84.9	84.9	84.8	84.8	84.8	85.7	84.7	84.7	84.6	84.6
760	86.1	86.0	86.0	86.0	85.9	85.9	85.9	85.8	85.8	85.8	85.7
770	87.2	87.2	87.1	87.1	87.1	87.0	87.0	86.9	86.9	86.9	86.8
780	88.3	88.3	88.3	88.2	88.2	88.1	88.1	88.1	88.0	88.0	88.0
790	89.5	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.1	89.1
800	90.6	90.6	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3	90.2
810	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.4
820	92.9	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.5	92.5
830	94.0	93.9	93.9	93.9	93.8	93.8	93.8	93.7	93.7	93.6	93.6
840	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
850	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0	95.9	95.9	95.9
860	97.4	97.3	97.3	97.3	97.2	97.2	97.1	97.1	97.1	97.0	97.0
870	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.2	98.2	98.2	98.1
880	99.6	99.6	99.6	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.3
890	100.8	100.7	100.7	100.7	100.6	100.6	100.5	100.5	100.5	100.4	100.4
900	101.9	101.9	101.8	101.8	101.8	101.7	101.7	101.6	101.6	101.6	101.5
910	103.0	103.0	103.0	102.9	102.9	102.8	102.8	102.8	102.7	102.7	102.6
920	104.2	104.1	104.1	104.1	104.0	104.0	103.9	103.9	103.8	103.8	103.8
930	105.3	105.3	105.2	105.2	105.1	105.1	105.1	105.0	105.0	104.9	104.9
940	106.4	106.4	106.4	106.3	106.3	106.2	106.2	106.1	106.1	106.1	106.0
950	107.6	107.5	107.5	107.4	107.4	107.4	107.3	107.3	107.2	107.2	107.2
960	108.7	108.7	108.6	108.6	108.5	108.5	108.5	108.4	108.4	108.3	108.3
970	109.8	109.8	109.8	109.7	109.7	109.6	109.6	109.5	109.5	109.4	109.4
980	111.0	110.9	110.9	110.8	110.8	110.8	110.7	110.7	110.6	110.6	110.5
990	112.1	112.1	112.0	112.0	111.9	111.9	111.8	111.8	111.8	111.7	111.7
1,000	113.2	113.2	113.1	113.1	113.1	113.0	113.0	112.9	112.9	112.8	112.8
1,010	114.4	114.3	114.3	114.2	114.2	114.1	114.1	114.1	114.0	114.0	113.9
1,020	115.5	115.5	115.4	115.4	115.3	115.3	115.2	115.2	115.1	115.1	115.0
1,030	116.6	116.6	116.5	116.5	116.5	116.4	116.4	116.3	116.3	116.2	116.2
1,040	117.8	117.7	117.7	117.6	117.6	117.5	117.5	117.4	117.4	117.3	117.3
1,050	118.9	118.9	118.8	118.8	118.7	118.7	118.6	118.6	118.5	118.5	118.4
1,060	120.0	120.0	119.9	119.9	119.8	119.8	119.7	119.7	119.7	119.6	119.6
1,070	121.2	121.1	121.1	121.0	121.0	120.9	120.9	120.8	120.8	120.7	120.7
1,080	122.3	122.2	122.2	122.2	122.1	122.1	122.0	122.0	121.9	121.9	121.8
1,090	123.4	123.4	123.3	123.3	123.2	123.2	123.1	123.1	123.0	123.0	122.9
1,100	124.6	124.5	124.5	124.4	124.4	124.3	124.3	124.2	124.2	124.1	124.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−21.0	−20.9	−20.8	−20.7	−20.6	−20.5	−20.4	−20.3	−20.2	−20.1	−20.0
700	78.9	78.9	78.9	78.9	78.8	78.8	78.8	78.7	78.7	78.7	78.6
710	80.1	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.8	79.8	79.8
720	81.2	81.2	81.1	81.1	81.1	81.0	81.0	81.0	80.9	80.9	80.9
730	82.3	82.3	82.3	82.2	82.2	82.2	82.1	82.1	82.1	82.0	82.0
740	83.5	83.4	83.4	83.4	83.3	83.3	83.3	83.2	83.2	83.2	83.1
750	84.6	84.6	84.5	84.5	84.5	84.4	84.4	84.4	84.3	84.3	84.3
760	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4
770	86.8	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.5	86.5
780	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.7	87.7	87.7	87.6
790	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.8	88.8	88.7
800	90.2	90.2	90.2	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9
810	91.4	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.0	91.0
820	92.5	92.4	92.4	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.1
830	93.6	93.6	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.2
840	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.4	94.4	94.4
850	95.9	95.8	95.8	94.8	95.7	95.7	95.6	95.6	95.6	95.5	95.5
860	97.0	97.0	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.7	96.6
870	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.7
880	99.3	99.2	99.2	99.1	99.1	99.1	99.0	99.0	98.9	98.9	98.9
890	100.4	100.3	100.3	100.3	100.2	100.2	100.1	100.1	100.1	100.0	100.0
900	101.5	101.5	101.4	101.4	101.4	101.3	101.3	101.2	101.2	101.2	101.1
910	102.6	102.6	102.6	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.2
920	103.8	103.7	103.7	103.6	103.6	103.6	103.5	103.5	103.4	103.4	103.4
930	104.9	104.9	104.8	104.8	104.7	104.7	104.6	104.6	104.6	104.5	104.5
940	106.0	106.0	105.9	105.9	105.9	105.8	105.8	105.7	105.7	105.6	105.6
950	107.2	107.1	107.1	107.0	107.0	106.9	106.9	106.9	106.8	106.8	106.7
960	108.3	108.2	108.2	108.1	108.1	108.1	108.0	108.0	107.9	107.9	107.9
970	109.4	109.4	109.3	109.3	109.2	109.2	109.1	109.1	109.1	109.0	109.0
980	110.5	110.5	110.4	110.4	110.4	110.3	110.3	110.2	110.2	110.1	110.1
990	111.7	111.6	111.6	111.5	111.5	111.4	111.4	111.4	111.3	111.3	111.2
1,000	112.8	112.7	112.7	112.7	112.6	112.6	112.5	112.5	112.4	112.4	112.3
1,010	113.9	113.9	113.8	113.8	113.7	113.7	113.6	113.6	113.6	113.5	113.5
1,020	115.0	115.0	115.0	114.9	114.9	114.8	114.8	114.7	114.7	114.6	114.6
1,030	116.2	116.1	116.1	116.0	116.0	115.9	115.9	115.9	115.8	115.8	115.7
1,040	117.3	117.3	117.2	117.2	117.1	117.1	117.0	117.0	116.9	116.9	116.8
1,050	118.4	118.4	118.3	118.3	118.2	118.2	118.1	118.1	118.1	118.0	118.0
1,060	119.6	119.5	119.5	119.4	119.4	119.3	119.3	119.2	119.2	119.1	119.1
1,070	120.7	120.6	120.6	120.5	120.5	120.4	120.4	120.4	120.3	120.3	120.2
1,080	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.5	121.4	121.4	121.3
1,090	122.9	122.9	122.8	122.8	122.7	122.7	122.6	122.6	122.6	122.5	122.5
1,100	124.1	124.0	124.0	123.9	123.9	123.8	123.8	123.7	123.7	123.6	123.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−20.0	−19.9	−19.8	−19.7	−19.6	−19.5	−19.4	−19.3	−19.2	−19.1	−19.0
700	78.6	78.6	78.6	78.5	78.5	78.5	78.5	78.4	78.4	78.4	78.3
710	79.8	79.7	79.7	79.7	79.6	79.6	79.6	79.5	79.5	79.5	79.4
720	80.9	80.9	80.8	80.8	80.8	80.7	80.7	80.7	80.6	80.6	80.6
730	82.0	82.0	81.9	81.9	81.9	81.8	81.8	81.8	81.7	81.7	81.7
740	83.1	83.1	83.1	83.0	83.0	83.0	82.9	82.9	82.9	82.8	82.8
750	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.0	84.0	84.0	83.9
760	85.4	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.0
770	86.5	86.5	86.4	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2
780	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.3	87.3	87.3
790	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.5	88.4	88.4
800	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.5
810	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.7	90.7	90.7	90.6
820	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8
830	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0	92.9	92.9	92.9
840	94.4	94.3	94.3	94.3	94.2	94.2	94.1	94.1	94.1	94.0	94.0
850	95.5	95.5	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1
860	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.3	96.3	96.3	96.2
870	97.7	97.7	97.7	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.4
880	98.9	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.5	98.5	98.5
890	100.0	99.9	99.9	99.9	99.8	99.8	99.7	99.7	99.7	99.6	99.6
900	101.1	101.1	101.0	101.0	101.0	100.9	100.9	100.8	100.8	100.8	100.7
910	102.2	102.2	102.2	102.1	102.1	102.0	102.0	102.0	101.9	101.9	101.8
920	103.4	103.3	103.3	103.2	103.2	103.2	103.1	103.1	103.0	103.0	103.0
930	104.5	104.4	104.4	104.4	104.3	104.3	104.2	104.2	104.2	104.1	104.1
940	105.6	105.6	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2
950	106.7	106.7	106.6	106.6	106.6	106.5	106.5	106.4	106.4	106.3	106.3
960	107.9	107.8	107.8	107.7	107.7	107.6	107.6	107.6	107.5	107.5	107.4
970	109.0	108.9	108.9	108.8	108.8	108.8	108.7	108.7	108.6	108.6	108.5
980	110.1	110.1	110.0	110.0	109.9	109.9	109.8	109.8	109.8	109.7	109.7
990	111.2	111.2	111.1	111.1	111.0	111.0	111.0	110.9	110.9	110.8	110.8
1,000	112.3	112.3	112.3	112.2	112.2	112.1	112.1	112.0	112.0	111.9	111.9
1,010	113.5	113.4	113.4	113.3	113.3	113.2	113.2	113.2	113.1	113.1	113.0
1,020	114.6	114.5	114.5	114.5	114.4	114.4	114.3	114.3	114.2	114.2	114.1
1,030	115.7	115.7	115.6	115.6	115.5	115.5	115.4	115.4	115.3	115.3	115.3
1,040	116.8	116.8	116.7	116.7	116.7	116.6	116.6	116.5	116.5	116.4	116.4
1,050	118.0	117.9	117.9	117.8	117.8	117.7	117.7	117.6	117.6	117.5	117.5
1,060	119.1	119.0	119.0	118.9	118.9	118.8	118.8	118.8	118.7	118.7	118.6
1,070	120.2	120.2	120.1	120.1	120.0	120.0	119.9	119.9	119.8	119.8	119.7
1,080	121.3	121.3	121.2	121.2	121.1	121.1	121.0	121.0	120.9	120.9	120.9
1,090	122.5	122.4	122.4	122.3	122.3	122.2	122.2	122.1	122.1	122.0	122.0
1,100	123.6	123.5	123.5	123.4	123.4	123.3	123.3	123.2	123.2	123.1	123.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−19.0	−18.9	−18.8	−18.7	−18.6	−18.5	−18.4	−18.3	−18.2	−18.1	−18.0
700	78.3	78.3	78.3	78.2	78.2	78.2	78.1	78.1	78.1	78.1	78.0
710	79.4	79.4	79.4	79.4	79.3	79.3	79.3	79.2	79.2	79.2	79.1
720	80.6	80.5	80.5	80.5	80.4	80.4	80.4	80.3	80.3	80.3	80.3
730	81.7	81.7	81.6	81.6	81.6	81.5	81.5	81.5	81.4	81.4	81.4
740	82.8	82.8	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5
750	83.9	83.9	83.9	83.8	83.8	83.8	83.7	83.7	83.7	83.6	83.6
760	85.0	85.0	85.0	84.9	84.9	84.9	84.8	84.8	84.8	84.7	84.7
770	86.2	86.1	86.1	86.1	86.0	86.0	86.0	85.9	85.9	85.9	85.8
780	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.0	87.0	87.0	86.9
790	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1
800	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2
810	90.6	90.6	90.6	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3
820	91.8	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.4	91.4
830	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.5	92.5
840	94.0	94.0	93.9	93.9	93.8	93.8	93.8	93.7	93.7	93.7	93.6
850	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
860	96.2	96.2	96.2	96.1	96.1	96.0	96.0	96.0	95.9	95.9	95.9
870	97.4	97.3	97.3	97.2	97.2	97.2	97.1	97.1	97.0	97.0	97.0
880	98.5	98.4	98.4	98.4	98.3	98.3	98.2	98.2	98.2	98.1	98.1
890	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.2	99.2
900	100.7	100.7	100.6	100.6	100.6	100.5	100.5	100.4	100.4	100.4	100.3
910	101.8	101.8	101.8	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.4
920	103.0	102.9	102.9	102.8	102.8	102.7	102.7	102.7	102.6	102.6	102.5
930	104.1	104.0	104.0	103.9	103.9	103.9	103.8	103.8	103.7	103.7	103.7
940	105.2	105.1	105.1	105.1	105.0	105.0	104.9	104.9	104.9	104.8	104.8
950	106.3	106.3	106.2	106.2	106.1	106.1	106.1	106.0	106.0	105.9	105.9
960	107.4	107.4	107.3	107.3	107.3	107.2	107.2	107.1	107.1	017.0	107.0
970	108.5	108.5	108.5	108.4	108.4	108.3	108.3	108.2	108.2	108.2	108.1
980	109.7	109.6	109.6	109.5	109.5	109.4	109.4	109.4	109.3	109.3	109.2
990	110.8	110.7	110.7	110.7	110.6	110.6	110.5	110.5	110.4	110.4	110.3
1,000	111.9	111.9	111.8	111.8	111.7	111.7	111.6	111.6	111.6	111.5	111.5
1,010	113.0	113.0	112.9	112.9	112.8	112.8	112.8	112.7	112.7	112.6	112.6
1,020	114.1	114.1	114.1	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
1,030	115.3	115.2	115.2	115.1	115.1	115.0	115.0	114.9	114.9	114.9	114.8
1,040	116.4	116.3	116.3	116.2	116.2	116.1	116.1	116.1	116.0	116.0	115.9
1,050	117.5	117.5	117.4	117.4	117.3	117.3	117.2	117.2	117.1	117.1	117.0
1,060	118.6	118.6	118.5	118.5	118.4	118.4	118.3	118.3	118.2	118.2	118.2
1,070	119.7	119.7	119.6	119.6	119.5	119.5	119.5	119.4	119.4	119.3	119.3
1,080	120.9	120.8	120.8	120.7	120.7	120.6	120.6	120.5	120.5	120.4	120.4
1,090	122.0	121.9	121.9	121.8	121.8	121.7	121.7	121.6	121.6	121.5	121.5
1,100	123.1	123.0	123.0	122.9	122.9	122.9	122.8	122.8	122.7	122.7	122.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density,} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−18.0	−17.9	−17.8	−17.7	−17.6	−17.5	−17.4	−17.3	−17.2	−17.1	−17.0
700	78.0	78.0	78.0	77.9	77.9	77.9	77.8	77.8	77.8	77.7	77.7
710	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9	78.9	78.8
720	80.3	80.2	80.2	80.2	80.1	80.1	80.1	80.0	80.0	80.0	79.9
730	81.4	81.3	81.3	81.3	81.2	81.2	81.2	81.1	81.1	81.1	81.0
740	82.5	82.4	82.4	82.4	82.4	82.3	82.3	82.3	82.2	82.2	82.2
750	83.6	83.6	83.5	83.5	83.5	83.4	83.4	83.4	83.3	83.3	83.3
760	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.4	84.4	84.4
770	85.8	85.8	85.8	85.7	85.7	85.7	85.6	85.6	85.6	85.5	85.5
780	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.7	86.6	86.6
790	88.1	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.7	87.7
800	89.2	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.8
810	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0	90.0	89.9
820	91.4	91.4	91.3	91.3	91.3	91.2	91.2	91.1	91.1	91.1	91.0
830	92.5	92.5	92.4	92.4	92.4	92.3	92.3	92.3	92.2	92.2	92.1
840	93.6	93.6	93.6	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3
850	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.4	94.4	94.4
860	95.9	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.6	95.5	95.5
870	97.0	96.9	96.9	96.9	96.8	96.8	96.7	96.7	96.7	96.6	96.6
880	98.1	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.7	97.7
890	99.2	99.2	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.9	98.8
900	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.0	100.0	100.0	99.9
910	101.4	101.4	101.4	101.3	101.3	101.2	101.2	101.2	101.1	101.1	101.0
920	102.5	102.5	102.5	112.4	102.4	102.3	102.3	102.3	102.2	102.2	102.1
930	103.7	103.6	103.6	103.5	103.5	103.5	103.4	193.4	103.3	193.3	103.3
940	104.8	104.7	104.7	104.7	104.6	104.6	104.5	104.5	104.4	104.4	104.4
950	105.9	105.8	105.8	105.8	105.7	105.7	105.6	105.6	105.6	105.5	105.5
960	107.0	107.0	106.9	106.9	106.8	106.8	106.8	106.7	106.7	106.6	106.6
970	108.1	108.1	108.0	108.0	108.0	107.9	107.9	107.8	107.8	107.7	107.7
980	109.2	109.2	109.1	109.1	109.1	109.0	109.0	108.9	108.9	108.9	108.8
990	110.3	110.3	110.3	110.2	110.2	110.1	110.1	110.0	110.0	110.0	109.9
1,000	111.5	111.4	111.4	111.3	111.3	111.2	111.2	111.2	111.1	111.1	111.0
1,010	112.6	112.5	112.5	112.4	112.4	112.4	112.3	112.3	112.2	112.2	112.1
1,020	113.7	113.6	113.6	113.6	113.5	113.5	113.4	113.4	113.3	113.3	113.2
1,030	114.8	114.8	114.7	114.7	114.6	114.6	114.5	114.5	114.4	114.4	114.4
1,040	115.9	115.9	115.8	115.8	115.7	115.7	115.7	115.6	115.6	115.5	115.5
1,050	117.0	117.0	116.9	116.9	116.9	116.8	116.8	116.7	116.7	116.6	116.6
1,060	118.2	118.1	118.1	118.0	118.0	117.9	117.9	117.8	117.8	117.7	117.7
1,070	119.3	119.2	119.2	119.1	119.1	119.0	119.0	118.9	118.9	118.8	118.8
1,080	120.4	120.3	120.3	120.2	120.2	120.1	120.1	120.1	120.0	120.0	119.9
1,090	121.5	121.4	121.4	121.4	121.3	121.3	121.2	121.2	121.1	121.1	121.0
1,100	122.6	122.6	122.5	122.5	122.4	122.4	122.3	122.3	122.2	122.2	122.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−17.0	−16.9	−16.8	−16.7	−16.6	−16.5	−16.4	−16.3	−16.2	−16.1	−16.0
700	77.7	77.7	77.7	77.6	77.6	77.6	77.5	77.5	77.5	77.4	77.4
710	78.8	78.8	78.8	78.7	78.7	78.7	78.6	78.6	78.6	78.6	78.5
720	79.9	79.9	79.9	79.8	79.8	79.8	79.8	79.7	79.7	79.7	79.6
730	81.0	81.0	81.0	81.0	80.9	80.9	80.9	80.8	80.8	80.8	80.7
740	82.2	82.1	82.1	82.1	82.0	82.0	82.0	81.9	81.9	81.9	81.8
750	83.3	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0	83.0	82.9
760	84.4	84.3	84.3	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.1
770	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3	85.2	85.2	85.2
780	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.4	86.3	86.3	86.3
790	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4
800	88.8	88.8	88.8	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.5
810	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7	89.6	89.6	89.6
820	91.0	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8	90.7	90.7
830	92.1	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8
840	93.3	93.2	93.2	93.2	93.1	93.1	93.0	93.0	93.0	92.9	92.9
850	94.4	94.3	94.3	94.3	94.2	94.2	94.1	94.1	94.1	94.0	94.0
860	95.5	95.4	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.1	95.1
870	96.6	96.6	96.5	96.5	96.4	96.4	96.4	96.3	96.3	96.3	96.2
880	97.7	97.7	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.4	97.3
890	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.5	98.5	98.5	98.4
900	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.6	99.6	99.6	99.5
910	101.0	101.0	101.0	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.6
920	102.1	102.1	102.1	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.7
930	103.3	103.2	103.2	103.1	103.1	103.1	103.0	103.0	102.9	102.9	102.9
940	104.4	104.3	104.3	104.2	104.2	104.2	104.1	104.1	104.0	104.0	104.0
950	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.1	105.1	105.1
960	106.6	106.5	106.5	106.5	106.4	106.4	106.3	106.3	106.3	106.2	106.2
970	107.7	107.7	107.6	107.6	107.5	107.5	107.4	107.4	107.4	107.3	107.3
980	108.8	108.8	108.7	108.7	108.6	108.6	108.6	108.5	108.5	108.4	108.4
990	109.9	109.9	109.8	109.8	109.7	109.7	109.7	109.6	109.6	109.5	109.5
1,000	111.0	111.0	110.9	110.9	110.9	110.8	110.8	110.7	110.7	110.6	110.6
1,010	112.1	112.1	112.1	112.0	112.0	111.9	111.9	111.8	111.8	111.7	111.7
1,020	113.2	113.2	113.2	113.1	113.1	113.0	113.0	112.9	112.9	112.9	112.8
1,030	114.4	114.3	114.3	114.2	114.2	114.1	114.1	114.0	114.0	114.0	113.9
1,040	115.5	115.4	115.4	115.3	115.3	115.2	115.2	115.2	115.1	115.1	115.0
1,050	116.6	116.5	116.5	116.4	116.4	116.4	116.3	116.3	116.2	116.2	116.1
1,060	117.7	117.6	117.6	117.6	117.5	117.5	117.4	117.4	117.3	117.3	117.2
1,070	118.8	118.8	118.7	118.7	118.6	118.6	118.5	118.5	118.4	118.4	118.3
1,080	119.9	119.9	119.8	119.8	119.7	119.7	119.6	119.6	119.5	119.5	119.4
1,090	121.0	121.0	120.9	120.9	120.8	120.8	120.7	120.7	120.6	120.6	120.6
1,100	122.1	122.1	122.0	122.0	121.9	121.9	121.8	121.8	121.8	121.7	121.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−16.0	−15.9	−15.8	−15.7	−15.6	−15.5	−15.4	−15.3	−15.2	−15.1	−15.0
700	77.4	77.4	77.4	77.3	77.3	77.3	77.2	77.2	77.2	77.1	77.1
710	78.5	78.5	78.5	78.4	78.4	78.4	78.3	78.3	78.3	78.2	78.2
720	79.6	79.6	79.6	79.5	79.5	79.5	79.4	79.4	79.4	79.3	79.3
730	80.7	80.7	80.7	80.6	80.6	80.6	80.5	80.5	80.5	80.5	80.4
740	81.8	81.8	81.8	81.7	81.7	81.7	81.6	81.6	81.6	81.6	81.5
750	82.9	82.9	82.9	82.8	82.8	82.8	82.8	82.7	82.7	82.7	82.6
760	84.1	84.0	84.0	84.0	83.9	83.9	83.9	83.8	83.8	83.8	83.7
770	85.2	85.1	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9	84.8
780	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0	86.0	86.0	85.9
790	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.0
800	88.5	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1
810	89.6	89.5	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.2
820	90.7	90.7	90.6	90.6	90.5	90.5	90.5	90.4	90.4	90.4	90.3
830	91.8	91.8	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.4
840	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.6	92.6	92.6	92.5
850	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.7	93.7	93.7	93.6
860	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
870	96.2	96.2	96.1	96.1	96.1	96.0	96.0	96.0	95.9	95.9	95.8
880	97.3	97.3	97.2	97.2	97.2	97.1	97.1	97.1	97.0	97.0	96.9
890	98.4	98.4	98.4	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.0
900	99.5	99.5	99.5	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.1
910	100.6	100.6	100.6	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3
920	101.7	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.4
930	102.9	102.8	102.8	102.7	102.7	102.7	102.6	102.6	102.5	102.5	102.5
940	104.0	103.9	103.9	103.8	103.8	103.8	103.7	103.7	103.6	103.6	103.6
950	105.1	105.0	105.0	104.9	104.9	104.9	104.8	104.8	104.7	104.7	104.7
960	106.2	106.1	106.1	106.0	106.0	106.0	105.9	105.9	105.8	105.8	105.8
970	107.3	107.2	107.2	107.2	107.1	107.1	107.0	107.0	106.9	106.9	106.9
980	108.4	108.3	108.3	108.3	108.2	108.2	108.1	108.1	108.0	108.0	108.0
990	109.5	109.4	109.4	109.4	109.3	109.3	109.2	109.2	109.2	109.1	109.1
1,000	110.6	110.6	110.5	110.5	110.4	110.4	110.3	110.3	110.3	110.2	110.2
1,010	111.7	111.7	111.6	111.6	111.5	111.5	111.4	111.4	111.4	111.3	111.3
1,020	112.8	112.8	112.7	112.7	112.6	112.6	112.5	112.5	112.5	112.4	112.4
1,030	113.9	113.9	113.8	113.8	113.7	113.7	113.6	113.6	113.6	113.5	113.5
1,040	115.0	115.0	114.9	114.9	114.8	114.8	114.8	114.7	114.7	114.6	114.6
1,050	116.1	116.1	116.0	116.0	115.9	115.9	115.9	115.8	115.8	115.7	115.7
1,060	117.2	117.2	117.1	117.1	117.1	117.0	117.0	116.9	116.9	116.8	116.8
1,070	118.3	118.3	118.2	118.2	118.2	118.1	118.1	118.0	118.0	117.9	117.9
1,080	119.4	119.4	119.4	119.3	119.3	119.2	119.2	119.1	119.1	119.0	119.0
1,090	120.6	120.5	120.5	120.4	120.4	120.3	120.3	120.2	120.2	120.1	120.1
1,100	121.7	121.6	121.6	121.5	121.5	121.4	121.4	121.3	121.3	121.2	121.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−15.0	−14.9	−14.8	−14.7	−14.6	−14.5	−14.4	−14.3	−14.2	−14.1	−14.0
700	77.1	77.1	77.1	77.0	77.0	77.0	76.9	76.9	76.9	76.8	76.8
710	78.2	78.2	78.2	78.1	78.1	78.1	78.0	78.0	78.0	77.9	77.9
720	79.3	79.3	79.3	79.2	79.2	79.2	79.1	79.1	79.1	79.0	79.0
730	80.4	80.4	80.4	80.3	80.3	80.3	80.2	80.2	80.2	80.1	80.1
740	81.5	81.5	81.5	81.4	81.4	81.4	81.3	81.3	81.3	81.2	81.2
750	82.6	82.6	82.6	82.5	82.5	82.5	82.4	82.4	82.4	82.3	82.3
760	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.4	83.4
770	84.8	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.5	84.5
780	85.9	85.9	85.9	85.8	85.8	85.8	85.7	85.7	85.7	85.6	85.6
790	87.0	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7
800	88.1	88.1	88.1	88.0	88.0	88.0	87.9	87.9	87.9	87.8	87.8
810	89.2	89.2	89.2	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9
820	90.3	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0
830	91.4	91.4	91.4	91.3	91.3	91.3	91.2	91.2	91.2	91.1	91.1
840	92.5	92.5	92.5	92.4	92.4	92.4	92.3	92.3	92.3	92.2	92.2
850	93.6	93.6	93.6	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3
860	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.4	94.4	94.4
870	95.8	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.5	95.5	95.5
880	96.9	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.6	96.6	96.6
890	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.7	97.7	97.7
900	99.1	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.8	98.8	98.8
910	100.3	100.2	100.2	100.1	100.1	100.1	100.0	100.0	99.9	99.9	99.9
920	101.4	101.3	101.3	101.2	101.2	101.2	101.1	101.1	101.0	101.0	101.0
930	102.5	102.4	102.4	102.3	102.3	102.3	102.2	102.2	102.1	102.1	102.1
940	103.6	103.5	103.5	103.4	103.4	103.4	103.3	103.3	103.2	103.2	103.2
950	104.7	104.6	104.6	104.5	104.5	104.5	104.4	104.4	104.3	104.3	104.3
960	105.8	105.7	105.7	105.6	105.6	105.6	105.5	105.5	105.4	105.4	105.4
970	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6	106.5	106.5	106.5
980	108.0	107.9	107.9	107.8	107.8	107.8	107.7	107.7	107.6	107.6	107.5
990	109.1	109.0	109.0	108.9	108.9	108.9	108.8	108.8	108.7	108.7	108.6
1,000	110.2	110.1	110.1	110.0	110.0	110.0	109.9	109.9	109.8	109.8	109.7
1,010	111.3	111.2	111.2	111.1	111.1	111.1	111.0	111.0	110.9	110.9	110.8
1,020	112.4	112.3	112.3	112.2	112.2	112.2	112.1	112.1	112.0	112.0	111.9
1,030	113.5	113.4	113.4	113.3	113.3	113.3	113.2	113.2	113.1	113.1	113.0
1,040	114.6	114.5	114.5	114.4	114.4	114.4	114.3	114.3	114.2	114.2	114.1
1,050	115.7	115.6	115.6	115.5	115.5	115.5	115.4	115.4	115.3	115.3	115.2
1,060	116.8	116.7	116.7	116.6	116.6	116.6	116.5	116.5	116.4	116.4	116.3
1,070	117.9	117.8	117.8	117.7	117.7	117.7	117.6	117.6	117.5	117.5	117.4
1,080	119.0	118.9	118.9	118.8	118.8	118.8	118.7	118.7	118.6	118.6	118.5
1,090	120.1	120.0	120.0	119.9	119.9	119.9	119.8	119.8	119.7	119.7	119.6
1,100	121.2	121.1	121.1	121.0	121.0	121.0	120.9	120.9	120.8	120.8	120.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−14.0	−13.9	−13.8	−13.7	−13.6	−13.5	−13.4	−13.3	−13.2	−13.1	−13.0
700	76.8	76.8	76.8	76.7	76.7	76.7	76.6	76.6	76.6	76.6	76.5
710	77.9	77.9	77.9	77.8	77.8	77.8	77.7	77.7	77.7	77.6	77.6
720	79.0	79.0	79.0	78.9	78.9	78.9	78.8	78.8	78.8	78.7	78.7
730	80.1	80.1	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.8	79.8
740	81.2	81.2	81.1	81.1	81.1	81.1	81.0	81.0	81.0	80.9	80.9
750	82.3	82.3	82.2	82.2	82.2	82.1	82.1	82.1	82.1	82.0	82.0
760	83.4	83.4	83.3	83.3	83.3	83.2	83.2	83.2	83.1	83.1	83.1
770	84.5	84.5	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2	84.2
780	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3
790	86.7	86.7	86.6	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.4
800	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5
810	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.6	88.6	88.6	88.5
820	90.0	90.0	89.9	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.6
830	91.1	91.0	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8	90.7
840	92.2	92.1	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.9	91.8
850	93.3	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0	92.9
860	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.0	94.0
870	95.5	95.4	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.1	95.1
880	96.6	96.5	96.5	96.5	96.4	96.4	96.3	96.3	96.3	96.2	96.2
890	97.7	97.6	97.6	97.6	97.5	97.5	97.4	97.4	97.4	97.3	97.3
900	98.8	98.7	98.7	98.7	98.6	98.6	98.5	98.5	98.5	98.4	98.4
910	99.9	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.6	99.5	99.5
920	101.0	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.7	100.6	100.6
930	102.1	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.7	101.7	101.7
940	103.2	103.1	103.1	103.0	103.0	103.0	102.9	102.9	102.8	102.8	102.8
950	104.3	104.2	104.2	104.1	104.1	104.1	104.0	104.0	103.9	103.9	103.9
960	105.4	105.3	105.3	105.2	105.2	105.2	105.1	105.1	105.0	105.0	104.9
970	106.5	106.4	106.4	106.3	106.3	106.2	106.2	106.2	106.1	106.1	106.0
980	107.5	107.5	107.5	107.4	107.4	107.3	107.3	107.3	107.2	107.2	107.1
990	108.6	108.6	108.6	108.5	108.5	108.4	108.4	108.4	108.3	108.3	108.2
1,000	109.7	109.7	109.7	109.6	109.6	109.5	109.5	109.4	109.4	109.4	109.3
1,010	110.8	110.8	110.8	110.7	110.7	110.6	110.6	110.5	110.5	110.5	110.4
1,020	111.9	111.9	111.9	111.8	111.8	111.7	111.7	111.6	111.6	111.6	111.5
1,030	113.0	113.0	112.9	112.9	112.9	112.8	112.8	112.7	112.7	112.6	112.6
1,040	114.1	114.1	114.0	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
1,050	115.2	115.2	115.1	115.1	115.1	115.0	115.0	114.9	114.9	114.8	114.8
1,060	116.3	116.3	116.2	116.2	116.1	116.1	116.1	116.0	116.0	115.9	115.9
1,070	117.4	117.4	117.3	117.3	117.2	117.2	117.2	117.1	117.1	117.0	117.0
1,080	118.5	118.5	118.4	118.4	118.3	118.3	118.2	118.2	118.2	118.1	118.1
1,090	119.6	119.6	119.5	119.5	119.4	119.4	119.3	119.3	119.3	119.2	119.2
1,100	120.7	120.7	120.6	120.6	120.5	120.5	120.4	120.4	120.3	120.3	120.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−13.0	−12.9	−12.8	−12.7	−12.6	−12.5	−12.4	−12.3	−12.2	−12.1	−12.0
700	76.5	76.5	76.5	76.4	76.4	76.4	76.3	76.3	76.3	76.3	76.2
710	77.6	77.6	77.6	77.5	77.5	77.5	77.4	77.4	77.4	77.3	77.3
720	78.7	78.7	78.6	78.6	78.6	78.6	78.5	78.5	78.5	78.4	78.4
730	79.8	79.8	79.7	79.7	79.7	79.6	79.6	79.6	79.6	79.5	79.5
740	80.9	80.9	80.8	80.8	80.8	80.7	80.7	80.7	80.6	80.6	80.6
750	82.0	82.0	81.9	81.9	81.9	81.8	81.8	81.8	81.7	81.7	81.7
760	83.1	83.0	83.0	83.0	83.0	82.9	82.9	82.9	82.8	82.8	82.8
770	84.2	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9	83.9	83.9
780	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.0	85.0	85.0	84.9
790	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0
800	87.5	87.4	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.1
810	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2
820	89.6	89.6	89.6	89.5	89.5	89.5	89.4	89.4	89.4	89.3	89.3
830	90.7	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.5	90.4	90.4
840	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.5	91.5	91.5
850	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.6
860	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.8	93.7	93.7	93.7
870	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
880	96.2	96.2	96.1	96.1	96.1	96.0	96.0	95.9	95.9	95.9	95.8
890	97.3	97.3	97.2	97.2	97.1	97.1	97.1	97.0	97.0	97.0	96.9
900	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.0	98.0
910	99.5	99.4	99.4	99.4	99.3	99.3	99.2	99.2	99.2	99.1	99.1
920	100.6	100.5	100.5	100.5	100.4	100.4	100.3	100.3	100.3	100.2	100.2
930	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.4	101.3	101.3
940	102.8	102.7	102.7	102.6	102.6	102.6	102.5	102.5	102.4	102.4	102.4
950	103.9	103.8	103.8	103.7	103.7	103.7	103.6	103.6	103.5	103.5	103.5
960	104.9	104.9	104.9	104.8	104.8	104.7	104.7	104.7	104.6	104.6	104.5
970	106.0	106.0	106.0	105.9	105.9	105.8	105.8	105.8	105.7	105.7	105.6
980	107.1	107.1	107.1	107.0	107.0	106.9	106.9	106.8	106.8	106.8	106.7
990	108.2	108.2	108.1	108.1	108.1	108.0	108.0	107.9	107.9	107.9	107.8
1,000	109.3	109.3	109.2	109.2	109.2	109.1	109.1	109.0	109.0	108.9	108.9
1,010	110.4	110.4	110.3	110.3	110.2	110.2	110.2	110.1	110.1	110.0	110.0
1,020	111.5	111.5	111.4	111.4	111.3	111.3	111.3	111.2	111.2	111.1	111.1
1,030	112.6	112.6	112.5	112.5	112.4	112.4	112.3	112.3	112.3	112.2	112.2
1,040	113.7	113.7	113.6	113.6	113.5	113.5	113.4	113.4	113.3	113.3	113.3
1,050	114.8	114.7	114.7	114.7	114.6	114.6	114.5	114.5	114.4	114.4	114.3
1,060	115.9	115.8	115.8	115.7	115.7	115.7	115.6	115.6	115.5	115.5	115.4
1,070	117.0	116.9	116.9	116.8	116.8	116.7	116.7	116.7	116.6	116.6	116.5
1,080	118.1	118.0	118.0	117.9	117.9	117.8	117.8	117.8	117.7	117.7	117.6
1,090	119.2	119.1	119.1	119.0	119.0	118.9	118.9	118.8	118.8	118.7	118.7
1,100	120.3	120.2	120.2	120.1	120.1	120.0	120.0	119.9	119.9	119.8	119.8

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−12.0	−11.9	−11.8	−11.7	−11.6	−11.5	−11.4	−11.3	−11.2	−11.1	−11.0
700	76. 2	76. 2	76. 2	76. 1	76. 1	76. 1	76. 1	76. 0	76. 0	76. 0	75. 9
710	77. 3	77. 3	77. 3	77. 2	77. 2	77. 2	77. 1	77. 1	77. 1	77. 1	77. 0
720	78. 4	78. 4	78. 3	78. 3	78. 3	78. 3	78. 2	78. 2	78. 2	78. 1	78. 1
730	79. 5	79. 5	79. 4	79. 4	79. 4	79. 3	79. 3	79. 3	79. 3	79. 2	79. 2
740	80. 6	80. 6	80. 5	80. 5	80. 5	80. 4	80. 4	80. 4	80. 3	80. 3	80. 3
750	81. 7	81. 6	81. 6	81. 6	81. 5	81. 5	81. 5	81. 5	81. 4	81. 4	81. 4
760	82. 8	82. 7	82. 7	82. 7	82. 6	82. 6	82. 6	82. 5	82. 5	82. 5	82. 4
770	83. 9	83. 8	83. 8	83. 8	83. 7	83. 7	83. 7	83. 6	83. 6	83. 6	83. 5
780	84. 9	84. 9	84. 9	84. 8	84. 8	84. 8	84. 7	84. 7	84. 7	84. 6	84. 6
790	86. 0	86. 0	86. 0	85. 9	85. 9	85. 9	85. 8	85. 8	85. 8	85. 7	85. 7
800	87. 1	87. 1	87. 1	87. 0	87. 0	87. 0	86. 9	86. 9	86. 9	86. 8	86. 8
810	88. 2	88. 2	88. 1	88. 1	88. 1	88. 0	88. 0	88. 0	87. 9	87. 9	87. 9
820	89. 3	89. 3	89. 2	89. 2	89. 2	89. 1	89. 1	89. 1	89. 0	89. 0	89. 0
830	90. 4	90. 4	90. 3	90. 3	90. 2	90. 2	90. 2	90. 1	90. 1	90. 1	90. 0
840	91. 5	91. 4	91. 4	91. 4	91. 3	91. 3	91. 3	91. 2	91. 2	91. 2	91. 1
850	92. 6	92. 5	92. 5	92. 5	92. 4	92. 4	92. 4	92. 3	92. 3	92. 2	92. 2
860	93. 7	93. 6	93. 6	93. 5	93. 5	93. 5	93. 4	93. 4	93. 4	93. 3	93. 3
870	94. 7	94. 7	94. 7	94. 6	94. 6	94. 6	94. 5	94. 5	94. 5	94. 4	94. 4
880	95. 8	95. 8	95. 8	95. 7	95. 7	95. 6	95. 6	95. 6	95. 5	95. 5	95. 5
890	96. 9	96. 9	96. 8	96. 8	96. 8	96. 7	96. 7	96. 7	96. 6	96. 6	96. 6
900	98. 0	98. 0	97. 9	97. 9	97. 9	97. 8	97. 8	97. 7	97. 7	97. 7	97. 6
910	99. 1	99. 1	99. 0	99. 0	98. 9	98. 9	98. 9	98. 8	98. 8	98. 8	98. 7
920	100. 2	100. 2	100. 1	100. 1	100. 0	100. 0	100. 0	99. 9	99. 9	99. 8	99. 8
930	101. 3	101. 2	101. 2	101. 2	101. 1	101. 1	101. 0	101. 0	101. 0	100. 9	100. 9
940	102. 4	102. 3	102. 3	102. 3	102. 2	102. 2	102. 1	102. 1	102. 1	102. 0	102. 0
950	103. 5	103. 4	103. 4	103. 3	103. 3	103. 3	103. 2	103. 2	103. 1	103. 1	103. 1
960	104. 5	104. 5	104. 5	104. 4	104. 4	104. 3	104. 3	104. 3	104. 2	104. 2	104. 1
970	105. 6	105. 6	105. 6	105. 5	105. 5	105. 4	105. 4	105. 4	105. 3	105. 3	105. 2
980	106. 7	106. 7	106. 6	106. 6	106. 6	106. 5	106. 5	106. 4	106. 4	106. 4	106. 3
990	107. 8	107. 8	107. 7	107. 7	107. 6	107. 6	107. 6	107. 5	107. 5	107. 4	107. 4
1, 000	108. 9	108. 9	108. 8	108. 8	108. 7	108. 7	108. 7	108. 6	108. 6	108. 5	108. 5
1, 010	110. 0	109. 9	109. 9	109. 9	109. 8	109. 8	109. 7	109. 7	109. 7	109. 6	109. 6
1, 020	111. 1	111. 0	111. 0	111. 0	110. 9	110. 9	110. 8	110. 8	110. 7	110. 7	110. 7
1, 030	112. 2	112. 1	112. 1	112. 0	112. 0	112. 0	111. 9	111. 9	111. 8	111. 8	111. 7
1, 040	113. 3	113. 2	113. 2	113. 1	113. 1	113. 0	113. 0	113. 0	112. 9	112. 9	112. 8
1, 050	114. 3	114. 3	114. 3	114. 2	114. 2	114. 1	114. 1	114. 0	114. 0	114. 0	113. 9
1, 060	115. 4	115. 4	115. 3	115. 3	115. 3	115. 2	115. 2	115. 1	115. 1	115. 0	115. 0
1, 070	116. 5	116. 5	116. 4	116. 4	116. 3	116. 3	116. 3	116. 2	116. 2	116. 1	116. 1
1, 080	117. 6	117. 6	117. 5	117. 5	117. 4	117. 4	117. 3	117. 3	117. 3	117. 2	117. 2
1, 090	118. 7	118. 7	118. 6	118. 6	118. 5	118. 5	118. 4	118. 4	118. 3	118. 3	118. 3
1, 100	119. 8	119. 7	119. 7	119. 7	119. 6	119. 6	119. 5	119. 5	119. 4	119. 4	119. 3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−11.0	−10.9	−10.8	−10.7	−10.6	−10.5	−10.4	−10.3	−10.2	−10.1	−10.0
700	75.9	75.9	75.9	75.9	75.8	75.8	75.8	75.7	75.7	75.7	75.6
710	77.0	77.0	77.0	76.9	76.9	76.9	76.8	76.8	76.8	76.8	76.7
720	78.1	78.1	78.0	78.0	78.0	78.0	77.9	77.9	77.9	77.8	77.8
730	79.2	79.2	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9
740	80.3	80.2	80.2	80.2	80.2	80.1	80.1	80.1	80.0	80.0	80.0
750	81.4	81.3	81.3	81.3	81.2	81.2	81.2	81.1	81.1	81.1	81.1
760	82.4	82.4	82.4	82.4	82.3	82.3	82.3	82.2	82.2	82.2	82.1
770	83.5	83.5	83.5	83.4	83.4	83.4	83.3	83.3	83.3	83.2	83.2
780	84.6	84.6	84.6	84.5	84.5	84.5	84.4	84.4	84.4	84.3	84.3
790	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4
800	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.5	86.5	86.5
810	87.9	87.8	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.5
820	89.0	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.7	88.6
830	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7
840	91.1	91.1	91.1	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8
850	92.2	92.2	92.1	92.1	92.1	92.0	92.0	92.0	92.0	91.9	91.9
860	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.0	93.0	93.0	92.9
870	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1	94.0
880	95.5	95.4	95.4	95.4	95.3	95.3	95.2	95.2	95.2	95.1	95.1
890	96.6	96.5	96.5	96.4	96.4	96.4	96.3	96.3	96.3	96.2	96.2
900	97.6	97.6	97.6	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.3
910	98.7	98.7	98.6	98.6	98.6	98.5	98.5	98.5	98.4	98.4	98.3
920	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.5	99.5	99.5	99.4
930	100.9	100.9	100.8	100.8	100.7	100.7	100.7	100.6	100.6	100.5	100.5
940	102.0	101.9	101.9	101.9	101.8	101.8	101.7	101.7	101.7	101.6	101.6
950	103.1	103.0	103.0	102.9	102.9	102.9	102.8	102.8	102.8	102.7	102.7
960	104.1	104.1	104.1	104.0	104.0	103.9	103.9	103.9	103.8	103.8	103.8
970	105.2	105.2	105.2	105.1	105.1	105.0	105.0	105.0	104.9	104.9	104.8
980	106.3	106.3	106.2	106.2	106.2	106.1	106.1	106.0	106.0	106.0	105.9
990	107.4	107.4	107.3	107.3	107.2	107.2	107.2	107.1	107.1	107.0	107.0
1,000	108.5	108.4	108.4	108.4	108.3	108.3	108.2	108.2	108.2	108.1	108.1
1,010	109.6	109.5	109.5	109.4	109.4	109.4	109.3	109.3	109.2	109.2	109.2
1,020	110.7	110.6	110.6	110.5	110.5	110.4	110.4	110.4	110.3	110.3	110.2
1,030	111.7	111.7	111.7	111.6	111.6	111.5	111.5	111.4	111.4	111.4	111.3
1,040	112.8	112.8	112.7	112.7	112.7	112.6	112.6	112.5	112.5	112.4	112.4
1,050	113.9	113.9	113.8	113.8	113.7	113.7	113.7	113.6	113.6	113.5	113.5
1,060	115.0	115.0	114.9	114.9	114.8	114.8	114.7	114.7	114.6	114.6	114.6
1,070	116.1	116.0	116.0	115.9	115.9	115.9	115.8	115.8	115.7	115.7	115.6
1,080	117.2	117.1	117.1	117.0	117.0	116.9	116.9	116.9	116.8	116.8	116.7
1,090	118.3	118.2	118.2	118.1	118.1	118.0	118.0	117.9	117.9	117.8	117.8
1,100	119.3	119.3	119.2	119.2	119.2	119.1	119.1	119.0	119.0	118.9	118.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−10.0	−9.9	−9.8	−9.7	−9.6	−9.5	−9.4	−9.3	−9.2	−9.1	−9.0
700	75.6	75.6	75.6	75.6	75.5	75.5	75.5	75.4	75.4	75.4	75.4
710	76.7	76.7	76.7	76.6	76.6	76.6	76.6	76.5	76.5	76.5	76.4
720	77.8	77.8	77.8	77.7	77.7	77.7	77.6	77.6	77.6	77.5	77.5
730	78.9	78.9	78.8	78.8	78.8	78.7	78.7	78.7	78.7	78.6	78.6
740	80.0	79.9	79.9	79.9	79.9	79.8	79.8	79.8	79.7	79.7	79.7
750	81.1	81.0	81.0	81.0	80.9	80.9	80.9	80.8	80.8	80.8	80.7
760	82.1	82.1	82.1	82.0	82.0	82.0	81.9	81.9	81.9	81.9	81.8
770	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0	83.0	82.9	82.9
780	84.3	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.0	84.0	84.0
790	85.4	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.1
800	86.5	86.4	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.1
810	87.5	87.5	87.5	87.4	87.4	87.4	87.3	87.3	87.3	87.2	87.2
820	88.6	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.3	88.3	88.3
830	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.5	89.4	89.4	89.4
840	90.8	90.7	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.5	90.4
850	91.9	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.5	91.5
860	92.9	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6
870	94.0	94.0	94.0	93.9	93.9	93.8	93.8	93.8	93.7	93.7	93.7
880	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.7
890	96.2	96.1	96.1	96.1	96.0	96.0	96.0	95.9	95.9	95.9	95.8
900	97.3	97.2	97.2	97.2	97.1	97.1	97.0	97.0	97.0	96.9	96.9
910	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.0	98.0	98.0
920	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.0
930	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.2	100.2	100.2	100.1
940	101.6	101.6	101.5	101.5	101.4	101.4	101.4	101.3	101.3	101.2	101.2
950	102.7	102.6	102.6	102.6	102.5	102.5	102.4	102.4	102.4	102.3	102.3
960	103.8	103.7	103.7	103.6	103.6	103.6	103.5	103.5	103.4	103.4	103.4
970	104.8	104.8	104.8	104.7	104.7	104.6	104.6	104.6	104.5	104.5	104.4
980	105.9	105.9	105.8	105.8	105.8	105.7	105.7	105.6	105.6	105.6	105.5
990	107.0	107.0	106.9	106.9	106.8	106.8	106.8	106.7	106.7	106.6	106.6
1,000	108.1	108.0	108.0	108.0	107.9	107.9	107.8	107.8	107.7	107.7	107.7
1,010	109.2	109.1	109.1	109.0	109.0	108.9	108.9	108.9	108.8	108.8	108.7
1,020	110.2	110.2	110.2	110.1	110.1	110.0	110.0	109.9	109.9	109.9	109.8
1,030	111.3	111.3	111.2	111.2	111.1	111.1	111.1	111.0	111.0	110.9	110.9
1,040	112.4	112.4	112.3	112.3	112.2	112.2	112.1	112.1	112.1	112.0	112.0
1,050	113.5	113.4	113.4	113.3	113.3	113.3	113.2	113.2	113.1	113.1	113.0
1,060	114.6	114.5	114.5	114.4	114.4	114.3	114.3	114.3	114.2	114.2	114.1
1,070	115.6	115.6	115.6	115.5	115.5	115.4	115.4	115.3	115.3	115.2	115.2
1,080	116.7	116.7	116.6	116.6	116.5	116.5	116.5	116.4	116.4	116.3	116.3
1,090	117.8	117.8	117.7	117.7	117.6	117.6	117.5	117.5	117.4	117.4	117.4
1,100	118.9	118.8	118.8	118.7	118.7	118.7	118.6	118.6	118.5	118.5	118.4

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−9.0	−8.9	−8.8	−8.7	−8.6	−8.5	−8.4	−8.3	−8.2	−8.1	−8.0
700	75. 4	75. 3	75. 3	75. 3	75. 2	75. 2	75. 2	75. 2	75. 1	75. 1	75. 1
710	76. 4	76. 4	76. 4	76. 4	76. 3	76 3	76. 3	76. 2	76. 2	76. 2	76. 2
720	77. 5	77. 5	77. 5	77. 4	77. 4	77. 4	77. 3	77. 3	77. 3	77. 3	77. 2
730	78. 6	78. 6	78. 5	78. 5	78. 5	78. 4	78. 4	78. 4	78. 4	78. 3	78. 3
740	79. 7	79. 6	79. 6	79. 6	79. 5	79. 5	79. 5	79. 5	79. 4	79. 4	79. 4
750	80. 7	80. 7	80. 7	80. 7	80. 6	80. 6	80. 6	80. 5	80. 5	80. 5	80. 4
760	81. 8	81. 8	81. 8	81. 7	81. 7	81. 7	81. 6	81. 6	81. 6	81. 5	81. 5
770	82. 9	82. 9	82. 8	82. 8	82. 8	82. 7	82. 7	82. 7	82. 6	82. 6	82. 6
780	84. 0	83. 9	83. 9	83. 9	83. 8	83. 8	93. 8	83. 8	83. 7	83. 7	83. 7
790	85. 1	85. 0	85. 0	85. 0	84. 9	84. 9	84. 9	84. 8	84. 8	84. 8	84. 7
800	86. 1	86. 1	86. 1	86. 0	86. 0	86. 0	85. 9	85. 9	85. 9	85. 8	85. 8
810	87. 2	87. 2	87. 1	87. 1	87. 1	87. 0	87. 0	87. 0	86. 9	86. 9	86. 9
820	88. 3	88. 2	88. 2	88. 2	88. 1	88. 1	88. 1	88. 0	88. 0	88. 0	87. 9
830	89. 4	89. 3	89. 3	89. 3	89. 2	89. 2	89. 2	89. 1	89. 1	89. 1	89. 0
840	90. 4	90. 4	90. 4	90. 3	90. 3	90. 3	90. 2	90. 2	90. 2	90. 1	90. 1
850	91. 5	91. 5	91. 4	91. 4	91. 4	91. 3	91. 3	91. 3	91. 2	91. 2	91. 2
860	92. 6	92. 6	92. 5	92. 5	92. 4	92. 4	92. 4	92. 3	92. 3	92. 3	92. 2
870	93. 7	93. 6	93. 6	93. 6	93. 5	93. 5	93. 5	93. 4	93. 4	93. 3	93. 3
880	94. 7	94. 7	94. 7	94. 6	94. 6	94. 6	94. 5	94. 5	94. 5	94. 4	94. 4
890	95. 8	95. 8	95. 7	95. 7	95. 7	95. 6	95. 6	95. 6	95. 5	95. 5	95. 5
900	96. 9	96. 9	96. 8	96. 8	96. 7	96. 7	96. 7	96. 6	9. 66	96. 6	96. 5
910	98. 0	97. 9	97. 9	97. 9	97. 8	97. 8	97. 8	97. 7	97. 7	97. 6	97. 6
920	99. 0	99. 0	99. 0	98. 9	98. 9	98. 9	98. 8	98. 8	98. 8	98. 7	98. 7
930	100. 1	100. 1	100. 1	100. 0	100. 0	99. 9	99. 9	99. 9	99. 8	99. 8	99. 7
940	101. 2	101. 2	101. 1	101. 1	101. 1	101. 1	101. 0	101. 0	100. 9	100. 9	100. 8
950	102. 3	102. 2	102. 2	102. 2	102. 1	102. 1	102. 1	102. 0	102. 0	101. 9	101. 9
960	103. 4	103. 3	103. 3	103. 2	103. 2	103. 2	103. 1	103. 1	103. 0	103. 0	103. 0
970	104. 4	104. 4	104. 4	104. 3	104. 3	104. 2	104. 2	104. 2	104. 1	104. 1	104. 0
980	105. 5	105. 5	105. 4	105. 4	105. 4	105. 3	105. 3	105. 2	105. 2	105. 2	105. 1
990	106. 6	106. 5	106. 5	106. 5	106. 4	106. 4	106. 3	106. 3	106. 3	106. 2	106. 2
1, 000	107. 7	107. 6	107. 6	107. 5	107. 5	107. 5	107. 4	107. 4	107. 3	107. 3	107. 3
1, 010	108. 7	108. 7	108. 7	108. 6	108. 6	108. 5	108. 5	108. 5	108. 4	108. 4	108. 3
1, 020	109. 8	109. 8	109. 7	109. 7	109. 7	109. 6	109. 6	109. 5	109. 5	109. 4	109. 4
1, 030	110. 9	110. 9	110. 8	110. 8	110. 7	110. 7	110. 6	110. 6	110. 6	110. 5	110. 5
1, 040	112. 0	111. 9	111. 9	111. 8	111. 8	111. 8	111. 7	111. 7	111. 6	111. 6	111. 6
1, 050	113. 0	113. 0	113. 0	112. 9	112. 9	112. 8	112. 8	112. 8	112. 7	112. 7	112. 6
1, 060	114. 1	114. 1	114. 0	114. 0	114. 0	113. 9	113. 9	113. 8	113. 8	113. 7	113. 7
1, 070	115. 2	115. 2	115. 1	115. 1	115. 0	115. 0	114. 9	114. 9	114. 9	114. 8	114. 8
1, 080	116. 3	116. 2	116. 2	116. 1	116. 1	116. 1	116. 0	116. 0	115. 9	115. 9	115. 8
1, 090	117. 4	117. 3	117. 3	117. 2	117. 2	117. 1	117. 1	117. 0	117. 0	117. 0	116. 9
1, 100	118. 4	118. 4	118. 3	118. 3	118. 3	118. 2	118. 2	118. 1	118. 1	118. 0	118. 0

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−8.0	−7.9	−7.8	−7.7	−7.6	−7.5	−7.4	−7.3	−7.2	−7.1	−7.0
700	75.1	75.1	75.0	75.0	75.0	74.9	74.9	74.9	74.9	74.8	74.8
710	76.2	76.1	76.1	76.1	76.0	76.0	76.0	76.0	75.9	75.9	75.9
720	77.2	77.2	77.2	77.1	77.1	77.1	77.1	77.0	77.0	77.0	76.9
730	78.3	78.3	78.2	78.2	78.2	78.1	78.1	78.1	78.1	78.0	78.0
740	79.4	79.3	79.3	79.3	79.2	79.2	79.2	79.2	79.1	79.1	79.1
750	80.4	80.4	80.4	80.4	80.3	80.3	80.3	80.2	80.2	80.2	80.1
760	81.5	81.5	81.5	81.4	81.4	81.4	81.3	31.3	81.3	81.2	81.2
770	82.6	82.6	82.5	82.5	82.5	82.4	82.4	82.4	82.3	82.3	82.3
780	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.4	83.4	83.4	83.3
790	84.7	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.4	84.4
800	85.8	85.8	85.7	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5
810	86.9	86.8	86.8	86.8	96.7	86.7	86.7	86.6	86.6	86.6	86.6
820	87.9	87.9	87.9	87.9	87.8	87.8	87.8	87.7	87.7	87.7	87.6
830	89.0	89.0	89.0	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7
840	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.8
850	91.2	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9	90.8
860	92.2	92.2	92.2	92.1	92.1	92.1	92.0	92.0	92.0	91.9	91.9
870	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0
880	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1	94.0
890	95.5	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1
900	96.5	96.5	96.5	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.2
910	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.3	97.3	97.3	97.2
920	98.7	98.6	98.6	98.6	98.5	98.5	98.5	98.4	98.4	98.3	98.3
930	99.7	99.7	99.7	99.6	99.6	99.6	99.5	99.5	99.4	99.4	99.4
940	100.8	100.8	100.7	100.7	100.7	100.6	100.6	100.6	100.5	100.5	100.4
950	101.9	101.9	101.8	101.8	101.7	101.7	101.7	101.6	101.6	101.6	101.5
960	103.0	102.9	102.9	102.9	102.8	102.8	102.7	102.7	102.7	102.6	102.6
970	104.0	104.0	104.0	103.9	103.9	103.8	103.8	103.8	103.7	103.7	103.7
980	105.1	105.1	105.0	105.0	105.0	104.9	104.9	104.8	104.8	104.8	104.7
990	106.2	106.1	106.1	106.1	106.0	106.0	105.9	105.9	105.9	105.8	105.8
1,000	107.3	107.2	107.2	107.1	107.1	107.1	107.0	107.0	106.9	106.9	106.9
1,010	108.3	108.3	108.3	108.2	108.2	108.1	108.1	108.0	108.0	108.0	107.9
1,020	109.4	109.4	109.3	109.3	109.2	109.2	109.2	109.1	109.1	109.0	109.0
1,030	110.5	110.4	110.4	110.4	110.3	110.3	110.2	110.2	110.1	110.1	110.1
1,040	111.6	111.5	111.5	111.4	111.4	111.3	111.3	111.3	111.2	111.2	111.1
1,050	112.6	112.6	112.5	112.5	112.5	112.4	112.4	112.3	112.3	112.2	112.2
1,060	113.7	113.7	113.6	113.6	113.5	113.5	113.4	113.4	113.4	113.3	113.3
1,070	114.8	114.7	114.7	114.6	114.6	114.6	114.5	114.5	114.4	114.4	114.3
1,080	115.8	115.8	115.8	115.7	115.7	115.6	115.6	115.5	115.5	115.4	115.4
1,090	116.9	116.9	116.8	116.8	116.7	116.7	116.6	116.6	116.6	116.5	116.5
1,100	118.0	117.9	117.9	117.9	117.8	117.8	117.7	117.7	117.6	117.6	117.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−7.0	−6.9	−6.8	−6.7	−6.6	−6.5	−6.4	−6.3	−6.2	−6.1	−6.0
700	74.8	74.8	74.7	74.7	74.7	74.7	74.6	74.6	74.6	74.5	74.5
710	75.9	75.8	75.8	75.8	75.8	75.7	75.7	75.7	75.6	75.6	75.6
720	76.9	76.9	76.9	76.8	76.8	76.8	76.8	76.7	76.7	76.7	76.6
730	78.0	78.0	77.9	77.9	77.9	77.9	77.8	77.8	77.8	77.7	77.7
740	79.1	79.0	79.0	79.0	79.0	78.9	78.9	78.9	78.8	78.8	78.8
750	80.1	80.1	80.1	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.8
760	81.2	81.2	81.1	81.1	81.1	81.1	81.0	81.0	81.0	80.9	80.9
770	82.3	82.2	82.2	82.2	82.2	82.1	82.1	82.1	82.0	82.0	82.0
780	83.3	83.3	83.3	83.3	83.2	83.2	83.2	83.1	83.1	83.1	83.0
790	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2	84.2	84.1	84.1
800	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3	85.2	85.2	85.2
810	86.6	86.5	86.5	86.5	86.4	86.4	86.4	86.3	86.3	86.3	86.2
820	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4	87.3	87.3
830	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.4
840	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.5	89.4
850	90.8	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.6	90.5	90.5
860	91.9	91.9	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.5
870	93.0	92.9	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.6	92.6
880	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.7	93.7	93.7
890	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.8	94.8	94.8	94.7
900	96.2	96.1	96.1	96.1	96.0	96.0	96.0	95.9	95.9	95.8	95.8
910	97.2	97.2	97.2	97.1	97.1	97.1	97.0	97.0	96.9	96.9	96.9
920	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.0	98.0	98.0	97.9
930	99.4	99.3	99.3	99.3	99.2	99.2	99.1	99.1	99.1	99.0	99.0
940	100.4	100.4	100.4	100.3	100.3	100.3	100.2	100.2	100.1	100.1	100.1
950	101.5	101.5	101.4	101.4	101.4	101.3	101.3	101.2	101.2	101.2	101.1
960	102.6	102.5	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.2	102.2
970	103.7	103.6	103.6	103.5	103.5	103.5	103.4	103.4	103.3	103.3	103.3
980	104.7	104.7	104.6	104.6	104.6	104.5	104.5	104.4	104.4	104.4	104.3
990	105.8	105.7	105.7	105.7	105.6	105.6	105.6	105.5	105.5	105.4	105.4
1,000	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6	106.5	106.5	106.5
1,010	107.9	107.9	107.8	107.8	107.8	107.7	107.7	107.6	107.6	107.6	107.5
1,020	109.0	109.0	108.9	108.9	108.8	108.8	108.7	108.7	108.7	108.6	108.6
1,030	110.1	110.0	110.0	109.9	109.9	109.9	109.8	109.8	109.7	109.7	109.7
1,040	111.1	111.1	111.0	111.0	111.0	110.9	110.9	110.8	110.8	110.8	110.7
1,050	112.2	112.2	112.1	112.1	112.0	112.0	111.9	111.9	111.9	111.8	111.8
1,060	113.3	113.2	113.2	113.1	113.1	113.1	113.0	113.0	112.9	112.9	112.8
1,070	114.3	114.3	114.3	114.2	114.2	114.1	114.1	114.0	114.0	114.0	113.9
1,080	115.4	115.4	115.3	115.3	115.2	115.2	115.1	115.1	115.1	115.0	115.0
1,090	116.5	116.4	116.4	116.3	116.3	116.3	116.2	116.2	116.1	116.1	116.0
1,100	117.5	117.5	117.5	117.4	117.4	117.3	117.3	117.2	117.2	117.1	117.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−6.0	−5.9	−5.8	−5.7	−5.6	−5.5	−5.4	−5.3	−5.2	−5.1	−5.0
700	74.5	74.5	74.5	74.4	74.4	74.4	74.4	74.3	74.3	74.3	74.2
710	75.6	75.6	75.5	75.5	75.5	75.4	75.4	75.4	75.4	75.3	75.3
720	76.6	76.6	76.6	76.6	76.5	76.5	76.5	76.4	76.4	76.4	76.4
730	77.7	77.7	77.7	77.6	77.6	77.6	77.5	77.5	77.5	77.4	77.4
740	78.8	78.7	78.7	78.7	78.7	78.6	78.6	78.6	78.5	78.5	78.5
750	79.8	79.8	79.8	79.8	79.7	79.7	79.7	79.6	79.6	79.6	79.5
760	80.9	80.9	80.8	80.8	80.8	80.8	80.7	80.7	80.7	80.6	80.6
770	82.0	81.9	81.9	81.9	81.8	81.8	81.8	81.8	81.7	81.7	81.7
780	83.0	83.0	83.0	82.9	82.9	82.9	82.8	82.8	82.8	82.8	82.7
790	84.1	84.1	84.0	84.0	84.0	83.9	83.9	83.9	83.8	83.8	83.8
800	85.2	85.1	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9	84.8
810	86.2	86.2	86.2	86.1	86.1	86.1	86.0	86.0	86.0	85.9	85.9
820	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.0	87.0	87.0
830	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1	88.0
840	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.1	89.1
850	90.5	90.5	90.4	90.4	90.3	90.3	90.3	90.2	90.2	90.2	90.1
860	91.5	91.5	91.5	91.4	91.4	91.4	91.3	91.3	91.3	91.2	91.2
870	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4	92.3	92.3	92.3
880	93.7	93.6	93.6	93.6	93.5	93.5	93.5	93.4	93.4	93.4	93.3
890	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4	94.4
900	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5
910	96.9	96.8	96.8	96.8	96.7	96.7	96.7	96.6	96.6	96.5	96.5
920	97.9	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.6	97.6	97.6
930	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.7	98.7	98.7	98.6
940	100.1	100.0	100.0	100.0	99.9	99.9	99.8	99.8	99.8	99.7	99.7
950	101.1	101.1	101.1	101.0	101.0	100.9	100.9	100.9	100.8	100.8	100.8
960	102.2	102.2	102.1	102.1	102.0	102.0	102.0	101.9	101.9	101.9	101.8
970	103.3	103.2	103.2	103.1	103.1	103.1	103.0	103.0	103.0	102.9	102.9
980	104.3	104.3	104.3	104.2	104.2	104.1	104.1	104.1	104.0	104.0	103.9
990	105.4	105.4	105.3	105.3	105.2	105.2	105.2	105.1	105.1	105.0	105.0
1,000	106.5	106.4	106.4	106.3	106.3	106.3	106.2	106.2	106.1	106.1	106.1
1,010	107.5	107.5	107.4	107.4	107.4	107.3	107.3	107.2	107.2	107.2	107.1
1,020	108.6	108.5	108.5	108.5	108.4	108.4	108.3	108.3	108.3	108.2	108.2
1,030	109.7	109.6	109.6	109.5	109.5	109.4	109.4	109.4	109.3	109.3	109.2
1,040	110.7	110.7	110.6	110.6	110.5	110.5	110.5	110.4	110.4	110.3	110.3
1,050	111.8	111.7	111.7	111.7	111.6	111.6	111.5	111.5	111.4	111.4	111.4
1,060	112.8	112.8	112.8	112.7	112.7	112.6	112.6	112.5	112.5	112.5	112.4
1,070	113.9	113.9	113.8	113.8	113.7	113.7	113.7	113.6	113.6	113.5	113.5
1,080	115.0	114.9	114.9	114.8	114.8	114.8	114.7	114.7	114.6	114.6	114.5
1,090	116.0	116.0	116.0	115.9	115.9	115.8	115.8	115.7	115.7	115.6	115.6
1,100	117.1	117.1	117.0	117.0	116.9	116.9	116.8	116.8	116.8	116.7	116.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−5.0	−4.9	−4.8	−4.7	−4.6	−4.5	−4.4	−4.3	−4.2	−4.1	−4.0
700	74.2	74.2	74.2	74.2	74.1	74.1	74.1	74.0	74.0	74.0	74.0
710	75.3	75.3	75.2	75.2	75.2	75.2	75.1	75.1	75.1	75.0	75.0
720	76.4	76.3	76.3	76.3	76.2	76.2	76.2	76.2	76.1	76.1	76.1
730	77.4	77.4	77.4	77.3	77.3	77.3	77.2	77.2	77.2	77.2	77.,1
740	78.5	78.5	78.4	78.4	78.4	78.3	78.3	78.3	78.2	78.2	78.2
750	79.5	79.5	79.5	79.5	79.4	79.4	79.4	79.3	79.3	79.3	79.2
760	80.6	80.6	80.5	80.5	80.5	89.5	80.4	80.4	80.4	80.3	80.3
770	81.7	81.6	81.6	81.6	81.5	81.5	81.5	81.5	81.4	81.4	81.4
780	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5	82.4	82.4
790	83.8	83.8	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5
800	84.8	84.8	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.5
810	85.9	85.9	85.8	85.8	85.8	85.7	85.7	85.7	85.6	85.6	85.6
820	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.7	86.6
830	88.0	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.7	87.7
840	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.8	88.8	88.8
850	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8
860	91.2	91.2	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9
870	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.0	92.0	92.0	91.9
880	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0
890	94.4	94.4	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1	94.0
900	95.5	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1
910	96.5	96.5	96.4	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.2
920	97.6	97.5	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.2	97.2
930	98.6	98.6	98.6	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3
940	99.7	99.7	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.3
950	100.8	100.7	100.7	100.6	100.6	100.6	100.5	100.5	100.5	100.4	100.4
960	101.8	101.8	101.7	101.7	101.7	101.6	191.6	101.6	191.5	101.5	101.4
970	102.9	102.8	102.8	102.8	102.7	102.7	102.6	102.6	102.6	102.5	102.5
980	103.9	103.9	103.9	103.8	103.8	103.7	103.7	103.7	103.6	103.6	103.6
990	105.0	105.0	104.9	104.9	104.8	104.8	104.8	104.7	104.7	104.6	104.6
1,000	106.1	106.0	106.0	105.9	105.9	105.9	105.8	195.8	105.7	105.7	105.7
1,010	107.1	107.1	107.0	107.0	107.0	106.9	106.9	106.8	106.8	106.8	106.7
1,020	108.2	108.1	108.1	108.1	108.0	108.0	107.9	107.9	107.9	107.8	107.8
1,030	109.2	109.2	109.2	109.1	109.1	109.0	109.0	109.0	108.9	108.9	108.8
1,040	110.3	110.3	110.2	110.2	110.1	110.1	110.1	110.0	110.0	109.9	109.9
1,050	111.4	111.3	111.3	111.2	111.2	111.2	111.1	111.1	111.0	111.0	110.9
1,060	112.4	112.4	112.3	112.3	112.3	112.2	112.2	112.1	112.1	112.0	112.0
1,070	113.5	113.4	113.4	113.4	113.3	113.3	113.2	113.2	113.1	113.1	113.1
1,080	114.5	114.5	114.5	114.4	114.4	114.3	114.3	114.2	114.2	114.2	114.1
1,090	115.6	115.6	115.5	115.5	115.4	115.4	115.3	115.3	115.3	115.2	115.2
1,100	116.7	116.6	116.6	116.5	116.5	116.4	116.4	116.4	116.3	116.3	116.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−4.0	−3.9	−3.8	−3.7	−3.6	−3.5	−3.4	−3.3	−3.2	−3.1	−3.0
700	74.0	73.9	73.9	73.9	73.9	73.8	73.8	73.8	73.7	73.7	73.7
710	75.0	75.0	75.0	74.9	74.9	74.9	74.9	74.8	74.8	74.8	74.7
720	76.1	76.0	76.0	76.0	76.0	75.9	75.9	75.9	75.9	75.8	75.8
730	77.1	77.1	77.1	77.0	77.0	77.0	77.0	76.9	76.9	76.9	76.8
740	78.2	78.2	78.1	78.1	78.1	78.0	78.0	78.0	78.0	77.9	77.9
750	79.2	79.2	79.2	79.2	79.1	79.1	79.1	79.0	79.0	79.0	79.0
760	80.3	80.3	80.2	80.2	80.2	80.2	80.1	80.1	80.1	80.0	80.0
770	81.4	81.3	81.3	81.3	81.2	81.2	81.2	81.1	81.1	81.1	81.1
780	82.4	82.4	82.4	82.3	82.3	82.3	82.2	82.2	82.2	82.1	82.1
790	83.5	83.4	83.4	83.4	83.3	83.3	83.3	83.3	83.2	83.2	83.2
800	84.5	84.5	84.5	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2
810	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3
820	86.6	86.6	86.6	86.5	86.5	86.5	86.5	86.4	86.4	86.4	86.3
830	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4
840	88.8	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.5	88.4
850	89.8	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.5
860	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.6	90.5
870	91.9	91.9	91.9	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6
880	93.0	92.9	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.6
890	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.8	93.7	93.7
900	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.8	94.8	94.8	94.7
910	96.2	96.1	96.1	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8
920	97.2	97.2	97.1	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.8
930	98.3	98.2	98.2	98.2	98.1	98.1	98.0	98.0	98.0	97.9	97.9
940	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.1	99.0	99.0	99.0
950	100.4	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.0	100.0
960	101.4	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.1	101.1	101.1
970	102.5	102.5	102.4	102.4	102.3	102.3	102.3	102.2	102.2	102.2	102.1
980	103.6	103.5	103.5	103.4	103.4	103.4	103.3	103.3	103.2	103.2	103.2
990	104.6	104.6	104.5	104.5	104.5	104.4	104.4	104.3	104.3	104.3	104.2
1,000	105.7	105.6	105.6	105.5	105.5	105.5	105.4	105.4	105.4	105.3	105.3
1,010	106.7	106.7	106.6	106.6	106.6	106.5	106.5	106.4	106.4	106.4	106.3
1,020	107.8	107.7	107.7	107.7	107.6	107.6	107.5	107.5	107.5	107.4	107.4
1,030	108.8	108.8	108.8	108.7	108.7	108.6	108.6	108.6	108.5	108.5	108.4
1,040	109.9	109.9	109.8	109.8	109.7	109.7	109.6	109.6	109.6	109.5	109.5
1,050	110.9	110.9	110.9	110.8	110.8	110.7	110.7	110.7	110.6	110.6	110.5
1,060	112.0	112.0	111.9	111.9	111.8	111.8	111.8	111.7	111.7	111.6	111.6
1,070	113.1	113.0	113.0	112.9	112.9	112.9	112.8	112.8	121.7	112.7	112.6
1,080	114.1	114.1	114.0	114.0	114.0	113.9	113.9	113.8	113.8	113.7	113.7
1,090	115.2	115.1	115.1	115.0	115.0	115.0	114.9	114.9	114.8	114.8	114.7
1,100	116.2	116.2	116.1	116.1	116.1	116.0	116.0	115.9	115.9	115.8	115.8

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−3.0	−2.9	−2.8	−2.7	−2.6	−2.5	−2.4	−2.3	−2.2	−2.1	−2.0
700	73.7	73.7	73.6	73.6	73.6	73.6	73.5	73.5	73.5	73.4	73.4
710	74.7	74.7	74.7	74.7	74.6	74.6	74.6	74.5	74.5	74.5	74.5
720	75.8	75.8	75.7	75.7	75.7	75.7	75.6	75.6	75.6	75.5	75.5
730	76.8	76.8	76.8	76.8	76.7	76.7	76.7	76.6	76.6	76.6	76.6
740	77.9	77.9	77.8	77.8	77.8	77.8	77.7	77.7	77.7	77.6	77.6
750	79.0	78.9	78.9	78.9	78.8	78.8	78.8	78.7	78.7	78.7	78.7
760	80.0	80.0	79.9	79.9	79.9	79.9	79.8	79.8	79.8	79.7	79.7
770	81.1	81.0	81.0	81.0	80.9	80.9	80.9	80.8	80.8	80.8	80.8
780	82.1	82.1	82.1	82.0	82.0	82.0	81.9	81.9	81.9	81.8	81.8
790	83.2	83.1	83.1	83.1	83.0	83.0	83.0	82.9	82.9	82.9	82.9
800	84.2	84.2	84.2	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9
810	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.0	85.0	85.0	85.0
820	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0	86.0
830	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.1
840	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1
850	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.2
860	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3	90.2	90.2
870	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.3	91.3	91.3	91.2
880	92.6	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4	92.3	92.3
890	93.7	93.7	93.6	93.6	93.6	93.5	93.5	93.4	93.4	93.4	93.3
900	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4	94.4
910	95.8	95.8	95.7	95.7	95.7	95.6	95.6	95.5	95.5	95.5	95.4
920	96.8	96.8	96.8	96.7	96.7	96.7	96.6	96.6	96.6	96.5	96.5
930	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.6	97.6	97.6	97.5
940	99.0	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.7	98.6	98.6
950	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.7	99.7	99.7	99.6
960	101.1	101.0	101.0	101.0	100.9	100.9	100.8	100.8	100.8	100.7	100.7
970	102.1	102.1	102.0	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.7
980	103.2	103.1	103.1	103.1	103.0	103.0	102.9	102.9	102.9	102.8	102.8
990	104.2	104.2	104.1	104.1	104.1	104.0	104.0	104.0	103.9	103.9	103.8
1,000	105.3	105.2	105.2	105.2	105.1	105.1	105.0	105.0	105.0	104.9	104.9
1,010	106.3	106.3	106.2	106.2	106.2	106.1	106.1	106.1	106.0	106.0	105.9
1,020	107.4	107.3	107.3	107.3	107.2	107.2	107.1	107.1	107.1	107.0	107.0
1,030	108.4	108.4	108.4	108.3	108.3	108.2	108.2	108.2	108.1	108.1	108.0
1,040	109.5	109.4	109.4	109.4	109.3	109.3	109.2	109.2	109.2	109.1	109.1
1,050	110.5	110.5	110.5	110.4	110.4	110.3	110.3	110.3	110.2	110.2	110.1
1,060	111.6	111.6	111.5	111.5	111.4	111.4	111.3	111.3	111.3	111.2	111.2
1,070	112.6	112.6	112.6	112.5	112.5	121.4	112.4	112.4	112.3	112.3	112.2
1,080	113.7	113.7	113.6	113.6	113.5	113.5	113.4	113.4	113.4	113.3	113.3
1,090	114.7	114.7	114.7	114.6	114.6	114.5	114.5	114.5	114.4	114.4	114.3
1,100	115.8	115.8	115.7	115.7	115.6	115.6	115.5	115.5	115.5	115.4	115.4

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−2.0	−1.9	−1.8	−1.7	−1.6	−1.5	−1.4	−1.3	−1.2	−1.1	−1.0
700	73.4	73.4	73.4	73.3	73.3	73.3	73.3	73.2	73.2	73.2	73.1
710	74.5	74.4	74.4	74.4	74.4	74.3	74.3	74.3	74.2	74.2	74.2
720	75.5	75.5	75.5	75.4	75.4	75.4	75.3	75.3	75.3	75.3	75.2
730	76.6	76.5	76.5	76.5	76.5	76.4	76.4	76.4	76.3	76.3	76.3
740	77.6	77.6	77.6	77.5	77.5	77.5	77.4	77.4	77.4	77.4	77.3
750	78.7	78.6	78.6	78.6	78.5	78.5	78.5	78.5	78.4	78.4	78.4
760	79.7	79.7	79.7	79.6	79.6	79.6	79.5	79.5	79.5	79.4	79.4
770	80.8	80.7	80.7	80.7	80.6	80.6	80.6	80.6	80.5	80.5	80.5
780	81.8	81.8	81.7	81.7	81.7	81.7	81.6	81.6	81.6	81.5	81.5
790	82.9	82.8	82.8	82.8	82.7	82.7	82.7	82.6	82.6	82.6	82.6
800	83.9	83.9	83.8	83.8	83.8	83.8	83.7	83.7	83.7	83.6	83.6
810	85.0	84.9	84.9	84.9	84.8	84.8	84.8	84.7	84.7	84.7	84.6
820	86.0	86.0	85.9	85.9	85.9	85.8	85.8	85.8	85.8	85.7	85.7
830	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.7
840	88.1	88.1	88.0	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8
850	89.2	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.8
860	90.2	90.2	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9
870	91.2	91.2	91.2	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9
880	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.0	92.0	92.0
890	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0
900	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.0
910	95.4	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1
920	96.5	96.5	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.2	96.1
930	97.5	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.3	97.2	97.2
940	98.6	98.6	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2
950	99.6	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.3	99.3	99.3
960	100.7	100.7	100.6	100.6	100.5	100.5	100.5	100.4	100.4	100.4	100.3
970	101.7	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.4
980	102.8	102.8	102.7	102.7	102.6	102.6	102.6	102.5	102.5	102.4	102.4
990	103.8	103.8	103.8	103.7	103.7	103.6	103.6	103.6	103.5	103.5	103.5
1,000	104.9	104.8	104.8	104.8	104.7	104.7	104.7	104.6	104.6	104.5	104.5
1,010	105.9	105.9	105.9	105.8	105.8	105.7	105.7	105.7	105.6	105.6	105.5
1,020	107.0	106.9	106.9	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6
1,030	108.0	108.0	108.0	107.9	107.9	107.8	107.8	107.8	107.7	107.7	107.6
1,040	109.1	109.0	109.0	109.0	108.9	108.9	108.8	108.8	108.8	108.7	108.7
1,050	110.1	110.1	110.0	110.0	110.0	109.9	109.9	109.8	109.8	109.8	109.7
1,060	111.2	111.1	111.1	111.1	111.0	111.0	110.9	110.9	110.9	110.8	110.8
1,070	112.2	112.2	112.1	112.1	112.1	112.0	112.0	111.9	111.9	111.9	111.8
1,080	113.3	113.2	113.2	113.2	113.1	113.1	113.0	113.0	112.9	112.9	112.9
1,090	114.3	114.3	114.2	114.2	114.2	114.1	114.1	114.0	114.0	113.9	113.9
1,100	115.4	115.3	115.3	115.2	115.2	115.2	115.1	115.1	115.0	115.0	115.0

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	−1.0	−.9	−.8	−.7	−.6	−.5	−.4	−.3	−.2	−.1	.0
700	73. 1	73. 1	73. 1	73. 1	73. 0	73. 0	73. 0	73. 0	72. 9	72. 9	72. 9
710	74. 2	74. 2	74. 1	74. 1	74. 1	74. 1	74. 0	74. 0	74. 0	73. 9	73. 9
720	75. 2	75. 2	75. 2	75. 2	75. 1	75. 1	75. 1	75. 0	75. 0	75. 0	75. 0
730	76. 3	76. 3	76. 2	76. 2	76. 2	76. 1	76. 1	76. 1	76. 1	76. 0	76. 0
740	77. 3	77. 3	77. 3	77. 2	77. 2	77. 2	77. 2	77. 1	77. 1	77. 1	77. 0
750	78. 4	78. 3	78. 3	78. 3	78. 3	78. 2	78. 2	78. 2	78. 1	78. 1	78. 1
760	79. 4	79. 4	79. 4	79. 3	79. 3	79. 3	79. 2	79. 2	79. 2	79. 2	79. 1
770	80. 5	80. 4	80. 4	80. 4	80. 3	80. 3	80. 3	80. 3	80. 2	80. 2	80. 2
780	81. 5	81. 5	81. 4	81. 4	81. 4	81. 4	81. 3	81. 3	81. 3	81. 2	81. 2
790	82. 6	82. 5	82. 5	82. 5	82. 4	82. 4	82. 4	82. 3	82. 3	82. 3	82. 3
800	83. 6	83. 6	83. 5	83. 5	83. 5	83. 4	83. 4	83. 4	83. 4	83. 3	83. 3
810	84. 6	84. 6	84. 6	84. 5	84. 5	84. 5	84. 5	84. 4	84. 4	84. 4	84. 3
820	85. 7	85. 7	85. 6	85. 6	85. 6	85. 5	85. 5	85. 5	85. 4	85. 4	85. 4
830	86. 7	86. 7	86. 7	86. 6	86. 6	86. 6	86. 5	86. 5	86. 5	86. 4	86. 4
840	87. 8	87. 7	87. 7	87. 7	87. 6	87. 6	87. 6	87. 6	87. 5	87. 5	87. 5
850	88. 8	88. 8	88. 8	88. 7	88. 7	88. 7	88. 6	88. 6	88. 6	88. 5	88. 5
860	89. 9	89. 8	89. 8	89. 8	89. 7	89. 7	89. 7	89. 6	89. 6	89. 6	89. 5
870	90. 9	90. 9	90. 8	90. 8	90. 8	90. 7	90. 7	90. 7	90. 6	90. 6	90. 6
880	92. 0	91. 9	91. 9	91. 9	91. 8	91. 8	91. 8	91. 7	91. 7	91. 7	91. 6
890	93. 0	93. 0	92. 9	92. 9	92. 9	92. 8	92. 8	92. 8	92. 7	92. 7	92. 7
900	94. 0	94. 0	94. 0	93. 9	93. 9	93. 9	93. 8	93. 8	93. 8	93. 7	93. 7
910	95. 1	95. 1	95. 0	95. 0	95. 0	94. 9	94. 9	94. 8	94. 8	94. 8	94. 7
920	96. 1	96. 1	96. 1	96. 0	96. 0	96. 0	95. 9	95. 9	95. 9	95. 8	95. 8
930	97. 2	97. 1	97. 1	97. 1	97. 0	97. 0	97. 0	96. 9	96. 9	96. 9	96. 8
940	98. 2	98. 2	98. 2	98. 1	98. 1	98. 0	98. 0	98. 0	97. 9	97. 9	97. 9
950	99. 3	99. 2	99. 2	99. 2	99. 1	99. 1	99. 1	99. 0	99. 0	98. 9	98. 9
960	100. 3	100. 3	100. 2	100. 2	100. 2	100. 1	100. 1	100. 1	100. 0	100. 0	100. 0
970	101. 4	101. 3	101. 3	101. 3	101. 2	101. 2	101. 1	101. 1	101. 1	101. 0	101. 0
980	102. 4	102. 4	102. 3	102. 3	102. 3	102. 2	102. 2	102. 1	102. 1	102. 1	102. 0
990	103. 5	103. 4	103. 4	103. 3	103. 3	103. 3	103. 2	103. 2	103. 2	103. 1	103. 1
1, 000	104. 5	104. 5	104. 4	104. 4	104. 3	104. 3	104. 3	104. 2	104. 2	104. 2	104. 1
1, 010	105. 5	105. 5	105. 5	105. 4	105. 4	105. 4	105. 3	105. 3	105. 2	105. 2	105. 2
1, 020	106. 6	106. 6	106. 5	106. 5	106. 4	106. 4	106. 4	106. 3	106. 3	106. 2	106. 2
1, 030	107. 6	107. 6	107. 6	107. 5	107. 5	107. 4	107. 4	107. 4	107. 3	107. 3	107. 2
1, 040	108. 7	108. 6	108. 6	108. 6	108. 5	108. 5	108. 4	108. 4	108. 4	108. 3	108. 3
1, 050	109. 7	109. 7	109. 6	109. 6	109. 6	109. 5	109. 5	109. 4	109. 4	109. 4	109. 3
1, 060	110. 8	110. 7	110. 7	110. 6	110. 6	110. 6	110. 5	110. 5	110. 4	110. 4	110. 4
1, 070	111. 8	111. 8	111. 7	111. 7	111. 7	111. 6	111. 6	111. 5	111. 5	111. 4	111. 4
1, 080	112. 9	112. 8	112. 8	112. 7	112. 7	112. 7	112. 6	112. 6	112. 5	112. 5	112. 4
1, 090	113. 9	113. 9	113. 8	113. 8	113. 7	113. 7	113. 7	113. 6	113. 6	113. 5	113. 5
1, 100	115. 0	114. 9	114. 9	114. 8	114. 8	114. 7	114. 7	114. 7	114. 6	114. 6	114. 5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0
700	72.9	72.9	72.8	72.8	72.8	72.7	72.7	72.7	72.7	72.6	72.6
710	73.9	73.9	73.9	73.8	73.8	73.8	73.8	73.7	73.7	73.7	73.7
720	75.0	74.9	74.9	74.9	74.9	74.8	74.8	74.8	74.7	74.7	74.7
730	76.0	76.0	75.9	75.9	75.9	75.9	75.8	75.8	75.8	75.8	75.7
740	77.0	77.0	77.0	77.0	76.9	76.9	76.9	76.8	76.8	76.8	76.8
750	78.1	78.1	78.0	78.0	78.0	77.9	77.9	77.9	77.9	77.8	77.8
760	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9	78.9	78.8
770	80.2	80.1	80.1	80.1	80.1	80.0	80.0	80.0	79.9	79.9	79.9
780	81.2	81.2	81.2	81.1	81.1	81.1	81.0	81.0	81.0	80.9	80.9
790	82.3	82.2	82.2	82.2	82.1	82.1	82.1	82.0	82.0	82.0	82.0
800	83.3	83.3	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0	83.0
810	84.3	84.3	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.1	84.0
820	85.4	85.3	85.3	85.3	85.2	85.2	85.2	85.2	85.1	85.1	85.1
830	86.4	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1
840	87.5	87.4	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.1
850	88.5	88.5	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2
860	89.5	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2
870	90.6	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3	90.2
880	91.6	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.4	91.3	91.3
890	92.7	92.6	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4	92.3
900	93.7	93.7	93.6	93.6	93.6	93.5	93.5	93.5	93.4	93.4	93.4
910	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4	94.4
920	95.8	95.8	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4
930	96.8	96.8	96.8	96.7	96.7	96.6	96.6	96.6	96.5	96.5	96.5
940	97.9	97.8	97.8	97.8	97.7	97.7	97.7	97.6	97.6	97.5	97.5
950	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.5
960	100.0	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.7	99.6	99.6
970	101.0	101.0	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.7	100.6
980	102.0	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.7	101.7	101.7
990	103.1	103.0	103.0	103.0	102.9	102.9	102.9	102.8	102.8	102.7	102.7
1,000	104.1	104.1	104.0	104.0	104.0	103.9	103.9	103.9	103.8	103.8	103.7
1,010	105.2	105.1	105.1	105.0	105.0	105.0	104.9	104.9	104.9	104.8	104.8
1,020	106.2	106.2	106.1	106.1	106.0	106.0	106.0	105.9	105.9	105.9	105.8
1,030	107.2	107.2	107.2	107.1	107.1	107.0	107.0	107.0	106.9	106.9	106.9
1,040	108.3	108.2	108.2	108.2	108.1	108.1	108.0	108.0	108.0	107.9	107.9
1,050	109.3	109.3	109.2	109.2	109.2	109.1	109.1	109.0	109.0	109.0	108.9
1,060	110.4	110.3	110.3	110.2	110.2	110.2	110.1	110.1	110.0	110.0	110.0
1,070	111.4	111.4	111.3	111.3	111.2	111.2	111.2	111.1	111.1	111.0	111.0
1,080	112.4	112.4	112.4	112.3	112.3	112.2	112.2	112.2	112.1	112.1	112.0
1,090	113.5	113.4	113.4	113.4	113.3	113.3	113.2	113.2	113.2	113.1	113.1
1,100	114.5	114.5	114.4	114.4	114.4	114.3	114.3	114.2	114.2	114.2	114.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
700	72.6	72.6	72.6	72.5	72.5	72.5	72.5	72.4	72.4	72.4	72.4
710	73.7	73.6	73.6	73.6	73.5	73.5	73.5	73.5	73.4	73.4	73.4
720	74.7	74.7	74.6	74.6	74.6	74.6	74.5	74.5	74.5	74.4	74.4
730	75.7	75.7	75.7	75.6	75.6	75.6	75.6	75.5	75.5	75.5	75.5
740	76.8	76.7	76.7	76.7	76.7	76.6	76.6	76.6	76.5	76.5	76.5
750	77.8	77.8	77.7	77.7	77.7	77.7	77.6	77.6	77.6	77.5	77.5
760	78.8	78.8	78.8	78.8	78.7	78.7	78.7	78.6	78.6	78.6	78.6
770	79.9	79.8	79.8	79.8	79.8	79.7	79.7	79.7	79.6	79.6	79.6
780	80.9	80.9	80.9	80.8	80.8	80.8	80.7	80.7	80.7	80.6	80.6
790	82.0	81.9	81.9	81.9	81.8	81.8	81.8	81.7	81.7	81.7	81.7
800	83.0	83.0	82.9	82.9	82.9	82.8	82.8	82.8	82.7	82.7	82.7
810	84.0	84.0	84.0	83.9	83.9	83.9	83.8	83.8	83.8	83.8	83.7
820	85.1	85.0	85.0	85.0	84.9	84.9	84.9	84.8	84.8	84.8	84.8
830	86.1	86.1	86.0	86.0	86.0	85.9	85.9	85.9	85.8	85.8	85.8
840	87.1	87.1	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.9	86.8
850	88.2	88.1	88.1	88.1	88.0	88.0	88.0	88.0	87.9	87.9	87.9
860	89.2	89.2	89.1	89.1	89.1	89.0	89.0	89.0	89.0	88.9	88.9
870	90.2	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0	90.0	89.9
880	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.0	91.0	91.0
890	92.3	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.0	92.0
900	93.4	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.1	93.0
910	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1
920	95.4	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1
930	96.5	96.4	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.2	96.1
940	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.2
950	98.5	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2
960	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.3	99.2
970	100.6	100.6	100.6	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3
980	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.4	101.3	101.3
990	102.7	102.7	102.6	102.6	102.6	102.5	102.5	102.4	102.4	102.4	102.3
1,000	103.7	103.7	103.7	103.6	103.6	103.6	103.5	103.5	103.4	103.4	103.4
1,010	104.8	104.7	104.7	104.7	104.6	104.6	104.5	104.5	104.5	104.4	104.4
1,020	105.8	105.8	105.7	105.7	105.7	105.6	105.6	105.5	105.5	105.5	105.4
1,030	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6	106.5	106.5	106.5
1,040	107.9	107.8	107.8	107.8	107.7	107.7	107.7	107.6	107.6	107.5	107.5
1,050	108.9	108.9	108.8	108.8	108.8	108.7	108.7	108.6	108.6	108.6	108.5
1,060	110.0	109.9	109.9	109.8	109.8	109.8	109.7	109.7	109.6	109.6	109.6
1,070	111.0	111.0	110.9	110.9	110.8	110.8	110.8	110.7	110.7	110.6	110.6
1,080	112.0	112.0	112.0	111.9	111.9	111.8	111.8	111.8	111.7	111.7	111.6
1,090	113.1	113.0	113.0	113.0	112.9	112.9	112.8	112.8	112.7	112.7	112.7
1,100	114.1	114.1	114.0	114.0	113.9	113.9	113.9	113.8	113.8	113.7	113.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0
700	72.4	72.3	72.3	72.3	72.2	72.2	72.2	72.2	72.1	72.1	72.1
710	73.4	73.4	73.3	73.3	73.3	73.3	73.2	73.2	73.2	73.1	73.1
720	74.4	74.4	74.4	74.3	74.3	74.3	74.3	74.2	74.2	74.2	74.1
730	75.5	75.4	75.4	75.4	75.3	75.3	75.3	75.3	75.2	75.2	75.2
740	76.5	76.5	76.4	76.4	76.4	76.3	76.3	76.3	76.3	76.2	76.2
750	77.5	77.5	77.5	77.4	77.4	77.4	77.3	77.3	77.3	77.3	77.2
760	78.6	78.5	78.5	78.5	78.4	78.4	78.4	78.4	78.3	78.3	78.3
770	79.6	79.6	79.5	79.5	79.5	79.4	79.4	79.4	79.4	79.3	79.3
780	80.6	80.6	80.6	80.5	80.5	80.5	80.4	80.4	80.4	80.4	80.3
790	81.7	81.6	81.6	81.6	81.5	81.5	81.5	81.4	81.4	81.4	81.4
800	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5	82.4	82.4	82.4
810	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.4	83.4
820	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.4
830	85.8	85.8	85.7	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5
840	86.8	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.5	86.5
850	87.9	87.8	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.5
860	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.7	88.6	88.6	88.6
870	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.6	89.6
880	91.0	90.9	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.6
890	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.7	91.7	91.7
900	93.0	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.8	92.7	92.7
910	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.7	93.7
920	95.1	95.1	95.0	95.0	95.0	94.9	94.9	94.8	94.8	94.8	94.7
930	96.1	96.1	96.1	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8
940	97.2	97.1	97.1	97.1	97.0	97.0	96.9	96.9	96.9	96.8	96.8
950	98.2	98.2	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.9	97.8
960	99.2	99.2	99.2	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.9
970	100.3	100.2	100.2	100.2	100.1	100.1	100.0	100.0	100.0	99.9	99.9
980	101.3	101.3	101.2	101.2	101.1	101.1	101.1	101.0	101.0	101.0	100.9
990	102.3	102.3	102.3	102.2	102.2	102.1	102.1	102.1	102.0	102.0	102.0
1,000	103.4	103.3	103.3	103.2	103.2	103.2	103.1	103.1	103.1	103.0	103.0
1,010	104.4	104.4	104.3	104.3	104.2	104.2	104.2	104.1	104.1	104.1	104.0
1,020	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.2	105.1	105.1	105.0
1,030	106.5	106.4	106.4	106.3	106.3	106.3	106.2	106.2	106.2	106.1	106.1
1,040	107.5	107.5	107.4	107.4	107.3	107.3	107.3	107.2	107.2	107.1	107.1
1,050	108.5	108.5	108.5	108.4	108.4	108.3	108.3	108.3	108.2	108.2	108.1
1,060	109.6	109.5	109.5	109.4	109.4	109.4	109.3	109.3	109.2	109.2	109.2
1,070	110.6	110.6	110.5	110.5	110.4	110.4	110.4	110.3	110.3	110.2	110.2
1,080	111.6	111.6	111.5	111.5	111.5	111.4	111.4	111.3	111.3	111.3	111.2
1,090	112.7	112.6	112.6	112.5	112.5	112.5	112.4	112.4	112.3	112.3	112.3
1,100	113.7	113.7	113.6	113.6	113.5	113.5	113.5	113.4	113.4	113.3	113.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
700	72. 1	72. 1	72. 0	72. 0	72. 0	72. 0	71. 9	71. 9	71. 9	71. 9	71. 8
710	73. 1	73. 1	73. 1	73. 0	73. 0	73. 0	73. 0	72. 9	72. 9	72. 9	72. 9
720	74. 1	74. 1	74. 1	74. 1	74. 0	74. 0	74. 0	74. 0	73. 9	73. 9	73. 9
730	75. 2	75. 2	75. 1	75. 1	75. 1	75. 0	75. 0	75. 0	75. 0	74. 9	74. 9
740	76. 2	76. 2	76. 2	76. 1	76. 1	76. 1	76. 0	76. 0	76. 0	76. 0	75. 9
750	77. 2	77. 2	77. 2	77. 2	77. 1	77. 1	77. 1	77. 0	77. 0	77. 0	77. 0
760	78. 3	78. 2	78. 2	78. 2	78. 2	78. 1	78. 1	78. 1	78. 0	78. 0	78. 0
770	79. 3	79. 3	79. 2	79. 2	79. 2	79. 2	79. 1	79. 1	79. 1	79. 0	79. 0
780	80. 3	80. 3	80. 3	80. 2	80. 2	80. 2	80. 2	80. 1	80. 1	80. 1	80. 0
790	81. 4	81. 3	81. 3	81. 3	81. 2	81. 2	81. 2	81. 2	81. 1	81. 1	81. 1
800	82. 4	82. 4	82. 3	82. 3	82. 3	82. 2	82. 2	82. 2	82. 1	82. 1	82. 1
810	83. 4	83. 4	83. 4	83. 3	83. 3	83. 3	83. 2	83. 2	83. 2	83. 1	83. 1
820	84. 4	84. 4	84. 4	84. 4	84. 3	84. 3	84. 3	84. 2	84. 2	84. 2	84. 1
830	85. 5	85. 4	85. 4	85. 4	85. 4	85. 3	85. 3	85. 3	85. 2	85. 2	85. 2
840	86. 5	86. 5	86. 4	86. 4	86. 4	86. 3	86. 3	86. 3	86. 3	86. 2	86. 2
850	87. 5	87. 5	87. 5	87. 4	87. 4	87. 4	87. 3	87. 3	87. 3	87. 3	87. 2
860	88. 6	88. 5	88. 5	88. 5	88. 4	88. 4	88. 4	88. 3	88. 3	88. 3	88. 2
870	89. 6	89. 6	89. 5	89. 5	89. 5	89. 4	89. 4	89. 4	89. 3	89. 3	89. 3
880	90. 6	90. 6	90. 6	90. 5	90. 5	90. 5	90. 4	90. 4	90. 4	90. 3	90. 3
890	91. 7	91. 6	91. 6	91. 6	91. 5	91. 5	91. 5	91. 4	91. 4	91. 4	91. 3
900	92. 7	92. 7	92. 6	92. 6	92. 6	92. 5	92. 5	92. 5	92. 4	92. 4	92. 4
910	93. 7	93. 7	93. 6	93. 6	93. 6	93. 5	93. 5	93. 5	93. 4	93. 4	93. 4
920	94. 7	94. 7	94. 7	94. 6	94. 6	94. 6	94. 5	94. 5	94. 5	94. 4	94. 4
930	95. 8	95. 7	95. 7	95. 7	95. 6	95. 6	95. 6	95. 5	95. 5	95. 5	95. 4
940	96. 8	96. 8	96. 7	96. 7	96. 7	96. 6	96. 6	96. 6	96. 5	96. 5	96. 5
950	97. 8	97. 8	97. 8	97. 7	97. 7	97. 7	97. 6	97. 6	97. 6	97. 5	97. 5
960	98. 9	98. 8	98. 8	98. 8	98. 7	98. 7	98. 6	98. 6	98. 6	98. 5	98. 5
970	99. 9	99. 9	99. 8	99. 8	99. 7	99. 7	99. 7	99. 6	99. 6	99. 6	99. 5
980	100. 9	100. 9	100. 9	100. 8	100. 8	100. 7	100. 7	100. 7	100. 6	100. 6	100. 6
990	102. 0	101. 9	101. 9	101. 8	101. 8	101. 8	101. 7	101. 7	101. 7	101. 6	101. 6
1, 000	103. 0	103. 0	102. 9	102. 9	102. 8	102. 8	102. 8	102. 7	102. 7	102. 7	102. 6
1, 010	104. 0	104. 0	103. 9	103. 9	103. 9	103. 8	103. 8	103. 8	103. 7	103. 7	103. 6
1, 020	105. 0	105. 0	105. 0	104. 9	104. 9	194. 9	104. 8	104. 8	104. 7	104. 7	104. 7
1, 030	106. 1	106. 0	106. 0	106. 0	105. 9	105. 9	195. 8	105. 8	105. 8	105. 7	105. 7
1, 040	107. 1	107. 1	107. 0	107. 0	107. 0	106. 9	106. 9	106. 8	106. 8	106. 8	106. 7
1, 050	108. 1	108. 1	108. 1	108. 0	108. 0	107. 9	107. 9	107. 9	107. 8	107. 8	107. 7
1, 060	109. 2	109. 1	109. 1	109. 0	109. 0	109. 0	108. 9	108. 9	108. 9	108. 8	108. 8
1, 070	110. 2	110. 2	110. 1	110. 1	110. 0	110. 0	110. 0	109. 9	109. 9	109. 8	109. 8
1, 080	111. 2	111. 2	111. 1	111. 1	111. 1	111. 0	111. 0	110. 9	110. 9	110. 9	110. 8
1, 090	112. 3	112. 2	112. 2	112. 1	112. 1	112. 1	112. 0	112. 0	111. 9	111. 9	111. 9
1, 100	113. 3	113. 2	113. 2	113. 2	113. 1	113. 1	113. 0	113. 0	113. 0	112. 9	112. 9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\ (\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
700	71.8	71.8	71.8	71.8	71.7	71.7	71.7	71.6	71.6	71.6	71.6
710	72.9	72.8	72.8	72.8	72.7	72.7	72.7	72.7	72.6	72.6	72.6
720	73.9	73.9	73.8	73.8	73.8	73.7	73.7	73.7	73.7	73.6	73.6
730	74.9	74.9	74.9	74.8	74.8	74.8	74.7	74.7	74.7	74.7	74.6
740	75.9	75.9	75.9	75.9	75.8	75.8	75.8	75.7	75.7	75.7	75.7
750	77.0	76.9	76.9	76.9	76.8	76.8	76.8	76.8	76.7	76.7	76.7
760	78.0	78.0	77.9	77.9	77.9	77.8	77.8	77.8	77.8	77.7	77.7
770	79.0	79.0	79.0	78.9	78.9	78.9	78.8	78.8	78.8	78.8	78.7
780	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.8	79.8	79.8	79.7
790	81.1	81.0	81.0	81.0	80.9	80.9	80.9	80.9	80.8	80.8	80.8
800	82.1	82.1	82.0	82.0	82.0	81.9	81.9	81.9	81.9	81.8	81.8
810	83.1	83.1	83.1	83.0	83.0	83.0	82.9	82.9	82.9	82.8	82.8
820	84.1	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9	83.9	83.8
830	85.2	85.1	85.1	85.1	85.0	85.0	85.0	85.0	84.9	84.9	84.9
840	86.2	86.2	86.1	86.1	86.1	86.0	86.0	86.0	85.9	85.9	85.9
850	87.2	87.2	87.2	87.1	87.1	87.1	87.0	87.0	87.0	86.9	86.9
860	88.2	88.2	88.2	88.2	88.1	88.1	88.1	88.0	88.0	88.0	87.9
870	89.3	89.2	89.2	89.2	89.1	89.1	89.1	89.0	89.0	89.0	89.0
880	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0	90.0
890	91.3	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.0	91.0
900	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.0
910	93.4	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.1	93.0
920	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1
930	95.4	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1
940	96.5	96.4	96.4	96.4	96.3	96.3	96.2	96.2	96.2	96.1	96.1
950	97.5	97.4	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.2	97.1
960	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2
970	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.2	99.2	99.2
980	100.6	100.5	100.5	100.5	100.4	100.4	100.3	100.3	100.3	100.2	100.2
990	101.6	101.6	101.5	101.5	101.4	101.4	101.4	101.3	101.3	101.3	101.2
1,000	102.6	102.6	102.5	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.2
1,010	103.6	103.6	103.6	103.5	103.5	103.5	103.4	103.4	103.3	103.3	103.3
1,020	104.7	104.6	104.6	104.6	104.5	104.5	104.4	104.4	104.4	104.3	104.3
1,030	105.7	105.7	105.6	105.6	105.5	105.5	105.5	105.4	105.4	105.4	105.3
1,040	106.7	106.7	106.6	106.6	106.6	106.5	106.5	106.5	106.4	106.4	106.3
1,050	107.7	107.7	107.7	107.6	107.6	107.6	107.5	107.5	107.4	107.4	107.4
1,060	108.8	108.7	108.7	108.7	108.6	108.6	108.5	108.5	108.5	108.4	108.4
1,070	109.8	109.8	109.7	109.7	109.6	109.6	109.6	109.5	109.5	109.4	109.4
1,080	110.8	110.8	110.7	110.7	110.7	110.6	110.6	110.5	110.5	110.5	110.4
1,090	111.9	111.8	111.8	111.7	111.7	111.7	111.6	111.6	111.5	111.5	111.4
1,100	112.9	122.8	112.8	112.8	112.7	112.7	112.6	112.6	112.6	112.5	112.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0
700	71.6	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.3	71.3
710	72.6	72.6	72.5	72.5	72.5	72.5	72.4	72.4	72.4	72.4	72.3
720	73.6	73.6	73.6	73.5	73.5	73.5	73.5	73.4	73.4	73.4	73.4
730	74.6	74.6	74.6	74.6	74.5	74.5	74.5	74.5	74.4	74.4	74.4
740	75.7	75.6	75.6	75.6	75.6	75.5	75.5	75.5	75.4	75.4	75.4
750	76.7	76.7	76.6	76.6	76.6	76.5	76.5	76.5	76.5	76.4	76.4
760	77.7	77.7	77.6	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4
770	78.7	78.7	78.7	78.6	78.6	78.6	78.6	78.5	78.5	78.5	78.4
780	79.7	79.7	79.7	79.7	79.6	79.6	79.6	79.5	79.5	79.5	79.5
790	80.8	80.7	80.7	80.7	80.7	80.6	80.6	80.6	80.5	80.5	80.5
800	81.8	81.8	81.7	81.7	81.7	81.6	81.6	81.6	81.6	81.5	81.5
810	82.8	82.8	82.8	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5
820	83.8	83.8	83.8	83.7	83.7	83.7	83.7	83.6	83.6	83.6	83.5
830	84.9	84.8	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.6
840	85.9	85.9	85.8	85.8	85.8	85.7	85.7	85.7	85.6	85.6	85.6
850	86.9	86.9	86.8	86.8	86.8	86.8	86.7	86.7	86.7	86.6	86.6
860	87.9	87.9	87.9	87.8	87.8	87.8	87.7	87.7	87.7	87.6	87.6
870	89.0	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.7	88.6
880	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.7
890	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7
900	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.7	91.7
910	93.0	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.8	92.7	92.7
920	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.8	93.7
930	95.1	95.1	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
940	96.1	96.1	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8
950	97.1	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.9	96.8	96.8
960	98.2	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8
970	99.2	99.1	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.9	98.8
980	100.2	100.2	100.1	100.1	100.1	100.0	100.0	99.9	99.9	99.9	99.8
990	101.2	101.2	101.2	101.1	101.1	101.0	101.0	101.0	100.9	100.9	100.9
1,000	102.2	102.2	102.2	102.1	102.1	102.1	102.0	102.0	102.0	101.9	101.9
1,010	103.3	103.2	103.2	103.2	103.1	103.1	103.0	103.0	103.0	102.9	102.9
1,020	104.3	104.3	104.2	104.2	104.1	104.1	104.1	104.0	104.0	104.0	103.9
1,030	105.3	105.3	105.2	105.2	105.2	105.1	105.1	105.1	105.0	105.0	104.9
1,040	106.3	106.3	106.3	106.2	106.2	106.1	106.1	106.1	106.0	106.0	106.0
1,050	107.4	107.3	107.3	107.2	107.2	107.2	107.1	107.1	107.1	107.0	107.0
1,060	108.4	108.3	108.3	108.3	108.2	108.2	108.1	108.1	108.1	108.0	108.0
1,070	109.4	109.4	109.3	109.3	109.2	109.2	109.2	109.1	109.1	109.1	109.0
1,080	110.4	110.4	110.3	110.3	110.3	110.2	110.2	110.1	110.1	110.1	110.0
1,090	111.4	111.4	111.4	111.3	111.3	111.2	111.2	111.2	111.1	111.1	111.1
1,100	112.5	112.4	112.4	112.4	112.3	112.3	112.2	112.2	112.1	112.1	112.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0
700	71.3	71.3	71.3	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
710	72.3	72.3	72.3	72.3	72.2	72.2	72.2	72.2	72.1	72.1	72.1
720	73.4	73.3	73.3	73.3	73.2	73.2	73.2	73.2	73.1	73.1	73.1
730	74.4	74.3	74.3	74.3	74.3	74.2	74.2	74.2	74.2	74.1	74.1
740	75.4	75.4	75.3	75.3	75.3	75.3	75.2	75.2	75.2	75.1	75.1
750	76.4	76.4	76.4	76.3	76.3	76.3	76.2	76.2	76.2	76.2	76.1
760	77.4	77.4	77.4	77.3	77.3	77.3	77.3	77.2	77.2	77.2	77.2
770	78.4	78.4	78.4	78.4	78.3	78.3	78.3	78.2	78.2	78.2	78.2
780	79.5	79.4	79.4	79.4	79.4	79.3	79.3	79.3	79.2	79.2	79.2
790	80.5	80.5	80.4	80.4	80.4	80.3	80.3	80.3	80.3	80.2	80.2
800	81.5	81.5	81.4	81.4	81.4	81.4	81.3	81.3	81.3	81.2	81.2
810	82.5	82.5	82.5	82.4	82.4	82.4	82.3	82.3	82.3	82.3	82.2
820	83.5	83.5	83.5	83.4	83.4	83.4	83.4	83.3	83.3	83.3	83.2
830	84.6	84.5	84.5	84.5	84.4	84.4	84.4	84.3	84.3	84.3	84.3
840	85.6	85.5	85.5	85.5	85.5	85.4	85.4	85.4	85.3	85.3	85.3
850	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.4	86.3	86.3	86.3
860	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4	87.3	87.3
870	88.6	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3
880	89.7	89.6	89.6	89.6	89.5	89.5	89.5	89.4	89.4	89.4	89.3
890	90.7	90.6	90.6	90.6	90.5	90.5	90.5	90.4	90.4	90.4	90.3
900	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.4
910	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4
920	93.7	93.7	93.7	93.6	93.6	93.6	93.5	93.5	93.5	93.4	93.4
930	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4	94.4
940	95.8	95.7	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4
950	96.8	96.7	96.7	96.7	96.6	96.6	96.6	96.5	96.5	96.5	96.4
960	97.8	97.8	97.7	97.7	97.7	97.6	97.6	97.6	97.5	97.5	97.5
970	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.6	98.5	98.5	98.5
980	99.8	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.6	99.5	99.5
990	100.9	100.8	100.8	100.8	100.7	100.7	100.6	100.6	100.6	100.5	100.5
1,000	101.9	101.8	101.8	101.8	101.7	101.7	101.7	101.6	101.6	101.6	101.5
1,010	102.9	102.9	102.8	102.8	102.8	102.7	102.7	102.6	102.6	102.6	102.5
1,020	103.9	103.9	103.8	103.8	103.8	103.7	103.7	103.7	103.6	103.6	103.5
1,030	104.9	104.9	104.9	104.8	104.8	104.8	104.7	104.7	104 6	104.6	104.6
1,040	106.0	105.9	105.9	105.8	105.8	105.8	105.7	105.7	105.7	105.6	105.6
1,050	107.0	106.9	106.9	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6
1,060	108.0	108.0	107.9	107.9	107.8	107.8	107.8	107.7	107.7	107.6	107.6
1,070	109.0	109.0	108.9	108.9	108.9	108.8	108.8	108.7	108.7	108.7	108.6
1,080	110.0	110.0	110.0	109.9	109.9	109.8	109.8	109.8	109.7	109.7	109.6
1,090	111.1	111.0	111.0	110.9	110.9	110.9	110.8	110.8	110.7	110.7	110.7
1,100	112.1	112.0	112.0	111.9	111.9	111.9	111.8	111.8	111.7	111.7	111.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0
700	71.1	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8	70.8
710	72.1	72.0	72.0	72.0	72.0	71.9	71.9	71.9	71.9	71.8	71.8
720	73.1	73.1	73.0	73.0	73.0	73.0	72.9	72.9	72.9	72.9	72.8
730	74.1	74.1	74.1	74.0	74.0	74.0	73.9	73.9	73.9	73.9	73.8
740	75.1	75.1	75.1	75.0	75.0	75.0	75.0	74.9	74.9	74.9	74.9
750	76.1	76.1	76.1	76.1	76.0	76.0	76.0	75.9	75.9	75.9	75.9
760	77.2	77.1	77.1	77.1	77.0	77.0	77.0	77.0	76.9	76.9	76.9
770	78.2	78.1	78.1	78.1	78.1	78.0	78.0	78.0	77.9	77.9	77.9
780	79.2	79.2	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9
790	80.2	80.2	80.1	80.1	80.1	80.1	80.0	80.0	80.0	79.9	79.9
800	81.2	81.2	81.2	81.1	81.1	81.1	81.0	81.0	81.0	81.0	80.9
810	82.2	82.2	82.2	82.1	82.1	82.1	82.1	82.0	82.0	82.0	81.9
820	83.2	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0	83.0	82.9
830	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.0	84.0	84.0	84.0
840	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.1	85.0	85.0	85.0
850	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0	86.0	86.0
860	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.1	87.0	87.0
870	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1	88.0	88.0
880	89.3	89.3	89.3	89.2	89.2	89.2	89.1	89.1	89.1	89.0	89.0
890	90.3	90.3	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.0
900	91.4	91.3	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.0
910	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.0
920	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.1
930	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1
940	95.4	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1
950	96.4	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.2	96.1	96.1
960	97.5	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.2	97.1	97.1
970	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1
980	99.5	99.4	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.2	99.1
990	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3	100.2	100.2	100.1
1,000	101.5	101.5	101.4	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.2
1,010	102.5	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.2	102.2	102.2
1,020	103.5	103.5	103.5	103.4	103.4	103.4	103.3	103.3	103.3	103.2	103.2
1,030	104.6	104.5	104.5	104.5	104.4	104.4	104.3	104.3	104.3	104.2	104.2
1,040	105.6	105.5	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2
1,050	106.6	106.6	106.5	106.5	106.4	106.4	106.4	106.3	106.3	106.3	106.2
1,060	107.6	107.6	107.5	107.5	107.5	107.4	107.4	107.3	107.3	107.3	107.2
1,070	108.6	108.6	108.5	108.5	108.5	108.4	108.4	108.4	108.3	108.3	108.2
1,080	109.6	109.6	109.6	109.5	109.5	109.4	109.4	109.4	109.3	109.3	109.2
1,090	110.7	110.6	110.6	110.5	110.5	110.5	110.4	110.4	110.3	110.3	110.3
1,100	111.7	111.6	111.6	111.5	111.5	111.5	111.4	111.4	111.4	111.3	111.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0
700	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6	70.6	70.6
710	71.8	71.8	71.8	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6
720	72.8	72.8	72.8	72.8	72.7	72.7	72.7	72.6	72.6	72.6	72.6
730	73.8	73.8	73.8	73.8	73.7	73.7	73.7	73.7	73.6	73.6	73.6
740	74.9	74.8	74.8	74.8	74.7	74.7	74.7	74.7	74.6	74.6	74.6
750	75.9	75.8	75.8	75.8	75.8	75.7	75.7	75.7	75.6	75.6	75.6
760	76.9	76.8	76.8	76.8	76.8	76.7	76.7	76.7	76.7	76.6	76.6
770	77.9	77.9	77.8	77.8	77.8	77.7	77.7	77.7	77.7	77.6	77.6
780	78.9	78.9	78.8	78.8	78.8	78.8	78.7	78.7	78.7	78.6	78.6
790	79.9	79.9	79.9	79.8	79.8	79.8	79.7	79.7	79.7	79.7	79.6
800	80.9	80.9	80.9	80.8	80.8	80.8	80.7	80.7	80.7	80.7	80.6
810	81.9	81.9	81.9	81.8	81.8	81.8	81.8	81.7	81.7	81.7	81.6
820	82.9	82.9	82.9	82.9	82.8	82.8	82.8	82.7	82.7	82.7	82.7
830	84.0	83.9	83.9	83.9	83.8	83.8	83.8	83.7	83.7	83.7	83.7
840	85.0	84.9	84.9	84.9	84.8	84.8	84.8	84.8	84.7	84.7	84.7
850	86.0	85.9	85.9	85.9	85.9	85.8	85.8	85.8	85.7	85.7	85.7
860	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.7
870	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.8	87.7	87.7
880	89.0	89.0	89.0	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7
890	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7
900	91.0	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8	90.7	90.7
910	92.0	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.7
920	93.1	93.0	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.8	92.7
930	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.8	93.7
940	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
950	96.1	96.1	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8
960	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.8
970	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.8
980	99.1	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.8	98.8	98.8
990	100.1	100.1	100.1	100.0	100.0	100.0	99.9	99.9	99.9	99.8	99.8
1,000	101.2	101.1	101.1	101.0	101.0	101.0	100.9	100.9	100.9	100.8	100.8
1,010	102.2	102.1	102.1	102.1	102.0	102.0	102.0	101.9	101.9	101.8	101.8
1,020	103.2	103.1	103.1	103.1	103.0	103.0	103.0	102.9	102.9	102.9	102.8
1,030	104.2	104.2	104.1	104.1	104.0	104.0	104.0	103.9	103.9	103.9	103.8
1,040	105.2	105.2	105.1	105.1	105.1	105.0	105.0	104.9	104.9	104.9	104.8
1,050	106.2	106.2	106.1	106.1	106.1	106.0	106.0	106.0	105.9	105.9	105.8
1,060	107.2	107.2	107.1	107.1	107.1	107.0	107.0	107.0	106.9	106.9	106.8
1,070	108.2	108.2	108.2	108.1	108.1	108.0	108.0	108.0	107.9	107.9	107.9
1,080	109.2	109.2	109.2	109.1	109.1	109.1	109.0	109.0	108.9	108.9	108.9
1,090	110.3	110.2	110.2	110.1	110.1	110.1	110.0	110.0	109.9	109.9	109.9
1,100	111.3	111.2	111.2	111.2	111.1	111.1	111.0	111.0	111.0	110.9	110.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0
700	70. 6	70. 5	70. 5	70. 5	70. 5	70. 4	70. 4	70. 4	70. 4	70. 3	70. 3
710	71. 6	71. 5	71. 5	71. 5	71. 5	71. 4	71. 4	71. 4	71. 4	71. 3	71. 3
720	72. 6	72. 5	72. 5	72. 5	72. 5	72. 4	72. 4	72. 4	72. 4	72. 3	72. 3
730	73. 6	73. 6	73. 5	73. 5	73. 5	73. 4	73. 4	73. 4	73. 4	73. 3	73. 3
740	74. 6	74. 6	74. 5	74. 5	74. 5	74. 5	74. 4	74. 4	74. 4	74. 4	74. 3
750	75. 6	75. 6	75. 5	75. 5	75. 5	75. 5	75. 4	75. 4	75. 4	75. 4	75. 3
760	76. 6	76. 6	76. 5	76. 5	76. 5	76. 5	76. 4	76. 4	76. 4	76. 4	76. 3
770	77. 6	77. 6	77. 6	77. 5	77. 5	77. 5	77. 4	77. 4	77. 4	77. 4	77. 3
780	78. 6	78. 6	78. 6	78. 5	78. 5	78. 5	78. 5	78. 4	78. 4	78. 4	78. 3
790	79. 6	79. 6	79. 6	79. 5	79. 5	79. 5	79. 5	79. 4	79. 4	79. 4	79. 3
800	80. 6	80. 6	80. 6	80. 5	80. 5	80. 5	80. 5	80. 4	80. 4	80. 4	80. 4
810	81. 6	81. 6	81. 6	81. 6	81. 5	81. 5	81. 5	81. 4	81. 4	81. 4	81. 4
820	82. 7	82. 6	82. 6	82. 6	82. 5	82. 5	82. 5	82. 4	82. 4	82. 4	82. 4
830	83. 7	83. 6	83. 6	83. 6	83. 5	83. 5	83. 5	83. 5	83. 4	83. 4	83. 4
840	84. 7	84. 6	84. 6	84. 6	84. 5	84. 5	84. 5	84. 5	84. 4	84. 4	84. 4
850	85. 7	85. 6	85. 6	85. 6	85. 6	85. 5	85. 5	85. 5	85. 4	85. 4	85. 4
860	86. 7	86. 7	86. 6	86. 6	86. 6	86. 5	86. 5	86. 5	86. 4	86. 4	86. 4
870	87. 7	87. 7	87. 6	87. 6	87. 6	87. 5	87. 5	87. 5	87. 4	87. 4	87. 4
880	88. 7	88. 7	88. 6	88. 6	88. 6	88. 5	88. 5	88. 5	88. 4	88. 4	88. 4
890	89. 7	89. 7	89. 6	89. 6	89. 6	89. 5	89. 5	89. 5	89. 5	89. 4	89. 4
900	90. 7	90. 7	90. 7	90. 6	90. 6	90. 6	90. 5	90. 5	90. 5	90. 4	90. 4
910	91. 7	91. 7	91. 7	91. 6	91. 6	91. 6	91. 5	91. 5	91. 5	91. 4	91. 4
920	92. 7	92. 7	92. 7	92. 6	92. 6	92. 6	92. 5	92. 5	92. 5	92. 4	92. 4
930	93. 7	93. 7	93. 7	93. 6	93. 6	93. 6	93. 5	93. 5	93. 5	93. 4	93. 4
940	94. 7	94. 7	94. 7	94. 6	94. 6	94. 6	94. 5	94. 5	94. 5	94. 4	94. 4
950	95. 8	95. 7	95. 7	95. 7	95. 6	95. 6	95. 6	95. 5	95. 5	95. 4	95. 4
960	96. 8	96. 7	96. 7	96. 7	96. 6	96. 6	96. 6	96. 5	96. 5	96. 5	96. 4
970	97. 8	97. 7	97. 7	97. 7	97. 6	97. 6	97. 6	97. 5	97. 5	97. 5	97. 4
980	98. 8	98. 7	98. 7	98. 7	98. 6	98. 6	98. 6	98. 5	98. 5	98. 5	98. 4
990	99. 8	99. 8	99. 7	99. 7	99. 6	99. 6	99. 6	99. 5	99. 5	99. 5	99. 4
1, 000	100. 8	100. 8	100. 7	100. 7	100. 7	100. 6	100. 6	100. 5	100. 5	100. 5	100. 4
1, 010	101. 8	101. 8	101. 7	101. 7	101. 7	101. 6	101. 6	101. 6	101. 5	101. 5	101. 4
1, 020	102. 8	102. 8	102. 7	102. 7	102. 7	102. 6	102. 6	102. 6	102. 5	102. 5	102. 5
1, 030	103. 8	103. 8	103. 7	103. 7	103. 7	103. 6	103. 6	103. 6	103. 5	103. 5	103. 5
1, 040	104. 8	104. 8	104. 8	104. 7	104. 7	104. 6	104. 6	104. 6	104. 5	104. 5	104. 5
1, 050	105. 8	105. 8	105. 8	105. 7	105. 7	105. 7	105. 6	105. 6	105. 5	105. 5	105. 5
1, 060	106. 8	106. 8	106. 8	106. 7	106. 7	106. 7	106. 6	106. 6	106. 5	106. 5	106. 5
1, 070	107. 9	107. 8	107. 8	107. 7	107. 7	107. 7	107. 6	107. 6	107. 5	107. 5	107. 5
1, 080	108. 9	108. 8	108. 8	108. 7	108. 7	108. 7	108. 6	108. 6	108. 6	108. 5	108. 5
1, 090	109. 9	109. 8	109. 8	109. 8	109. 7	109. 7	109. 6	109. 6	109. 6	109. 5	109. 5
1. 100	110. 9	110. 8	110. 8	110. 8	110. 7	110. 7	110. 6	110. 6	110. 6	110. 5	110. 5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0
700	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.1	70.1	70.1	70.1
710	71.3	71.3	71.3	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
720	72.3	72.3	72.3	72.2	72.2	72.2	72.2	72.1	72.1	72.1	72.1
730	73.3	73.3	73.3	73.2	73.2	73.2	73.2	73.1	73.1	73.1	73.1
740	74.3	74.3	74.3	74.2	74.2	74.2	74.2	74.1	74.1	74.1	74.1
750	75.3	75.3	75.3	75.2	75.2	75.2	75.2	75.1	75.1	75.1	75.1
760	76.3	76.3	76.3	76.3	76.2	76.2	76.2	76.1	76.1	76.1	76.1
770	77.3	77.3	77.3	77.3	77.2	77.2	77.2	77.1	77.1	77.1	77.1
780	78.3	78.3	78.3	78.3	78.2	78.2	78.2	78.1	78.1	78.1	78.1
790	79.3	79.3	79.3	79.3	79.2	79.2	79.2	79.2	79.1	79.1	79.1
800	80.4	80.3	80.3	80.3	80.2	80.2	80.2	80.2	80.1	80.1	80.1
810	81.4	81.3	81.3	81.3	81.2	81.2	81.2	81.2	81.1	81.1	81.1
820	82.4	82.3	82.3	82.3	82.2	82.2	82.2	82.2	82.1	82.1	82.1
830	83.4	83.3	83.3	83.3	83.2	83.2	83.2	83.2	83.1	83.1	83.1
840	84.4	84.3	84.3	84.3	84.2	84.2	84.2	84.2	84.1	84.1	84.1
850	85.4	85.3	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1
860	86.4	86.3	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1
870	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1
880	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1
890	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.1	89.1	89.1
900	90.4	90.4	90.3	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1
910	91.4	91.4	91.3	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.1
920	92.4	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1
930	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1	93.1
940	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1	94.1
950	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1
960	96.4	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.1	96.1	96.1
970	97.4	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.2	97.1	97.1
980	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1
990	99.4	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.2	99.1	99.1
1,000	100.4	100.4	100.4	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.1
1,010	101.4	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.2	101.1	101.1
1,020	102.5	102.4	102.4	102.3	102.3	102.3	102.2	102.2	102.2	102.1	102.1
1,030	103.5	103.4	103.4	103.3	103.3	103.3	103.2	103.2	103.2	103.1	103.1
1,040	104.5	104.4	104.4	104.3	104.3	104.3	104.2	104.2	104.2	104.1	104.1
1,050	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.2	105.1	105.1
1,060	106.5	106.4	106.4	106.4	106.3	106.3	106.2	106.2	106.2	106.1	106.1
1,070	107.5	107.4	107.4	107.4	107.3	107.3	107.2	107.2	107.2	107.1	107.1
1,080	108.5	108.4	108.4	108.4	108.3	108.3	108.2	108.2	108.2	108.1	108.1
1,090	109.5	109.4	109.4	109.4	109.3	109.3	109.3	109.2	109.2	109.1	109.1
1,100	110.5	110.4	110.4	110.4	110.3	110.3	110.3	110.2	110.2	110.1	110.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	12.0
700	70. 1	70. 0	70. 0	70. 0	70. 0	69. 9	69. 9	69. 9	69. 9	69. 8	69. 8
710	71. 1	71. 0	71. 0	71. 0	71. 0	70. 9	70. 9	70. 9	70. 9	70. 8	70. 8
720	72. 1	72. 0	72. 0	72. 0	72. 0	71. 9	71. 9	71. 9	71. 9	71. 8	71. 8
730	73. 1	73. 0	73. 0	73. 0	73. 0	72. 9	72. 9	72. 9	72. 9	72. 8	72. 8
740	74. 1	74. 0	74. 0	74. 0	74. 0	73. 9	73. 9	73. 9	73. 9	73. 8	73. 8
750	75. 1	75. 0	75. 0	75. 0	75. 0	74. 9	74. 9	74. 9	74. 9	74. 8	74. 8
760	76. 1	76. 0	76. 0	76. 0	76. 0	75. 9	75. 9	75. 9	75. 9	75. 8	75. 8
770	77. 1	77. 0	77. 0	77. 0	77. 0	76. 9	76. 9	76. 9	76. 8	76. 8	76. 8
780	78. 1	78. 0	78. 0	78. 0	78. 0	77. 9	77. 9	77. 9	77. 8	77. 8	77. 8
790	79. 1	79. 0	79. 0	79. 0	79. 0	78. 9	78. 9	78. 9	78. 8	78. 8	78. 8
800	80. 1	80. 0	80. 0	80. 0	80. 0	79. 9	79. 9	79. 9	79. 8	79. 8	79. 8
810	81. 1	81. 0	81. 0	81. 0	81. 0	80. 9	80. 9	80. 9	80. 8	80. 8	80. 8
820	82. 1	82. 0	82. 0	82. 0	82. 0	81. 9	81. 9	81. 9	81. 8	81. 8	81. 8
830	83. 1	83. 0	83. 0	83. 0	83. 0	82. 9	82. 9	82. 9	82. 8	82. 8	82. 8
840	84. 1	84. 0	84. 0	84. 0	84. 0	83. 9	83. 9	83. 9	83. 8	83. 8	83. 8
850	85. 1	85. 0	85. 0	85. 0	85. 0	84. 9	84. 9	84. 9	84. 8	84. 8	84. 8
860	86. 1	86. 0	86. 0	86. 0	86. 0	85. 9	85. 9	85. 9	85. 8	85. 8	85. 8
870	87. 1	87. 0	87. 0	87. 0	87. 0	86. 9	86. 9	86. 9	86. 8	86. 8	86. 8
880	88. 1	88. 0	88. 0	88. 0	88. 0	87. 9	87. 9	87. 9	87. 8	87. 8	87. 8
890	89. 1	89. 0	89. 0	89. 0	88. 9	88. 9	88. 9	89. 9	88. 8	88. 8	88. 8
900	90. 1	90. 0	90. 0	90. 0	89. 9	89. 9	89. 9	89. 9	89. 8	89. 8	89. 8
910	91. 1	91. 0	91. 0	91. 0	90. 9	90. 9	90. 9	90. 9	90. 8	90. 8	90. 8
920	92. 1	92. 0	92. 0	92. 0	91. 9	91. 9	91. 9	91. 9	91. 8	91. 8	91. 8
930	93. 1	93. 0	93. 0	93. 0	92. 9	92. 9	92. 9	92. 8	92. 8	92. 8	92. 8
940	94. 1	94. 0	94. 0	94. 0	93. 9	93. 9	93. 9	93. 8	93. 8	93. 8	93. 7
950	95. 1	95. 0	95. 0	95. 0	94. 9	94. 9	94. 9	94. 8	94. 8	94. 8	94. 7
960	96. 1	96. 0	96. 0	96. 0	95. 9	95. 9	95. 9	95. 8	95. 8	95. 8	95. 7
970	97. 1	97. 0	97. 0	97. 0	96. 9	96. 9	96. 9	96. 8	96. 8	96. 8	97. 7
980	98. 1	98. 0	98. 0	98. 0	97. 9	97. 9	97. 9	97. 8	97. 8	97. 8	97. 7
990	99. 1	99. 0	99. 0	99. 0	98. 9	98. 9	98. 9	98. 8	98. 8	98. 8	98. 7
1, 000	100. 1	100. 1	100. 0	100. 0	99. 9	99. 9	99. 9	99. 8	99. 8	99. 8	99. 7
1, 010	101. 1	101. 1	101. 0	101. 0	100. 9	100. 9	100. 9	100. 8	100. 8	100. 8	100. 7
1, 020	102. 1	102. 1	102. 0	102. 0	101. 9	101. 9	101. 9	101. 8	101. 8	101. 8	101. 7
1, 030	103. 1	103. 1	103. 0	103. 0	102. 9	102. 9	102. 9	102. 8	102. 8	102. 8	102. 7
1, 040	104. 1	104. 1	104. 0	104. 0	103. 9	103. 9	103. 9	103. 8	103. 8	103. 8	103. 7
1, 050	105. 1	105. 1	105. 0	105. 0	104. 9	104. 9	104. 9	104. 8	104. 8	104. 8	104. 7
1, 060	106. 1	106. 1	106. 0	106. 0	105. 9	105. 9	105. 9	105. 8	105. 8	105. 8	105. 7
1, 070	107. 1	107. 1	107. 0	107. 0	106. 9	106. 9	106. 9	106. 8	106. 8	106. 8	106. 7
1, 080	108. 1	108. 1	108. 0	108. 0	107. 9	107. 9	107. 9	107. 8	107. 8	107. 8	107. 7
1, 090	109. 1	109. 1	109. 0	109. 0	108. 9	108. 9	108. 9	108. 8	108. 8	108. 8	108. 7
1, 100	110. 1	110. 1	110. 0	110. 0	109. 9	109. 9	109. 9	109. 8	109. 8	109. 7	109. 7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0
700	69.8	69.8	69.8	69.7	69.7	69.7	69.7	69.6	69.6	69.6	69.6
710	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6	70.6	70.6
720	71.8	71.8	71.8	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6
730	72.8	72.8	72.8	72.7	72.7	72.7	72.7	72.6	72.6	72.6	72.6
740	73.8	73.8	73.8	73.7	73.7	73.7	73.6	73.6	73.6	73.6	73.5
750	74.8	74.8	74.7	74.7	74.7	74.7	74.6	74.6	74.6	74.6	74.5
760	75.8	75.8	75.7	75.7	75.7	75.7	75.6	75.6	75.6	75.6	75.5
770	76.8	76.8	76.7	76.7	76.7	76.7	76.6	76.6	76.6	76.6	76.5
780	77.8	77.8	77.7	77.7	77.7	77.7	77.6	77.6	77.6	77.5	77.5
790	78.8	78.8	78.7	78.7	78.7	78.7	78.6	78.6	78.6	78.5	78.5
800	79.8	79.8	79.7	79.7	79.7	79.6	79.6	79.6	79.6	79.5	79.5
810	80.8	80.8	80.7	80.7	80.7	80.6	80.6	80.6	80.6	80.5	80.5
820	81.8	81.8	81.7	81.7	81.7	81.6	81.6	81.6	81.6	81.5	81.5
830	82.8	82.7	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5
840	83.8	83.7	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5
850	84.8	84.7	84.7	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5
860	85.8	85.7	85.7	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5
870	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.6	86.5	86.5	86.5
880	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.6	87.5	87.5	87.5
890	88.8	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.5	88.5
900	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.5	89.4
910	90.8	90.7	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.5	90.4
920	91.8	91.7	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.4
930	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.5	92.4
940	93.7	93.7	93.7	93.7	93.6	93.6	93.6	93.5	93.5	93.5	93.4
950	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4	94.4
960	95.7	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4
970	96.7	96.7	96.7	96.6	96.6	96.6	96.5	96.5	96.5	96.4	96.4
980	97.7	97.7	97.7	97.6	97.6	97.6	97.5	97.5	97.5	97.4	97.4
990	98.7	98.7	98.7	98.6	98.6	98.6	98.5	98.5	98.5	98.4	98.4
1,000	99.7	99.7	99.7	99.6	99.6	99.6	99.5	99.5	99.5	99.4	99.4
1,010	100.7	100.7	100.7	100.6	100.6	100.6	100.5	100.5	100.5	100.4	100.4
1,020	101.7	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.4
1,030	102.7	102.7	102.7	102.6	102.6	102.6	102.5	102.5	102.4	102.4	102.4
1,040	103.7	103.7	103.7	103.6	103.6	103.5	103.5	103.5	103.4	103.4	103.4
1,050	104.7	104.7	104.7	104.6	104.6	104.5	104.5	104.5	104.4	104.4	104.4
1,060	105.7	105.7	105.6	105.6	105.6	105.5	105.5	105.5	105.4	105.4	105.4
1,070	106.7	106.7	106.6	106.6	106.6	106.5	106.5	106.5	106.4	106.4	106.3
1,080	107.7	107.7	107.6	107.6	107.6	107.5	107.5	107.5	107.4	107.4	107.3
1,090	108.7	108.7	108.6	108.6	108.6	108.5	108.5	108.4	108.4	108.4	108.3
1,100	109.7	109.7	109.6	109.6	109.6	109.5	109.5	109.4	109.4	109.4	109.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	14.0
700	69.6	69.5	69.5	69.5	69.5	69.4	69.4	69.4	69.4	69.4	69.3
710	70.6	70.5	70.5	70.5	70.5	70.4	70.4	70.4	70.4	70.3	70.3
720	71.6	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.3	71.3
730	72.6	72.5	72.5	72.5	72.4	72.4	72.4	72.4	72.3	72.3	72.3
740	73.5	73.5	73.5	73.5	73.4	73.4	73.4	73.4	73.3	73.3	73.3
750	74.5	74.5	74.5	74.5	74.4	74.4	74.4	74.4	74.3	74.3	74.3
760	75.5	75.5	75.5	75.5	75.4	75.4	75.4	75.3	75.3	75.3	75.3
770	76.5	76.5	76.5	76.4	76.4	76.4	76.4	76.3	76.3	76.3	76.3
780	77.5	77.5	77.5	77.4	77.4	77.4	77.4	77.3	77.3	77.3	77.3
790	78.5	78.5	78.5	78.4	78.4	78.4	78.3	78.3	78.3	78.3	78.2
800	79.5	79.5	79.5	79.4	79.4	79.4	79.3	79.3	79.3	79.3	79.2
810	80.5	80.5	80.4	80.4	80.4	80.4	80.3	80.3	80.3	80.2	80.2
820	81.5	81.5	81.4	81.4	81.4	81.4	81.3	81.3	81.3	81.2	81.2
830	82.5	82.5	82.4	82.4	82.4	82.3	82.3	82.3	82.3	82.2	82.2
840	83.5	83.5	83.4	83.4	83.4	83.3	83.3	83.3	83.3	83.2	83.2
850	84.5	84.4	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2	84.2
860	85.5	85.4	85.4	85.4	85.4	85.3	85.3	85.3	85.2	85.2	85.2
870	86.5	86.4	86.4	86.4	86.3	86.3	86.3	86.3	86.2	86.2	86.2
880	87.5	87.4	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.2
890	88.5	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1
900	89.4	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.1
910	90.4	90.4	90.4	90.3	90.3	90.3	90.3	90.2	90.2	90.2	90.1
920	91.4	91.4	91.4	91.3	91.3	91.3	91.2	91.2	91.2	91.1	91.1
930	92.4	92.4	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.1	92.1
940	93.4	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1
950	94.4	94.4	94.3	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1
960	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1
970	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.1
980	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.2	97.1	97.1	97.1
990	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.0
1,000	99.4	99.4	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.1	99.0
1,010	100.4	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.1	100.0
1,020	101.4	101.3	101.3	101.3	101.2	101.2	101.2	101.1	101.1	101.1	101.0
1,030	102.4	102.3	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.0	102.0
1,040	103.4	103.3	103.3	103.3	103.2	103.2	103.1	103.1	103.1	103.0	103.0
1,050	104.4	104.3	104.3	104.2	104.2	104.2	104.1	104.1	104.1	104.0	104.0
1,060	105.4	105.3	105.3	105.2	105.2	105.2	105.1	105.1	105.1	105.0	105.0
1,070	106.3	106.3	106.3	106.2	106.2	106.2	106.1	106.1	106.0	106.0	106.0
1,080	107.3	107.3	107.3	107.2	107.2	107.2	107.1	107.1	107.0	107.0	107.0
1,090	108.3	108.3	108.3	108.2	108.2	108.1	108.1	108.1	108.0	108.0	108.0
1,100	109.3	109.3	109.3	109.2	109.2	109.1	109.1	109.1	109.0	109.0	108.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0
700	69.3	69.3	69.3	69.3	69.2	69.2	69.2	69.2	69.1	69.1	69.1
710	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.1	70.1	70.1	70.1
720	71.3	71.3	71.3	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
730	72.3	72.3	72.2	72.2	72.2	72.2	72.1	72.1	72.1	72.1	72.0
740	73.3	73.3	73.2	73.2	73.2	73.2	73.1	73.1	73.1	73.1	73.0
750	74.3	74.3	74.2	74.2	74.2	74.2	74.1	74.1	74.1	74.0	74.0
760	75.3	75.2	75.2	75.2	75.2	75.1	75.1	75.1	75.1	75.0	75.0
770	76.3	76.2	76.2	76.2	76.2	76.1	76.1	76.1	76.0	76.0	76.0
780	77.3	77.2	77.2	77.2	77.1	77.1	77.1	77.1	77.0	77.0	77.0
790	78.2	78.2	78.2	78.2	78.1	78.1	78.1	78.1	78.0	78.0	78.0
800	79.2	79.2	79.2	79.1	79.1	79.1	79.1	79.0	79.0	79.0	79.0
810	80.2	80.2	80.2	80.1	80.1	80.1	80.1	80.0	80.0	80.0	79.9
820	81.2	81.2	81.2	81.1	81.1	81.1	81.0	81.0	81.0	81.0	80.9
830	82.2	82.2	82.1	82.1	82.1	82.1	82.0	82.0	82.0	81.9	81.9
840	83.2	83.2	83.1	83.1	83.1	83.0	83.0	83.0	83.0	82.9	82.9
850	84.2	84.2	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9	83.9
860	85.2	85.1	85.1	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9
870	86.2	86.1	86.1	86.1	86.0	86.0	86.0	86.0	85.9	85.9	85.9
880	87.2	87.1	87.1	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.9
890	88.1	88.1	88.1	88.1	88.0	88.0	88.0	87.9	87.9	87.9	87.8
900	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.9	88.8
910	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8
920	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9	90.8	90.8
930	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.9	91.9	91.8	91.8
940	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.8
950	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.8
960	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
970	96.1	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7
980	97.1	97.0	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.8	96.7
990	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.8	97.7	97.7
1,000	99.0	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.8	98.7	98.7
1,010	100.0	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.8	99.7	99.7
1,020	101.0	101.0	101.0	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.7
1,030	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.8	101.7	101.7	101.7
1,040	103.0	103.0	102.9	102.9	102.9	102.8	102.8	102.8	102.7	102.7	102.6
1,050	104.0	104.0	103.9	103.9	103.9	103.8	103.8	103.7	103.7	103.7	103.6
1,060	105.0	104.9	104.9	104.9	104.8	104.8	104.8	104.7	104.7	104.7	104.6
1,070	106.0	105.9	105.9	105.9	105.8	105.8	105.8	105.7	105.7	105.6	105.6
1,080	107.0	106.9	106.9	106.9	106.8	106.8	106.7	106.7	106.7	106.6	106.6
1,090	108.0	107.9	107.9	107.8	107.8	107.8	107.7	107.7	107.7	107.6	107.6
1,100	108.9	108.9	108.9	108.8	108.8	108.8	108.7	108.7	108.6	108.6	108.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	16.0
700	69.1	69.1	69.0	69.0	69.0	69.0	68.9	68.9	68.9	68.9	68.8
710	70.1	70.0	70.0	70.0	70.0	70.0	69.9	69.9	69.9	69.9	69.8
720	71.1	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8	70.8
730	72.0	72.0	72.0	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8
740	73.0	73.0	73.0	73.0	72.9	72.9	72.9	72.9	72.8	72.8	72.8
750	74.0	74.0	74.0	73.9	73.9	73.9	73.9	73.8	73.8	73.8	73.8
760	75.0	75.0	75.0	74.9	74.9	74.9	74.9	74.8	74.8	74.8	74.7
770	76.0	76.0	75.9	75.9	75.9	75.9	75.8	75.8	75.8	75.8	75.7
780	77.0	77.0	76.9	76.9	76.9	76.8	76.8	76.8	76.8	76.7	76.7
790	78.0	77.9	77.9	77.9	77.9	77.8	77.8	77.8	77.8	77.7	77.7
800	79.0	78.9	78.9	78.9	78.8	78.8	78.8	78.8	78.7	78.7	78.7
810	79.9	79.9	79.9	79.9	79.8	79.8	79.8	79.7	79.7	79.7	79.7
820	80.9	80.9	80.9	80.8	80.8	80.8	80.8	80.7	80.7	80.7	80.7
830	81.9	81.9	81.9	81.8	81.8	81.8	81.7	81.7	81.7	81.7	81.6
840	82.9	82.9	82.8	82.8	82.8	82.8	82.7	82.7	82.7	82.6	82.6
850	83.9	83.9	83.8	83.8	83.8	83.7	83.7	83.7	83.7	83.6	83.6
860	84.9	84.8	84.8	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6
870	85.9	85.8	85.8	85.8	85.7	85.7	85.7	85.7	85.6	85.6	85.6
880	86.9	86.8	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.6
890	87.8	87.8	87.8	87.7	87.7	87.7	87.7	87.6	87.6	87.6	87.5
900	88.8	88.8	88.8	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5
910	89.8	89.8	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5
920	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.5
930	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5
940	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.5	92.5
950	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.5	93.5	93.5	93.4
960	94.7	94.7	94.7	94.6	94.6	94.6	94.6	94.5	94.5	94.5	94.4
970	95.7	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4
980	96.7	96.7	96.7	96.6	96.6	96.6	96.5	96.5	96.5	96.4	96.4
990	97.7	97.7	97.6	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.4
1,000	98.7	98.7	98.6	98.6	98.6	98.5	98.5	98.5	98.4	98.4	98.4
1,010	99.7	99.6	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.3
1,020	100.7	100.6	100.6	100.6	100.5	100.5	100.5	100.4	100.4	100.4	100.3
1,030	101.7	101.6	101.6	101.6	101.5	101.5	101.4	101.4	101.4	101.3	101.3
1,040	102.6	102.6	102.6	102.5	102.5	102.5	102.4	102.4	102.4	102.3	102.3
1,050	103.6	103.6	103.6	103.5	103.5	103.5	103.4	103.4	103.3	103.3	103.3
1,060	104.6	104.6	104.5	104.5	104.5	104.4	104.4	104.4	104.3	104.3	104.3
1,070	105.6	105.6	105.5	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2
1,080	106.6	106.6	106.5	106.5	106.4	106.4	106.4	106.3	106.3	106.3	106.2
1,090	107.6	107.5	107.5	107.5	107.4	107.4	107.4	107.3	107.3	107.2	107.2
1,100	108.6	108.5	108.5	108.5	108.4	108.4	108.3	108.3	108.3	108.2	108.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	17.0
700	68.8	68.8	68.8	68.8	68.8	68.7	68.7	68.7	68.7	68.6	68.6
710	69.8	69.8	69.8	69.8	69.7	69.7	69.7	69.7	69.6	69.6	69.6
720	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6	70.6	70.6
730	71.8	71.8	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.6
740	72.8	72.8	72.7	72.7	72.7	72.7	72.6	72.6	72.6	72.6	72.5
750	73.8	73.7	73.7	73.7	73.7	73.6	73.6	73.6	73.6	73.5	73.5
760	74.7	74.7	74.7	74.7	74.6	74.6	74.6	74.6	74.5	74.5	74.5
770	75.7	75.7	75.7	75.7	75.6	75.6	75.6	75.5	75.5	75.5	75.5
780	76.7	76.7	76.7	76.6	76.6	76.6	76.6	76.5	76.5	76.5	76.5
790	77.7	77.7	77.6	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4
800	78.7	78.7	78.6	78.6	78.6	78.5	78.5	78.5	78.5	78.4	78.4
810	79.7	79.6	79.6	79.6	79.6	79.5	79.5	79.5	79.4	79.4	79.4
820	80.7	80.6	80.6	80.6	80.5	80.5	80.5	80.5	80.4	80.4	80.4
830	81.6	81.6	81.6	81.5	81.5	81.5	81.5	81.4	81.4	81.4	81.4
840	82.6	82.6	82.6	82.5	82.5	82.5	82.4	82.4	82.4	82.4	82.3
850	83.6	83.6	83.5	83.5	83.5	83.5	83.4	83.4	83.4	83.3	83.3
860	84.6	84.6	84.5	84.5	84.5	84.4	84.4	84.4	84.4	84.3	84.3
870	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.4	85.3	85.3	85.3
880	86.6	86.5	86.5	86.5	86.4	86.4	86.4	86.3	86.3	86.3	86.3
890	87.5	87.5	87.5	87.4	87.4	87.4	87.4	87.3	87.3	87.3	87.2
900	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2
910	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.3	89.2	89.2
920	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3	90.2	90.2	90.2
930	91.5	91.4	91.4	91.4	91.3	91.3	91.3	91.2	91.2	91.2	91.2
940	92.5	92.4	92.4	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.1
950	93.4	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.2	93.1	93.1
960	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1
970	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1
980	96.4	96.4	96.3	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.1
990	97.4	97.3	97.3	97.3	97.2	97.2	97.2	97.1	97.1	97.1	97.0
1,000	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.0	98.0
1,010	99.3	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.1	99.0	99.0
1,020	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.0	100.0	100.0
1,030	101.3	101.3	101.2	101.2	101.2	101.1	101.1	101.1	101.0	101.0	101.0
1,040	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.0	102.0	102.0	101.9
1,050	103.3	103.2	103.2	103.2	103.1	103.1	103.1	103.0	103.0	103.0	102.9
1,060	104.3	104.2	104.2	104.2	104.1	104.1	104.0	104.0	104.0	103.9	103.9
1,070	105.2	105.2	105.2	105.1	105.1	105.1	105.0	105.0	105.0	104.9	104.9
1,080	106.2	106.2	106.2	106.1	106.1	106.0	106.0	106.0	105.9	105.9	105.9
1,090	107.2	107.2	107.1	107.1	107.1	107.0	107.0	107.0	106.9	106.9	106.8
1,100	108.2	108.2	108.1	108.1	108.0	108.0	108.0	107.9	107.9	107.9	107.8

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	18.0
700	68.6	68.6	68.6	68.5	68.5	68.5	68.5	68.4	68.4	68.4	68.4
710	69.6	69.6	69.5	69.5	69.5	69.5	69.4	69.4	69.4	69.4	69.4
720	70.6	70.5	70.5	70.5	70.5	70.4	70.4	70.4	70.4	70.4	70.3
730	71.6	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.3	71.3
740	72.5	72.5	72.5	72.5	72.4	72.4	72.4	72.4	72.3	72.3	72.3
750	73.5	73.5	73.5	73.4	73.4	73.4	73.4	73.3	73.3	73.3	73.3
760	74.5	74.5	74.4	74.4	74.4	74.4	74.3	74.3	74.3	74.3	74.2
770	75.5	75.4	75.4	75.4	75.4	75.3	75.3	75.3	75.3	75.2	75.2
780	76.5	76.4	76.4	76.4	76.3	76.3	76.3	76.3	76.2	76.2	76.2
790	77.4	77.4	77.4	77.4	77.3	77.3	77.3	77.2	77.2	77.2	77.2
800	78.4	78.4	78.4	78.3	78.3	78.3	78.3	78.2	78.2	78.2	78.1
810	79.4	79.4	79.3	79.3	79.3	79.3	79.2	79.2	79.2	79.1	79.1
820	80.4	80.3	80.3	80.3	80.3	80.2	80.2	80.2	80.2	80.1	80.1
830	81.4	81.3	81.3	81.3	81.2	81.2	81.2	81.2	81.1	81.1	81.1
840	82.3	82.3	82.3	82.2	82.2	82.2	82.2	82.1	82.1	82.1	82.0
850	83.3	83.3	83.3	83.2	83.2	83.2	83.1	83.1	83.1	83.1	83.0
860	84.3	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.1	84.0	84.0
870	85.3	85.2	85.2	85.2	85.2	85.1	85.1	85.1	85.0	85.0	85.0
880	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0	86.0	86.0	86.0
890	87.2	87.2	87.2	87.1	87.1	87.1	87.1	87.0	87.0	87.0	86.9
900	88.2	88.2	88.2	88.1	88.1	88.1	88.0	88.0	88.0	87.9	87.9
910	89.2	89.2	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9
920	90.2	90.1	90.1	90.1	90.0	90.0	90.0	90.0	89.9	89.9	89.9
930	91.2	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9	90.8
940	92.1	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8
950	93.1	93.1	93.0	93.0	93.0	93.0	92.9	92.9	92.9	92.8	92.8
960	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.8
970	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
980	96.1	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7
990	97.0	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.8	96.7	96.7
1,000	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.7
1,010	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.7
1,020	100.0	99.9	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.7	99.6
1,030	101.0	100.9	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.6	100.6
1,040	101.9	101.9	101.9	101.8	101.8	101.8	101.7	101.7	101.7	101.6	101.6
1,050	102.9	102.9	102.8	102.8	102.8	102.7	102.7	102.7	102.6	102.6	102.6
1,060	103.9	103.9	103.8	103.8	103.8	103.7	103.7	103.7	103.6	103.6	103.5
1,070	104.9	104.8	104.8	104.8	104.7	104.7	104.7	104.6	104.6	104.6	104.5
1,080	105.9	105.8	105.8	105.8	105.7	105.7	105.6	105.6	105.6	105.5	105.5
1,090	106.8	106.8	106.8	106.7	106.7	106.7	106.6	106.6	106.5	106.5	106.5
1,100	107.8	107.8	107.7	107.7	107.7	107.6	107.6	107.6	107.5	107.5	107.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	19.0
700	68.4	68.4	68.3	68.3	68.3	68.3	68.2	68.2	68.2	68.2	68.1
710	69.4	69.3	69.3	69.3	69.3	69.2	69.2	69.2	69.2	69.1	69.1
720	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.1	70.1	70.1
730	71.3	71.3	71.3	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
740	72.3	72.3	72.2	72.2	72.2	72.2	72.1	72.1	72.1	72.1	72.0
750	73.3	73.2	73.2	73.2	73.2	73.1	73.1	73.1	73.1	73.0	73.0
760	74.2	74.2	74.2	74.2	74.1	74.1	74.1	74.1	74.0	74.0	74.0
770	75.2	75.2	75.2	75.1	75.1	75.1	75.1	75.0	75.0	75.0	75.0
780	76.2	76.2	76.1	76.1	76.1	76.1	76.0	76.0	76.0	76.0	75.9
790	77.2	77.1	77.1	77.1	77.1	77.0	77.0	77.0	77.0	76.9	76.9
800	78.1	78.1	78.1	78.1	78.0	78.0	78.0	78.0	77.9	77.9	77.9
810	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9	78.9	78.8
820	80.1	80.1	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.8	79.8
830	81.1	81.0	81.0	81.0	81.0	80.9	80.9	80.9	80.9	80.8	80.8
840	82.0	82.0	82.0	82.0	81.9	81.9	81.9	81.9	81.8	81.8	81.8
850	83.0	83.0	83.0	82.9	82.9	82.9	82.9	82.8	82.8	82.8	82.7
860	84.0	84.0	83.9	83.9	83.9	83.9	83.8	83.8	83.8	83.7	83.7
870	85.0	85.0	84.9	84.9	84.9	84.8	84.8	84.8	84.7	84.7	84.7
880	86.0	85.9	85.9	85.9	85.8	85.8	85.8	85.8	85.7	85.7	85.7
890	86.9	86.9	86.9	86.8	86.8	86.8	86.8	86.7	86.7	86.7	86.6
900	87.9	87.9	87.8	87.8	87.8	87.8	87.7	87.7	87.7	87.6	87.6
910	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.7	88.6	88.6	88.6
920	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.6
930	90.8	90.8	90.8	90.7	90.7	90.7	90.7	90.6	90.6	90.6	90.5
940	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.6	91.5	91.5
950	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.5
960	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.5	93.5	93.5	93.5
970	94.7	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
980	95.7	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4
990	96.7	96.7	96.6	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.4
1,000	97.7	97.6	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.4	97.3
1,010	98.7	98.6	98.6	98.6	98.5	98.5	98.5	98.4	98.4	98.4	98.3
1,020	99.6	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3
1,030	100.6	100.6	100.5	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3
1,040	101.6	101.6	101.5	101.5	101.5	101.4	101.4	101.3	101.3	101.3	101.2
1,050	102.6	102.5	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.3	102.2
1,060	103.5	103.5	103.5	103.4	103.4	103.4	103.3	103.3	103.3	103.2	103.2
1,070	104.5	104.5	104.4	104.4	104.4	104.3	104.3	104.3	104.2	104.2	104.2
1,080	105.5	105.5	105.4	105.4	105.4	105.3	105.3	105.2	105.2	105.2	105.1
1,090	106.5	106.4	106.4	106.4	106.3	106.3	106.3	106.2	106.2	106.1	106.1
1,100	107.5	107.4	107.4	107.3	107.3	107.3	107.2	107.2	107.2	107.1	107.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	20.0
700	68.1	68.1	68.1	68.1	68.0	68.0	68.0	68.0	68.0	67.9	67.9
710	69.1	69.1	69.1	69.0	69.0	69.0	69.0	68.9	68.9	68.9	68.9
720	70.1	70.1	70.0	70.0	70.0	70.0	69.9	69.9	69.9	69.9	69.8
730	71.1	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8	70.8
740	72.0	72.0	72.0	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8
750	73.0	73.0	73.0	72.9	72.9	72.9	72.9	72.8	72.8	72.8	72.8
760	74.0	74.0	73.9	73.9	73.9	73.9	73.8	73.8	73.8	73.8	73.7
770	75.0	74.9	74.9	74.9	74.9	74.8	74.8	74.8	74.8	74.7	74.7
780	75.9	75.9	75.9	75.9	75.8	75.8	75.8	75.7	75.7	75.7	75.7
790	76.9	76.9	76.8	76.8	76.8	76.8	76.7	76.7	76.7	76.7	76.6
800	77.9	77.8	77.8	77.8	77.8	77.7	77.7	77.7	77.7	77.6	77.6
810	78.8	78.8	78.8	78.8	78.7	78.7	78.7	78.7	78.6	78.6	78.6
820	79.8	79.8	79.8	79.7	79.7	79.7	79.7	79.6	79.6	79.6	79.5
830	80.8	80.8	80.7	80.7	80.7	80.7	8.06	80.6	80.6	80.5	80.5
840	81.8	81.7	81.7	81.7	81.7	81.6	81.6	81.6	81.5	81.5	81.5
850	82.7	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5	82.5
860	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.5	83.4
870	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.5	84.4	84.4
880	85.7	85.6	85.6	85.6	85.5	85.5	85.5	85.5	85.4	85.4	85.4
890	86.6	86.6	86.6	86.5	86.5	86.5	86.5	86.4	86.4	86.4	86.3
900	87.6	87.6	87.5	87.5	87.5	87.5	87.4	87.4	87.4	87.3	87.3
910	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3	88.3
920	89.6	89.5	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.3
930	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3	90.3	90.2
940	91.5	91.5	91.4	91.4	91.4	91.3	91.3	91.3	91.3	91.2	91.2
950	92.5	92.4	92.4	92.4	92.4	92.3	92.3	92.2	92.2	92.2	92.2
960	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.2	93.1
970	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1
980	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1
990	96.4	96.3	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.1	96.0
1,000	97.3	97.3	97.3	97.2	97.2	97.2	97.1	97.1	97.1	97.0	97.0
1,010	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.1	98.0	98.0	98.0
1,020	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.1	99.0	99.0	99.0
1,030	100.3	100.2	100.2	100.2	100.1	100.1	100.1	100.0	100.0	100.0	99.9
1,040	101.2	101.2	101.2	101.1	101.1	101.1	101.0	101.0	101.0	100.9	100.9
1,050	102.2	102.2	102.1	102.1	102.1	102.0	102.0	102.0	101.9	101.9	101.9
1,060	103.2	103.2	103.1	103.1	103.0	103.0	103.0	102.9	102.9	102.9	102.8
1,070	104.2	104.1	104.1	104.1	104.0	104.0	103.9	103.9	103.9	103.8	103.8
1,080	105.1	105.1	105.1	105.0	105.0	105.0	104.9	104.9	104.8	104.8	104.8
1,090	106.1	106.1	106.0	106.0	106.0	105.9	105.9	105.9	105.8	105.8	105.7
1,100	107.1	107.0	107.0	107.0	106.9	106.9	106.9	106.8	106.8	106.8	106.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	21.0
700	67.9	67.9	67.9	67.8	67.8	67.8	67.8	67.7	67.7	67.7	67.7
710	68.9	68.9	68.8	68.8	68.8	68.8	68.7	68.7	68.7	68.7	68.6
720	69.8	69.8	69.8	69.8	69.8	69.7	69.7	69.7	69.7	69.6	69.6
730	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6	70.6	70.6
740	71.8	71.8	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.5
750	72.8	72.7	72.7	72.7	72.7	72.6	72.6	72.6	72.6	72.5	72.5
760	73.7	73.7	73.7	73.7	73.6	73.6	73.6	73.6	73.5	73.5	73.5
770	74.7	74.7	74.6	74.6	74.6	74.6	74.5	74.5	74.5	74.5	74.4
780	75.7	75.6	75.6	75.6	75.6	75.5	75.5	75.5	75.5	75.4	75.4
790	76.6	76.6	76.6	76.6	76.5	76.5	76.5	76.5	76.4	76.4	76.4
800	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4	77.4	77.4	77.3
810	78.6	78.6	78.5	78.5	78.5	78.4	78.4	78.4	78.4	78.3	78.3
820	79.5	79.5	79.5	79.5	79.4	79.4	79.4	79.4	79.3	79.3	79.3
830	80.5	80.5	80.5	80.4	80.4	80.4	80.4	80.3	80.3	80.3	80.2
840	81.5	81.5	81.4	81.4	81.4	81.4	81.3	81.3	81.3	81.2	81.2
850	82.5	82.4	82.4	82.4	82.3	82.3	82.3	82.3	82.2	82.2	82.2
860	83.4	83.4	83.4	83.3	83.3	83.3	83.3	83.2	83.2	83.2	83.1
870	84.4	84.4	84.3	84.3	84.3	84.3	84.2	84.2	84.2	84.1	84.1
880	85.4	85.3	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1
890	86.3	86.3	86.3	86.3	86.2	86.2	86.2	86.1	86.1	86.1	86.0
900	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.0	87.0
910	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1	88.0	88.0	88.0
920	89.3	89.2	89.2	89.2	89.1	89.1	89.1	89.0	89.0	89.0	88.9
930	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9
940	91.2	91.2	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9
950	92.2	92.1	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.9	91.8
960	93.1	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.9	92.8	92.8
970	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8	93.8
980	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
990	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7	95.7
1,000	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.7
1,010	98.0	97.9	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.7	97.6
1,020	99.0	98.9	98.9	98.9	98.8	98.8	98.7	98.7	98.7	98.6	98.6
1,030	99.9	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.7	99.6	99.6
1,040	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.7	100.6	100.6	100.6
1,050	101.9	101.8	101.8	101.8	101.7	101.7	101.7	101.6	101.6	101.6	101.5
1,060	102.8	102.8	102.8	102.7	102.7	102.7	102.6	102.6	102.6	102.5	102.5
1,070	103.8	103.8	103.7	103.7	103.7	103.6	103.6	103.6	103.5	103.5	103.5
1,080	104.8	104.7	104.7	104.7	104.6	104.6	104.6	104.5	104.5	104.5	104.4
1,090	105.7	105.7	105.7	105.6	105.6	105.6	105.5	105.5	105.5	105.4	105.4
1,100	106.7	106.7	106.6	106.6	106.6	106.5	106.5	106.5	106.4	106.4	106.4

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	22.0
700	67.7	67.7	67.6	67.6	67.6	67.6	67.5	67.5	67.5	67.5	67.4
710	68.6	68.6	68.6	68.6	68.6	68.5	68.5	68.5	68.5	68.4	68.4
720	69.6	69.6	69.6	69.5	69.5	69.5	69.5	69.4	69.4	69.4	69.4
730	70.6	70.6	70.5	70.5	70.5	70.5	70.4	70.4	70.4	70.4	70.3
740	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.4	71.3	71.3
750	72.5	72.5	72.5	72.4	72.4	72.4	72.4	72.3	72.3	72.3	72.3
760	73.5	73.5	73.4	73.4	73.4	73.4	73.3	73.3	73.3	73.3	73.2
770	74.4	74.4	74.4	74.4	74.3	74.3	74.3	74.3	74.2	74.2	74.2
780	75.4	75.4	75.4	75.3	75.3	75.3	75.3	75.2	75.2	75.2	75.2
790	76.4	76.4	76.3	76.3	76.3	76.2	76.2	76.2	76.2	76.1	76.1
800	77.3	77.3	77.3	77.3	77.2	77.2	77.2	77.2	77.1	77.1	77.1
810	78.3	78.3	78.3	78.2	78.2	78.2	78.2	78.1	78.1	78.1	78.0
820	79.3	79.3	79.2	79.2	79.2	79.1	79.1	79.1	79.1	79.0	79.0
830	80.2	80.2	80.2	80.2	80.1	80.1	80.1	80.1	80.0	80.0	80.0
840	81.2	81.2	81.2	81.1	81.1	81.1	81.0	81.0	81.0	81.0	80.9
850	82.2	82.2	82.1	82.1	82.1	82.0	82.0	82.0	82.0	81.9	81.9
860	83.1	83.1	83.1	83.1	83.0	83.0	83.0	82.9	82.9	82.9	82.9
870	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9	83.9	83.9	83.8
880	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9	84.8	84.8	84.8
890	86.0	86.0	86.0	86.0	85.9	85.9	85.9	85.8	85.8	85.8	85.8
900	87.0	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7
910	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.7	87.7	87.7
920	88.9	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.7	88.6
930	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.6	89.6
940	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.6
950	91.8	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.6	91.5
960	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.5	92.5
970	93.8	93.7	93.7	93.7	93.7	33.6	93.6	93.6	93.5	93.5	93.5
980	94.7	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
990	95.7	95.7	95.6	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4
1,000	96.7	96.6	96.6	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.4
1,010	97.6	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.4	97.4	97.3
1,020	98.6	98.6	98.5	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3
1,030	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.3	99.2
1,040	100.6	100.5	100.5	100.5	100.4	100.4	100.3	100.3	100.3	100.2	100.2
1,050	101.5	101.5	101.5	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.2
1,060	102.5	102.5	102.4	102.4	102.3	102.3	102.3	102.2	102.2	102.2	102.1
1,070	103.5	103.4	103.4	103.3	103.3	103.3	103.2	103.2	103.2	103.1	103.1
1,080	104.4	104.4	104.3	104.3	104.3	104.2	104.2	104.2	104.1	104.1	104.1
1,090	105.4	105.4	105.3	105.3	105.2	105.2	105.2	105.1	105.1	105.1	105.0
1,100	106.4	106.3	106.3	106.2	106.2	106.2	106.1	106.1	106.1	106.0	106.0

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	23.0
700	67.4	67.4	67.4	67.4	67.4	67.3	67.3	67.3	67.3	67.2	67.2
710	68.4	68.4	68.4	68.3	68.3	68.3	68.3	68.2	68.2	68.2	68.2
720	69.4	69.4	69.3	69.3	69.3	69.3	69.2	69.2	69.2	69.2	69.1
730	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.1	70.1	70.1
740	71.3	71.3	71.3	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
750	72.3	72.2	72.2	72.2	72.2	72.1	72.1	72.1	72.1	72.0	72.0
760	73.2	73.2	73.2	73.2	73.1	73.1	73.1	73.1	73.0	73.0	73.0
770	74.2	74.2	74.1	74.1	74.1	74.1	74.0	74.0	74.0	74.0	73.9
780	75.2	75.1	75.1	75.1	75.1	75.0	75.0	75.0	75.0	74.9	74.9
790	76.1	76.1	76.1	76.0	76.0	76.0	76.0	75.9	75.9	75.9	75.9
800	77.1	77.1	77.0	77.0	77.0	77.0	76.9	76.9	76.9	76.8	76.8
810	78.0	78.0	78.0	78.0	77.9	77.9	77.9	77.9	77.8	77.8	77.8
820	79.0	79.0	79.0	78.9	78.9	78.9	78.9	78.8	78.8	78.8	78.7
830	80.0	79.9	79.9	79.9	79.9	79.8	79.8	79.8	79.8	79.7	79.7
840	80.9	80.9	80.9	80.9	80.8	80.8	80.8	80.7	80.7	80.7	80.7
850	81.9	81.9	81.8	81.8	81.8	81.8	81.7	81.7	81.7	81.7	81.6
860	82.9	82.8	82.8	82.8	82.8	82.7	82.7	82.7	82.6	82.6	82.6
870	83.8	83.8	83.8	83.7	83.7	83.7	83.7	83.6	83.6	83.6	83.5
880	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.6	84.5	84.5
890	85.8	85.7	85.7	85.7	85.6	85.6	85.6	85.6	85.5	85.5	85.5
900	86.7	86.7	86.7	86.6	86.6	86.6	86.5	86.5	86.5	86.5	86.4
910	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4
920	88.6	88.6	88.6	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.3
930	89.6	89.6	89.5	89.5	89.5	89.5	89.4	89.4	89.4	89.3	89.3
940	90.6	90.5	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3
950	91.5	91.5	91.5	91.4	91.4	91.4	91.4	91.3	91.3	91.3	91.2
960	92.5	92.5	92.4	92.4	92.4	92.4	92.3	92.3	92.3	92.2	92.2
970	93.5	93.4	93.4	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.1
980	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1
990	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1
1,000	96.4	96.3	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.1	96.0
1,010	97.3	97.3	97.3	97.2	97.2	97.2	97.1	97.1	97.1	97.0	97.0
1,020	98.3	98.2	98.2	98.2	98.1	98.1	98.1	98.0	98.0	98.0	97.9
1,030	99.2	99.2	99.2	99.1	99.1	99.1	99.0	99.0	99.0	98.9	98.9
1,040	100.2	100.2	100.1	100.1	100.1	100.0	100.0	100.0	99.9	99.9	99.9
1,050	101.2	101.1	101.1	101.1	101.0	101.0	101.0	100.9	100.9	100.9	100.8
1,060	102.1	102.1	102.1	102.0	102.0	102.0	101.9	101.9	101.9	101.8	101.8
1,070	103.1	103.1	103.0	103.0	103.0	102.9	102.9	102.9	102.8	102.8	102.8
1,080	104.1	104.0	104.0	104.0	103.9	103.9	103.9	103.8	103.8	103.8	103.7
1,090	105.0	105.0	105.0	104.9	104.9	104.9	104.8	104.8	104.7	104.7	104.7
1,100	106.0	106.0	105.9	105.9	105.9	105.8	105.8	105.7	105.7	105.7	105.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	24.0
700	67.2	67.2	67.2	67.2	67.1	67.1	67.1	67.1	67.0	67.0	67.0
710	68.2	68.2	68.1	68.1	68.1	68.1	68.0	68.0	68.0	68.0	68.0
720	69.1	69.1	69.1	69.0	69.0	69.0	69.0	69.0	69.0	68.9	68.9
730	70.1	70.1	70.1	70.0	70.0	70.0	70.0	69.9	69.9	69.9	69.9
740	71.1	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8	70.8
750	72.0	72.0	72.0	71.9	71.9	71.9	71.9	71.9	71.8	71.8	71.8
760	73.0	73.0	72.9	72.9	72.9	72.9	72.8	72.8	72.8	72.8	72.7
770	73.9	73.9	73.9	73.9	73.8	73.8	73.8	73.8	73.7	73.7	73.7
780	74.9	74.9	74.9	74.8	74.8	74.8	74.8	74.7	74.7	74.7	74.7
790	75.9	75.8	75.8	75.8	75.8	75.7	75.7	75.7	75.7	75.6	75.6
800	76.8	76.8	76.8	76.7	76.7	76.7	76.7	76.6	76.6	76.6	76.6
810	77.8	77.8	77.7	77.7	77.7	77.7	77.6	77.6	77.6	77.5	77.5
820	78.7	78.7	78.7	78.7	78.6	78.6	78.6	78.6	78.5	78.5	78.5
830	79.7	79.7	79.7	79.6	79.6	79.6	79.5	79.5	79.5	79.5	79.4
840	80.7	80.6	80.6	80.6	80.6	80.5	80.5	80.5	80.4	80.4	80.4
850	81.6	81.6	81.6	81.5	81.5	81.5	81.5	81.4	81.4	81.4	81.4
860	82.6	82.6	82.5	82.5	82.5	82.4	82.4	82.4	82.4	82.3	82.3
870	83.5	83.5	83.5	83.5	83.4	83.4	83.4	83.3	83.3	83.3	83.3
880	84.5	84.5	84.4	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2
890	85.5	85.4	85.4	85.4	85.4	85.3	85.3	85.3	85.2	85.2	85.2
900	86.4	86.4	86.4	86.3	86.3	86.3	86.3	86.2	86.2	86.2	86.1
910	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2	87.2	87.1	87.1
920	88.3	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1	88.0
930	89.3	89.3	89.2	89.2	89.2	89.2	89.1	89.1	89.1	89.0	89.0
940	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.1	90.0	90.0	90.0
950	91.2	91.2	91.1	91.1	91.1	91.1	91.0	91.0	91.0	91.0	90.9
960	92.2	92.2	92.1	92.1	92.1	92.0	92.0	92.0	91.9	91.9	91.9
970	93.1	93.1	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.9	92.8
980	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.9	93.8	93.8
990	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
1,000	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7	95.7
1,010	97.0	97.0	96.9	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.7
1,020	97.9	97.9	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.7	97.6
1,030	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.6
1,040	99.9	99.8	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.6	99.5
1,050	100.8	100.8	100.8	100.7	100.7	100.7	100.6	100.6	100.6	100.5	100.5
1,060	101.8	101.8	101.7	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.5
1,070	102.8	102.7	102.7	102.7	102.6	102.6	102.5	102.5	102.5	102.4	102.4
1,080	103.7	103.7	103.6	103.6	103.6	103.5	103.5	103.5	103.4	103.4	103.4
1,090	104.7	104.6	104.6	104.6	104.5	104.5	104.5	104.4	104.4	104.4	104.3
1,100	105.6	105.6	105.6	105.5	105.5	105.5	105.4	105.4	105.4	105.3	105.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	25.0
700	67.0	67.0	66.9	66.9	66.9	66.9	66.9	66.8	66.8	66.8	66.8
710	68.0	67.9	67.9	67.9	67.9	67.8	67.8	67.8	67.8	67.7	67.7
720	68.9	68.9	68.9	68.8	68.8	68.8	68.8	68.7	68.7	68.7	68.7
730	69.9	69.8	69.8	69.8	69.8	69.7	69.7	69.7	69.7	69.7	69.6
740	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6	70.6
750	71.8	71.8	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.5
760	72.7	72.7	72.7	72.7	72.6	72.6	72.6	72.6	72.5	72.5	72.5
770	73.7	73.7	73.6	73.6	73.6	73.6	73.5	73.5	73.5	73.5	73.4
780	74.7	74.6	74.6	74.6	74.6	74.5	74.5	74.5	74.5	74.4	74.4
790	75.6	75.6	75.6	75.5	75.5	75.5	75.5	75.4	75.4	75.4	75.4
800	76.6	76.5	76.5	76.5	76.5	76.4	76.4	76.4	76.4	76.3	76.3
810	77.5	77.5	77.5	77.4	77.4	77.4	77.4	77.3	77.3	77.3	77.3
820	78.5	78.5	78.4	78.4	78.4	78.3	78.3	78.3	78.3	78.2	78.2
830	79.4	79.4	79.4	79.4	79.3	79.3	79.3	79.2	79.2	79.2	79.2
840	80.4	80.4	80.3	80.3	80.3	80.3	80.2	80.2	80.2	80.2	80.1
850	81.4	81.3	81.3	81.3	81.2	81.2	81.2	81.2	81.1	81.1	81.1
860	82.3	82.3	82.3	82.2	82.2	82.2	82.1	82.1	82.1	82.1	82.0
870	83.3	83.2	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0	83.0
880	84.2	84.2	84.2	84.1	84.1	84.1	84.1	84.0	84.0	84.0	83.9
890	85.2	85.1	85.1	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9
900	86.1	86.1	86.1	86.0	86.0	86.0	86.0	85.9	85.9	85.9	85.8
910	87.1	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.9	86.8	86.8
920	88.0	88.0	88.0	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.8
930	89.0	89.0	88.9	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7
940	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.8	89.7	89.7	89.7
950	90.9	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.6	90.6
960	91.9	91.8	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.6
970	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.6	92.5
980	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.5	93.5	93.5
990	94.7	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
1,000	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4	95.4
1,010	96.7	96.6	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.4	96.3
1,020	97.6	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.4	97.3	97.3
1,030	98.6	98.5	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2
1,040	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.3	99.2	99.2
1,050	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3	100.2	100.2	100.2
1,060	101.5	101.4	101.4	101.4	101.3	101.3	101.2	101.2	101.2	101.1	101.1
1,070	102.4	102.4	102.3	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.1
1,080	103.4	103.3	103.3	103.3	103.2	103.2	103.2	103.1	103.1	103.1	103.0
1,090	104.3	104.3	104.3	104.2	104.2	104.1	104.1	104.1	104.0	104.0	104.0
1,100	105.3	105.2	105.2	105.2	105.1	105.1	105.1	105.0	105.0	105.0	104.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	26.0
700	66.8	66.7	66.7	66.7	66.7	66.7	66.6	66.6	66.6	66.6	66.5
710	67.7	67.7	67.7	67.7	67.6	67.6	67.6	67.6	67.5	67.5	67.5
720	68.7	68.7	68.6	68.6	68.6	68.6	68.5	68.5	68.5	68.5	68.4
730	69.6	69.6	69.6	69.6	69.5	69.5	69.5	69.5	69.4	69.4	69.4
740	70.6	70.6	70.5	70.5	70.5	70.5	70.4	70.4	70.4	70.4	70.3
750	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.3	71.3	71.3
760	72.5	72.5	72.4	72.4	72.4	72.4	72.3	72.3	72.3	72.3	72.3
770	73.4	73.4	73.4	73.4	73.3	73.3	73.3	73.3	73.2	73.2	73.2
780	74.4	74.4	74.4	74.3	74.3	74.3	74.3	74.2	74.2	74.2	74.2
790	75.4	75.3	75.3	75.3	75.3	75.2	75.2	75.2	75.2	75.1	75.1
800	76.3	76.3	76.3	76.2	76.2	76.2	76.2	76.1	76.1	76.1	76.1
810	77.3	77.2	77.2	77.2	77.2	77.1	77.1	77.1	77.1	77.0	77.0
820	78.2	78.2	78.2	78.1	78.1	78.1	78.1	78.0	78.0	78.0	78.0
830	79.2	79.1	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9
840	80.1	80.1	80.1	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.9
850	81.1	81.1	81.0	81.0	81.0	80.9	80.9	80.9	80.9	80.8	80.8
860	82.0	82.0	82.0	81.9	81.9	81.9	81.9	81.8	81.8	81.8	81.8
870	83.0	83.0	82.9	82.9	82.9	82.8	82.8	82.8	82.8	82.7	82.7
880	83.9	83.9	83.9	83.9	83.8	83.8	83.8	83.7	83.7	83.7	83.7
890	84.9	84.9	84.8	84.8	84.8	84.8	84.7	84.7	84.7	84.6	84.6
900	85.8	85.8	85.8	85.8	85.7	85.7	85.7	85.6	85.6	85.6	85.6
910	86.8	86.8	86.7	86.7	86.7	86.7	86.6	86.6	86.6	86.5	86.5
920	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5	87.5
930	88.7	88.7	88.6	88.6	88.6	88.6	88.5	88.5	88.5	88.4	88.4
940	89.7	89.6	89.6	89.6	89.5	89.5	89.5	89.5	89.4	89.4	89.4
950	90.6	90.6	90.6	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3
960	91.6	91.5	91.5	91.5	91.4	91.4	91.4	91.4	91.3	91.3	91.3
970	92.5	92.5	92.5	92.4	92.4	92.4	92.3	92.3	92.3	92.2	92.2
980	93.5	93.4	93.4	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.2
990	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1	94.1
1,000	95.4	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1
1,010	96.3	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0
1,020	97.3	97.3	97.2	97.2	97.2	97.1	97.1	97.1	97.0	97.0	97.0
1,030	98.2	98.2	98.2	98.1	98.1	98.1	98.0	98.0	98.0	98.0	97.9
1,040	99.2	99.2	99.1	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.9
1,050	100.2	100.1	100.1	100.1	100.0	100.0	100.0	99.9	99.9	99.9	99.8
1,060	101.1	101.1	101.0	101.0	101.0	100.9	100.9	100.9	100.8	100.8	100.8
1,070	102.1	102.0	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.8	101.7
1,080	103.0	103.0	103.0	102.9	102.9	102.8	102.8	102.8	102.7	102.7	102.7
1,090	104.0	103.9	103.9	103.9	103.8	103.8	103.8	103.7	103.7	103.7	103.6
1,100	104.9	104.9	104.9	104.8	104.8	104.8	104.7	104.7	104.6	104.6	104.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	27.0
700	66.5	66.5	66.5	66.5	66.5	66.4	66.4	66.4	66.4	66.3	66.3
710	67.5	67.5	67.5	67.4	67.4	67.4	67.4	67.3	67.3	67.3	67.3
720	68.4	68.4	68.4	68.4	68.4	68.3	68.3	68.3	68.3	68.2	68.2
730	69.4	69.4	69.4	69.3	69.3	69.3	69.3	69.2	69.2	69.2	69.2
740	70.3	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.1	70.1
750	71.3	71.3	71.3	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
760	72.3	72.2	72.2	72.2	72.2	72.1	72.1	72.1	72.1	72.0	72.0
770	73.2	73.2	73.2	73.1	73.1	73.1	73.1	73.0	73.0	73.0	73.0
780	74.2	74.1	74.1	74.1	74.1	74.0	74.0	74.0	74.0	73.9	73.9
790	75.1	75.1	75.1	75.0	75.0	75.0	75.0	74.9	74.9	74.9	74.9
800	76.1	76.0	76.0	76.0	76.0	75.9	75.9	75.9	75.9	75.8	75.8
810	77.0	77.0	77.0	76.9	76.9	76.9	76.8	76.8	76.8	76.8	76.7
820	78.0	77.9	77.9	77.9	77.9	77.8	77.8	77.8	77.7	77.7	77.7
830	78.9	78.9	78.9	78.8	78.8	78.8	78.7	78.7	78.7	78.7	78.6
840	79.9	79.8	79.8	79.8	79.7	79.7	79.7	79.7	79.6	79.6	79.6
850	80.8	80.8	80.8	80.7	80.7	80.7	80.6	80.6	80.6	80.6	80.5
860	81.8	81.7	81.7	81.7	81.6	81.6	81.6	81.6	81.5	81.5	81.5
870	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5	82.5	82.4
880	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.5	83.4	83.4	83.4
890	84.6	84.6	84.6	84.5	84.5	84.5	84.4	84.4	84.4	84.4	84.3
900	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.4	85.3	85.3	85.3
910	86.5	86.5	86.5	86.4	86.4	86.4	86.3	86.3	86.3	86.3	86.2
920	87.5	87.4	87.4	87.4	87.3	87.3	87.3	87.3	87.2	87.2	87.2
930	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1
940	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.2	89.1	89.1	89.1
950	90.3	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0
960	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.1	91.0	91.0	91.0
970	92.2	92.2	92.2	92.1	92.1	92.1	92.0	92.0	92.0	91.9	91.9
980	93.2	93.1	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.9	92.9
990	94.1	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8
1,000	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
1,010	96.0	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7	95.7
1,020	97.0	96.9	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.7	96.6
1,030	97.9	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.7	97.6	97.6
1,040	98.9	98.8	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.6	98.5
1,050	99.8	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.6	99.5	99.5
1,060	100.8	100.7	100.7	100.7	100.6	100.6	100.6	100.5	100.5	100.5	100.4
1,070	101.7	101.7	101.7	101.6	101.6	101.6	101.5	101.5	101.5	101.4	101.4
1,080	102.7	102.6	102.6	102.6	102.5	102.5	102.5	102.4	102.4	102.4	102.3
1,090	103.6	103.6	103.6	103.5	103.5	103.5	103.4	103.4	103.4	103.3	103.3
1,100	104.6	104.5	104.5	104.5	104.4	104.4	104.4	104.3	104.3	104.3	104.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	28.0
700	66.3	66.3	66.3	66.3	66.2	66.2	66.2	66.2	66.1	66.1	66.1
710	67.3	67.2	67.2	67.2	67.2	67.2	67.1	67.1	67.1	67.1	67.0
720	68.2	68.2	68.2	68.2	68.1	68.1	68.1	68.1	68.0	68.0	68.0
730	69.2	69.1	69.1	69.1	69.1	69.1	69.0	69.0	69.0	69.0	68.9
740	70.1	70.1	70.1	70.0	70.0	70.0	70.0	70.0	69.9	69.9	69.9
750	71.1	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8	70.8
760	72.0	72.0	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8	71.8
770	73.0	72.9	72.9	72.9	72.9	72.8	72.8	72.8	72.8	72.7	72.7
780	73.9	73.9	73.9	73.8	73.8	73.8	73.8	73.7	73.7	73.7	73.7
790	74.9	74.8	74.8	74.8	74.8	74.7	74.7	74.7	74.7	74.6	74.6
800	75.8	75.8	75.7	75.7	75.7	75.7	75.6	75.6	75.6	75.6	75.5
810	76.7	76.7	76.7	76.7	76.6	76.6	76.6	76.6	76.5	76.5	76.5
820	77.7	77.7	77.6	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4
830	78.6	78.6	78.6	78.6	78 5	78.5	78.5	78.5	78.4	78.4	78.4
840	79.6	79.6	79.5	79.5	79.5	79.5	79.4	79.4	79.4	79.4	79.3
850	80.5	80.5	80.5	80.5	80.4	80.4	80.4	80.3	80.3	80.3	80.3
860	81.5	81.5	81.4	81.4	81.4	81.3	81.3	81.3	81.3	81.2	81.2
870	82.6	82.4	82.4	82.3	82.3	82.3	82.3	82.2	82.2	82.2	82.2
880	83.4	83.4	83.3	83.3	83.3	83 2	83.2	83.2	83.2	83.1	83.1
890	84.3	84.3	84.3	84.2	84.2	84.2	84.2	84.1	84.1	84.1	84.0
900	85.3	85.2	85.2	85.2	85.2	85.1	85.1	85.1	85.0	85.0	85.0
910	86.2	86.2	86.2	86.1	86.1	86.1	86.1	86.0	86.0	86.0	85.9
920	87.2	87.1	87.1	87.1	87.1	87.0	87.0	87.0	86.9	86.9	86.9
930	88.1	88.1	88.1	88.0	88.0	88.0	87.9	87.9	87.9	87.9	87.8
940	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.9	88.8	88.8	88.8
950	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7
960	91.0	90.9	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.7
970	91.9	91.9	91.8	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6
980	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.6	92.5
990	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.6	93.5	93.5
1,000	94.7	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
1,010	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4	95.4
1,020	96.6	96.6	96.6	96.5	96.5	96.5	96.5	96.4	96.4	96.4	96.3
1,030	97.6	97.6	97.5	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.3
1,040	98.5	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2
1,050	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.2
1,060	100.4	100.4	100.4	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.1
1,070	101.4	101.4	101.3	101.3	101.3	101.2	101.2	101.2	101.1	101.1	101.0
1,080	102.3	102.3	102.3	102.2	102.2	102.2	102.1	102.1	102.1	102.0	102.0
1,090	103.3	103.2	103.2	103.2	103.1	103.1	103.1	103.0	103.0	103.0	102.9
1,100	104.2	104.2	104.2	104.1	104.1	104.1	104.0	104.0	104.0	103.9	103.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	29.0
700	66.1	66.1	66.1	66.0	66.0	66.0	66.0	66.0	65.9	65.9	65.9
710	67.0	67.0	67.0	67.0	67.0	66.9	66.9	66.9	66.9	66.8	66.8
720	68.0	68.0	67.9	67.9	67.9	67.9	67.9	67.8	67.8	67.8	67.8
730	68.9	68.9	68.9	68.9	68.8	68.8	68.8	68.8	68.8	68.7	68.7
740	69.9	69.9	69.8	69.8	69.8	69.8	69.7	69.7	69.7	69.7	69.7
750	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6	70.6
760	71.8	71.7	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.5
770	72.7	72.7	72.7	72.6	72.6	72.6	72.6	72.5	72.5	72.5	72.5
780	73.7	73.6	73.6	73.6	73.6	73.5	73.5	73.5	73.5	73.4	73.4
790	74.6	74.6	74.6	74.5	74.5	74.5	74.5	74.4	74.4	74.4	74.4
800	75.5	75.5	75.5	75.5	75.4	75.4	75.4	75.4	75.3	75.3	75.3
810	76.5	76.5	76.4	76.4	76.4	76.4	76.3	76.3	76.3	76.3	76.2
820	77.4	77.4	77.4	77.4	77.3	77.3	77.3	77.3	77.2	77.2	77.2
830	78.4	78.4	78.3	78.3	78.3	78.3	78.2	78.2	78.2	78.1	78.1
840	79.3	79.3	79.3	79.2	79.2	79.2	79.2	79.1	79.1	79.1	79.1
850	80.3	80.2	80.2	80.2	80.2	80.1	80.1	80.1	80.1	80.0	80.0
860	81.2	81.2	81.2	81.1	81.1	81.1	81.1	81.0	81.0	81.0	80.9
870	82.2	82.1	82.1	82.1	82.0	82.0	82.0	82.0	81.9	81.9	81.9
880	83.1	83.1	83.0	83.0	83.0	83.0	82.9	82.9	82.9	82.9	82.8
890	84.0	84.0	84.0	84.0	83.9	83.9	83.9	83.9	83.8	83.8	83.8
900	85.0	85.0	84.9	84.9	84.9	84.9	84.8	84.8	84.8	84.7	84.7
910	85.9	85.9	85.9	85.9	85.8	85.8	85.8	85.7	85.7	85.7	85.7
920	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6
930	87.8	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.6	87.5
940	88.8	88.7	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.5
950	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5	89.5	89.4	89.4
960	90.7	90.6	90.6	90.6	90.5	90.5	90.5	90.4	90.4	90.4	90.4
970	91.6	91.6	91.5	91.5	91.5	91.4	91.4	91.4	91.4	91.3	91.3
980	92.5	92.5	92.5	92.5	92.4	92.4	92.4	92.3	92.3	92.3	92.2
990	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.2	93.2	93.2
1,000	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.2	94.1
1,010	95.4	95.3	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1
1,020	96.3	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0
1,030	97.3	97.2	97.2	97.2	97.1	97.1	97.1	97.0	97.0	97.0	96.9
1,040	98.2	98.2	98.1	98.1	98.1	98.0	98.0	98.0	98.0	97.9	97.9
1,050	99.2	99.1	99.1	99.1	99.0	99.0	99.0	98.9	98.9	98.9	98.8
1,060	100.1	100.1	100.0	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.8
1,070	101.0	101.0	101.0	100.9	100.9	100.9	100.8	100.8	100.8	100.7	100.7
1,080	102.0	102.0	101.9	101.9	101.9	101.8	101.8	101.8	101.7	101.7	101.7
1,090	102.9	102.9	102.9	102.8	102.8	102.8	102.7	102.7	102.7	102.6	102.6
1,100	103.9	103.8	103.8	103.8	103.7	103.7	103.7	103.6	103.6	103.6	103.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	30.0
700	65.9	65.9	65.8	65.8	65.8	65.8	65.8	65.7	65.7	65.7	65.7
710	66.8	66.8	66.8	66.8	66.7	66.7	66.7	66.7	66.7	66.6	66.6
720	67.8	67.7	67.7	67.7	67.7	67.7	67.6	67.6	67.6	67.6	67.5
730	68.7	68.7	68.7	68.6	68.6	68.6	68.6	68.6	68.5	68.5	68.5
740	69.7	69.6	69.6	69.6	69.6	69.5	69.5	69.5	69.5	69.4	69.4
750	70.6	70.6	70.5	70.5	70.5	70.5	70.5	70.4	70.4	70.4	70.4
760	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.3	71.3	71.3
770	72.5	72.5	72.4	72.4	72.4	72.4	72.4	72.3	72.3	72.3	72.2
780	73.4	73.4	73.4	73.3	73.3	73.3	73.3	73.2	73.2	73.2	73.2
790	74.4	74.3	74.3	74.3	74.3	74.2	74.2	74.2	74.2	74.1	74.1
800	75.3	75.3	75.2	75.2	75.2	75.2	75.1	75.1	75.1	75.1	75.0
810	76.2	76.2	76.2	76.2	76.1	76.1	76.1	76.1	76.0	76.0	76.0
820	77.2	77.2	77.1	77.1	77.1	77.1	77.0	77.0	77.0	77.0	76.9
830	78.1	78.1	78.1	78.0	78.0	78.0	78.0	77.9	77.9	77.9	77.9
840	79.1	79.0	79.0	79.0	79.0	78.9	78.9	78.9	78.9	78.8	78.8
850	80.0	80.0	80.0	79.9	79.9	79.9	79.8	79.8	79.8	79.8	79.7
860	80.9	80.9	80.9	80.9	80.8	80.8	80.8	80.8	80.7	80.7	80.7
870	81.9	81.9	81.8	81.8	81.8	81.8	81.7	81.7	81.7	81.6	81.6
880	82.8	82.8	82.8	82.7	82.7	82.7	82.7	82.6	82.6	82.6	82.6
890	83.8	83.7	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5
900	84.7	84.7	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.5	84.4
910	85.7	85.6	85.6	85.6	85.5	85.5	85.5	85.5	85.4	85.4	85.4
920	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.4	86.4	86.3	86.3
930	87.5	87.5	87.5	87.4	87.4	87.4	87.4	87.3	87.3	87.3	87.2
940	88.5	88.4	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2
950	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.2	89.1
960	90.4	90.3	90.3	90.3	90.2	90.2	90.2	90.1	90.1	90.1	90.1
970	91.3	91.3	91.2	91.2	91.2	91.1	91.1	91.1	91.1	91.0	91.0
980	92.2	92.2	92.2	92.1	92.1	92.1	92.1	92.0	92.0	92.0	91.9
990	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0	92.9	92.9	92.9
1,000	94.1	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8	93.8
1,010	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.7
1,020	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.8	95.7	95.7
1,030	96.9	96.9	96.9	96.8	96.8	96.8	96.8	96.7	96.7	96.7	96.6
1,040	97.9	97.9	97.8	97.8	97.8	97.7	97.7	97.7	97.6	97.6	97.6
1,050	98.8	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.6	98.5	98.5
1,060	99.8	99.7	99.7	99.7	99.6	99.6	99.6	99.5	99.5	99.5	99.4
1,070	100.7	100.7	100.6	100.6	100.6	100.5	100.5	100.5	100.4	100.4	100.4
1,080	101.7	101.6	101.6	101.6	101.5	101.5	101.5	101.4	101.4	101.4	101.3
1,090	102.6	102.6	102.5	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.3
1,100	103.5	103.5	103.5	103.4	103.4	103.4	103.3	103.3	103.3	103.2	103.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	31.0
700	65.7	65.6	65.6	65.6	65.6	65.6	65.5	65.5	65.5	65.5	65.5
710	66.6	66.6	66.6	66.5	66.5	66.5	66.5	66.5	66.4	66.4	66.4
720	67.5	67.5	67.5	67.5	67.5	67.4	67.4	67.4	67.4	67.3	67.3
730	68.5	68.5	68.4	68.4	68.4	68.4	68.3	68.3	68.3	68.3	68.3
740	69.4	69.4	69.4	69.4	69.3	69.3	69.3	69.3	69.2	69.2	69.2
750	70.4	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.2	70.1
760	71.3	71.3	71.2	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
770	72.2	72.2	72.2	72.2	72.1	72.1	72.1	72.1	72.0	72.0	72.0
780	73.2	73.1	73.1	73.1	73.1	73.1	73.0	73.0	73.0	73.0	72.9
790	74.1	74.1	74.1	74.0	74.0	74.0	74.0	73.9	73.9	73.9	73.9
800	75.0	75.0	75.0	75.0	75.0	74.9	74.9	74.9	74.9	74.8	74.8
810	76.0	76.0	75.9	75.9	75.9	75.9	75.8	75.8	75.8	75.8	75.7
820	76.9	76.9	76.9	76.8	76.8	76.8	76.8	76.7	76.7	76.7	76.7
830	77.9	77.8	77.8	77.8	77.8	77.7	77.7	77.7	77.7	77.6	77.6
840	78.8	78.8	78.7	78.7	78.7	78.7	78.6	78.6	78.6	78.6	78.5
850	79.7	79.7	79.7	79.7	79.6	79.6	79.6	79.6	79.5	79.5	79.5
860	80.7	80.7	80.6	80.6	80.6	80.5	80.5	80.5	80.5	80.4	80.4
870	81.6	81.6	81.6	81.5	81.5	81.5	81.5	81.4	81.4	81.4	81.3
880	82.6	82.5	82.5	82.5	82.4	82.4	82.4	82.4	82.3	82.3	82.3
890	83.5	83.5	83.4	83.4	83.4	83.4	83.3	83.3	83.3	83.2	83.2
900	84.4	84.4	84.4	84.3	84.3	84.3	84.3	84.2	84.2	84.2	84.2
910	85.4	85.3	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1
920	86.3	86.3	86.2	86.2	86.2	86.2	86.1	86.1	86.1	86.1	86.0
930	87.2	87.2	87.2	87.2	87.1	87.1	87.1	87.0	87.0	87.0	87.0
940	88.2	88.2	88.1	88.1	88.1	88.0	88.0	88.0	88.0	87.9	87.9
950	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.9	88.8
960	90.1	90.0	90.0	90.0	89.9	89.9	89.9	89.9	89.8	89.8	89.8
970	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8	90.8	90.7	90.7
980	91.9	91.9	91.9	91.8	91.8	91.8	91.8	91.7	91.7	91.7	91.6
990	92.9	92.8	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6	92.6
1,000	93.8	93.8	93.7	93.7	93.7	93.7	93.6	93.6	93.6	93.5	93.5
1,010	94.7	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
1,020	95.7	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4	95.4
1,030	96.6	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.4	96.3	96.3
1,040	97.6	97.5	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.3	97.2
1,050	98.5	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2
1,060	99.4	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.2	99.1	99.1
1,070	100.4	100.3	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.1
1,080	101.3	101.3	101.3	101.2	101.2	101.2	101.1	101.1	101.1	101.0	101.0
1,090	102.3	102.2	102.2	102.2	102.1	102.1	102.1	102.0	102.0	102.0	101.9
1,100	103.2	103.2	103.1	103.1	103.1	103.0	103.0	103.0	102.9	102.9	102.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	32.0
700	65.5	65.4	65.4	65.4	65.4	65.3	65.3	65.3	65.3	65.3	65.2
710	66.4	66.4	66.3	66.3	66.3	66.3	66.3	66.2	66.2	66.2	66.2
720	67.3	67.3	67.3	67.3	67.2	67.2	67.2	67.2	67.1	67.1	67.1
730	68.3	68.2	68.2	68.2	68.2	68.1	68.1	68.1	68.1	68.1	68.0
740	69.2	69.2	69.1	69.1	69.1	69.1	69.1	69.0	69.0	69.0	69.0
750	70.1	70.1	70.1	70.1	70.0	70.0	70.0	70.0	69.9	69.9	69.9
760	71.1	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.9	70.8
770	72.0	72.0	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8	71.8
780	72.9	72.9	72.9	72.9	72.8	72.8	72.8	72.8	72.7	72.7	72.7
790	73.9	73.8	73.8	73.8	73.8	73.7	73.7	73.7	73.7	73.6	73.6
800	74.8	74.8	74.8	74.7	74.7	74.7	74.7	74.6	74.6	74.6	74.6
810	75.7	75.7	75.7	75.7	75.6	75.6	75.6	75.6	75.5	75.5	75.5
820	76.7	76.6	76.6	76.6	76.6	76.5	76.5	76.5	76.5	76.4	76.4
830	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4	77.4	77.4	77.4
840	78.5	78.5	78.5	78.5	78.4	78.4	78.4	78.4	78.3	78.3	78.3
850	79.5	79.5	79.4	79.4	79.4	79.3	79.3	79.3	79.3	79.2	79.2
860	80.4	80.4	80.4	80.3	80.3	80.3	80.3	80.2	80.2	80.2	80.1
870	81.3	81.3	81.3	81.3	81.2	81.2	81.2	81.2	81.1	81.1	81.1
880	82.3	82.3	82.2	82.2	82.2	82.1	82.1	82.1	82.1	82.0	82.0
890	83.2	83.2	83.2	83.1	83.1	83.1	83.1	83.0	83.0	83.0	82.9
900	84.2	84.1	84.1	84.1	84.0	84.0	84.0	84.0	83.9	83.9	83.9
910	85.1	85.1	85.0	85.0	85.0	84.9	84.9	84.9	84.9	84.8	84.8
920	86.0	86.0	86.0	85.9	85.9	85.9	85.9	85.8	85.8	85.8	85.7
930	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.8	86.7	86.7	86.7
940	87.9	87.9	87.8	87.8	87.8	87.7	87.7	87.7	87.7	87.6	87.6
950	88.8	88.8	88.8	88.7	88.7	88.7	88.7	88.6	88.6	88.6	88.5
960	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.6	89.5	89.5	89.5
970	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.5	90.5	90.4	90.4
980	91.6	91.6	91.6	91.5	91.5	91.5	91.5	91.4	91.4	91.4	91.3
990	92.6	92.5	92.5	92.5	92.4	92.4	92.4	92.4	92.3	92.3	92.3
1,000	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.3	93.2	93.2
1,010	94.4	94.4	94.4	94.3	94.3	94.3	94.3	94.2	94.2	94.2	94.1
1,020	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.2	95.1	95.1	95.1
1,030	96.3	96.3	96.2	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0
1,040	97.2	97.2	97.2	97.1	97.1	97.1	97.1	97.0	97.0	97.0	96.9
1,050	98.2	98.1	98.1	98.1	98.0	98.0	98.0	98.0	97.9	97.9	97.9
1,060	99.1	99.1	99.0	99.0	99.0	99.0	98.9	98.9	98.9	98.8	98.8
1,070	100.1	100.0	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.8	99.7
1,080	101.0	101.0	100.9	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.7
1,090	101.9	101.9	101.9	101.8	101.8	101.8	101.7	101.7	101.7	101.6	101.6
1,100	102.9	102.8	102.8	102.8	102.7	102.7	102.7	102.6	102.6	102.6	102.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	33.0
700	65.2	65.2	65.2	65.2	65.2	65.1	65.1	65.1	65.1	65.0	65.0
710	66.2	66.1	66.1	66.1	66.1	66.1	66.0	66.0	66.0	66.0	66.0
720	67.1	67.1	67.1	67.0	67.0	67.0	67.0	66.9	66.9	66.9	66.9
730	68.0	68.0	68.0	68.0	67.9	67.9	67.9	67.9	67.9	67.8	67.8
740	69.0	68.9	68.9	68.9	68.9	68.9	68.8	68.8	68.8	68.8	68.7
750	69.9	69.9	69.9	69.8	69.8	69.8	69.8	69.7	69.7	69.7	69.7
760	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6	70.6
770	71.8	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.6	71.5
780	72.7	72.7	72.6	72.6	72.6	72.6	72.6	72.5	72.5	72.5	72.5
790	73.6	73.6	73.6	73.6	73.5	73.5	73.5	73.5	73.4	73.4	73.4
800	74.6	74.5	74.5	74.5	74.5	74.4	74.4	74.4	74.4	74.3	74.3
810	75.5	75.5	75.4	75.4	75.4	75.4	75.3	75.3	75.3	75.3	75.2
820	76.4	76.4	76.4	76.3	76.3	76.3	76.3	76.2	76.2	76.2	76.2
830	77.4	77.3	77.3	77.3	77.3	77.2	77.2	77.2	77.2	77.1	77.1
840	78.3	78.3	78.2	78.2	78.2	78.2	78.1	78.1	78.1	78.1	78.0
850	79.2	79.2	79.2	79.1	79.1	79.1	79.1	79.0	79.0	79.0	79.0
860	80.1	80.1	80.1	80.1	80.0	80.0	80.0	80.0	79.9	79.9	79.9
870	81.1	81.1	81.0	81.0	81.0	80.9	80.9	80.9	80.9	80.8	80.8
880	82.0	82.0	82.0	81.9	81.9	81.9	81.9	81.8	81.8	81.8	81.7
890	82.9	82.9	82.9	82.9	82.8	82.8	82.8	82.8	82.7	82.7	82.7
900	83.9	83.8	83.8	83.8	83.8	83.7	83.7	83.7	83.7	83.6	83.6
910	84.8	84.8	84.8	84.7	84.7	84.7	84.6	84.6	84.6	84.6	84.5
920	85.7	85.7	85.7	85.7	85.6	85.6	85.6	85.5	85.5	85.5	85.5
930	86.7	86.6	86.6	86.6	86.6	86.5	86.5	86.5	86.4	86.4	86.4
940	87.6	87.6	87.5	87.5	87.5	87.5	87.4	87.4	87.4	87.3	87.3
950	88.5	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3	88.3	88.2
960	89.5	89.4	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2
970	90.4	90.4	90.3	90.3	90.3	90.3	90.2	90.2	90.2	90.1	90.1
980	91.3	91.3	91.3	91.2	91.2	91.2	91.2	91.1	91.1	91.1	91.0
990	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.1	92.0	92.0	92.0
1,000	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0	93.0	92.9	92.9
1,010	94.1	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.9	93.8
1,020	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.8
1,030	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7	95.7	95.7
1,040	96.9	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.7	96.6	96.6
1,050	97.9	97.8	97.8	97.8	97.7	97.7	97,7	97.6	97.6	97.6	97.5
1,060	98.8	98.8	98.7	98.7	98.7	98.6	98.6	98.6	98.5	98.5	98.5
1,070	99.7	99.7	99.7	99.6	99.6	99.6	99.5	99.5	99.5	99.4	99.4
1,080	100.7	100.6	100.6	100.6	100.5	100.5	100.5	100.4	100.4	100.4	100.3
1,090	101.6	101.6	101.5	101.5	101.5	101.4	101.4	101.4	101.3	101.3	101.3
1,100	102.5	102.5	102.5	102.4	102.4	102.4	102.3	102.3	102.3	102.2	102.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	34.0
700	65.0	65.0	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.8	64.8
710	66.0	65.9	65.9	65.9	65.9	65.8	65.8	65.8	65.8	65.8	65.7
720	66.9	66.9	66.8	66.8	66.8	66.8	66.8	66.7	66.7	66.7	66.7
730	67.8	67.8	67.8	67.7	67.7	67.7	67.7	67.7	67.6	67.6	67.6
740	68.7	68.7	68.7	68.7	68.7	68.6	68.6	68.6	68.6	68.5	68.5
750	69.7	69.6	69.6	69.6	69.6	69.6	69.5	69.5	69.5	69.5	69.4
760	70.6	70.6	70.6	70.5	70.5	70.5	70.5	70.4	70.4	70.4	70.4
770	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.3	71.3	71.3
780	72.5	72.4	72.4	72.4	72.4	72.3	72.3	72.3	72.3	72.2	72.2
790	73.4	73.4	73.3	73.3	73.3	73.3	73.2	73.2	73.2	73.2	73.1
800	74.3	74.3	74.3	74.2	74.2	74.2	74.2	74.1	74.1	74.1	74.1
810	75.2	75.2	75.2	75.2	75.1	75.1	75.1	75.1	75.0	75.0	75.0
820	76.2	76.1	76.1	76.1	76.1	76.0	76.0	76.0	76.0	75.9	75.9
830	77.1	77.1	77.1	77.0	77.0	77.0	76.9	76.9	76.9	76.9	76.8
840	78.0	78.0	78.0	78.0	77.9	77.9	77.9	77.9	77.8	77.8	77.8
850	79.0	78.9	78.9	78.9	78.9	78.8	78.8	78.8	78.8	78.7	78.7
860	79.9	79.9	79.8	79.8	79.8	79.8	79.7	79.7	79.7	79.7	79.6
870	80.8	80.8	80.8	80.7	80.7	80.7	80.7	80.6	80.6	80.6	80.6
880	81.7	81.7	81.7	81.7	81.6	81.6	81.6	81.6	81.5	81.5	81.5
890	82.7	82.6	82.6	82.6	82.6	82.5	82.5	82.5	82.5	82.4	82.4
900	83.6	83.6	83.5	83.5	83.5	83.5	83.4	83.4	83.4	83.4	83.3
910	84.5	84.5	84.5	84.4	84.4	84.4	84.4	84.3	84.3	84.3	84.3
920	85.5	85.4	85.4	85.4	85.3	85.3	85.3	85.3	85.2	85.2	85.2
930	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.2	86.1	86.1
940	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.1	87.0
950	88.2	88.2	88.2	88.2	88.1	88.1	88.1	88.0	88.0	88.0	88.0
960	89.2	89.1	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9
970	90.1	90.1	90.0	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8
980	91.0	91.0	91.0	90.9	90.9	90.9	90.9	90.8	90.8	90.8	90.7
990	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.8	91.7	91.7	91.7
1,000	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.7	92.6	92.6
1,010	93.8	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.5	93.5
1,020	94.8	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
1,030	95.7	95.6	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4	95.4
1,040	96.6	96.6	96.5	96.5	96.5	96.5	96.4	96.4	96.4	96.3	96.3
1,050	97.5	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.3	97.3	97.2
1,060	98.5	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1
1,070	99.4	99.4	99.3	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.1
1,080	100.3	100.3	100.3	100.2	100.2	100.2	100.1	100.1	100.1	100.0	100.0
1,090	101.3	101.2	101.2	101.2	101.1	101.1	101.1	101.0	101.0	101.0	100.9
1,100	102.2	102.2	102.1	102.1	102.1	102.0	102.0	102.0	101.9	101.9	101.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	35.0
700	64.8	64.8	64.8	64.8	64.7	64.7	64.7	64.7	64.6	64.6	64.6
710	65.7	65.7	65.7	65.7	65.7	65.6	65.6	65.6	65.6	65.5	65.5
720	66.7	66.6	66.6	66.6	66.6	66.6	66.5	66.5	66.5	66.5	66.4
730	67.6	67.6	67.5	67.5	67.5	67.5	67.5	67.4	67.4	67.4	67.4
740	68.5	68.5	68.5	68.5	68.4	68.4	68.4	68.4	68.3	68.3	68.3
750	69.4	69.4	69.4	69.4	69.4	69.3	69.3	69.3	69.3	69.2	69.2
760	70.4	70.3	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.1
770	71.3	71.3	71.2	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
780	72.2	72.2	72.2	72.2	72.1	72.1	72.1	72.1	72.0	72.0	72.0
790	73.1	73.1	73.1	73.1	73.1	73.0	73.0	73.0	73.0	72.9	72.9
800	74.1	74.0	74.0	74.0	74.0	74.0	73.9	73.9	73.9	73.9	73.8
810	75.0	75.0	74.9	74.9	74.9	74.9	74.9	74.8	74.8	74.8	74.8
820	75.9	75.9	75.9	75.8	75.8	75.8	75.8	75.8	75.7	75.7	75.7
830	76.8	76.8	76.8	76.8	76.7	76.7	76.7	76.7	76.7	76.6	76.6
840	77.8	77.8	77.7	77.7	77.7	77.6	77.6	77.6	77.6	77.5	77.5
850	78.7	78.7	78.7	78.6	78.6	78.6	78.5	78.5	78.5	78.5	78.4
860	79.6	79.6	79.6	79.5	79.5	79.5	79.5	79.4	79.4	79.4	79.4
870	80.6	80.5	80.5	80.5	80.4	80.4	80.4	80.4	80.3	80.3	80.3
880	81.5	81.5	81.4	81.4	81.4	81.3	81.3	81.3	81.3	81.2	81.2
890	82.4	82.4	82.4	82.3	82.3	82.3	82.2	82.2	82.2	82.2	82.1
900	83.3	83.3	83.3	83.2	83.2	83.2	83.2	83.1	83.1	83.1	83.1
910	84.3	84.2	84.2	84.2	84.1	84.1	84.1	84.1	84.0	84.0	84.0
920	85.2	85.2	85.1	85.1	85.1	85.0	85.0	85.0	85.0	84.9	84.9
930	86.1	86.1	86.1	86.0	86.0	86.0	85.9	85.9	85.9	85.9	85.8
940	87.0	87.0	87.0	86.9	86.9	86.9	86.9	86.8	86.8	86.8	86.8
950	88.0	87.9	87.9	87.9	87.8	87.8	87.8	87.8	87.7	87.7	87.7
960	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.7	88.7	88.6	88.6
970	89.8	89.8	89.8	89.7	89.7	89.7	89.6	89.6	89.6	89.5	89.5
980	90.7	90.7	90.7	90.6	90.6	90.6	90.6	90.5	90.5	90.5	90.4
990	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.5	91.4	91.4	91.4
1,000	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4	92.3	92.3	92.3
1,010	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.2	93.2
1,020	94.4	94.4	94.4	94.3	94.3	94.3	94.3	94.2	94.2	94.2	94.1
1,030	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.2	95.1	95.1	95.1
1,040	96.3	96.3	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0	96.0
1,050	97.2	97.2	97.2	97.1	97.1	97.1	97.0	97.0	97.0	96.9	96.9
1,060	98.1	98.1	98.1	98.0	98.0	98.0	98.0	97.9	97.9	97.9	97.8
1,070	99.1	99.0	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.8	98.7
1,080	100.0	100.0	99.9	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.7
1,090	100.9	100.9	100.9	100.8	100.8	100.8	100.7	100.7	100.7	100.6	100.6
1,100	101.9	101.8	101.8	101.8	101.7	101.7	101.7	101.6	101.6	101.6	101.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	36.0
700	64.6	64.6	64.6	64.5	64.5	64.5	64.5	64.5	64.4	64.4	64.4
710	65.5	65.5	65.5	65.5	65.4	65.4	65.4	65.4	65.4	65.3	65.3
720	66.4	66.4	66.4	66.4	66.4	66.3	66.3	66.3	66.3	66.3	66.2
730	67.4	67.3	67.3	67.3	67.3	67.3	67.2	67.2	67.2	67.2	67.2
740	68.3	68.3	68.3	68.2	68.2	68.2	68.2	68.1	68.1	68.1	68.1
750	69.2	69.2	69.2	69.2	69.1	69.1	69.1	69.1	69.0	69.0	69.0
760	70.1	70.1	70.1	70.1	70.0	70.0	70.0	70.0	70.0	69.9	69.9
770	71.1	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.9	70.8
780	72.0	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8	71.8	71.8
790	72.9	72.9	72.9	72.8	72.8	72.8	72.8	72.7	72.7	72.7	72.7
800	73.8	73.8	73.8	73.8	73.7	73.7	73.7	73.7	73.6	73.6	73.6
810	74.8	74.7	74.7	74.7	74.7	74.6	74.6	74.6	74.6	74.5	74.5
820	75.7	75.7	75.6	75.6	75.6	75.6	75.5	75.5	75.5	75.5	75.4
830	76.6	76.6	76.6	76.5	76.5	76.5	76.5	76.4	76.4	76.4	76.4
840	77.5	77.5	77.5	77.4	77.4	77.4	77.4	77.3	77.3	77.3	77.3
850	78.4	78.4	78.4	78.4	78.3	78.3	78.3	78.3	78.2	78.2	78.2
860	79.4	79.3	79.3	79.3	79.3	79.2	79.2	79.2	79.2	79.1	79.1
870	80.3	80.3	80.2	80.2	80.2	80.2	80.1	80.1	80.1	80.1	80.0
880	81.2	81.2	81.2	81.1	81.1	81.1	81.1	81.0	81.0	81.0	81.0
890	82.1	82.1	82.1	82.1	82.0	82.0	82.0	82.0	81.9	81.9	81.9
900	83.1	83.0	83.0	83.0	83.0	82.9	82.9	82.9	82.8	82.8	82.8
910	84.0	84.0	83.9	83.9	83.9	83.8	83.8	83.8	83.8	83.7	83.7
920	84.9	84.9	84.9	84.8	84.8	84.8	84.7	84.7	84.7	84.7	84.6
930	85.8	85.8	85.8	85.7	85.7	85.7	85.7	85.6	85.6	85.6	85.6
940	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.6	86.5	86.5	86.5
950	87.7	87.6	87.6	87.6	87.6	87.5	87.5	87.5	87.4	87.4	87.4
960	88.6	88.6	88.5	88.5	88.5	88.5	88.4	88.4	88.4	88.3	88.3
970	89.5	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3	89.3	89.2
980	90.4	90.4	90.4	90.4	90.3	90.3	90.3	90.2	90.2	90.2	90.2
990	91.4	91.3	91.3	91.3	91.2	91.2	91.2	91.2	91.1	91.1	91.1
1,000	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.1	92.0	92.0
1,010	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0	92.9	92.9
1,020	94.1	94.1	94.1	94.0	94.0	94.0	94.0	93.9	93.9	93.9	93.8
1,030	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.8
1,040	96.0	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7	95.7	95.7
1,050	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.7	96.7	96.6	96.6
1,060	97.8	97.8	97.8	97.7	97.7	97.7	97.6	97.6	97.6	97.5	97.5
1,070	98.7	98.7	98.7	98.7	98.6	98.6	98.6	98.5	98.5	98.5	98.4
1,080	99.7	99.6	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.4
1,090	100.6	100.6	100.5	100.5	100.5	100.4	100.4	100.4	100.3	100.3	100.3
1,100	101.5	101.5	101.5	101.4	101.4	101.4	101.3	101.3	101.3	101.2	101.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	37.0
700	64.4	64.4	64.4	64.3	64.3	64.3	64.3	64.2	64.2	64.2	64.2
710	65.3	65.3	65.3	65.3	65.2	65.2	65.2	65.2	65.1	65.1	65.1
720	66.2	66.2	66.2	66.2	66.1	66.1	66.1	66.1	66.1	66.0	66.0
730	67.2	67.1	67.1	67.1	67.1	67.0	67.0	67.0	67.0	67.0	66.9
740	68.1	68.1	68.0	68.0	68.0	68.0	67.9	67.9	67.9	67.9	67.9
750	69.0	69.0	68.9	68.9	68.9	68.9	68.9	68.8	68.8	68.8	68.8
760	69.9	69.9	69.9	69.8	69.8	69.8	69.8	69.8	69.7	69.7	69.7
770	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.7	70.6	70.6
780	71.8	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.5	71.5
790	72.7	72.6	72.6	72.6	72.6	72.6	72.5	72.5	72.5	72.5	72.4
800	73.6	73.6	73.5	73.5	73.5	73.5	73.5	73.4	73.4	73.4	73.4
810	74.5	74.5	74.5	74.4	74.4	74.4	74.4	74.3	74.3	74.3	74.3
820	75.4	75.4	75.4	75.4	75.3	75.3	75.3	75.3	75.2	75.2	75.2
830	76.4	76.3	76.3	76.3	76.3	76.2	76.2	76.2	76.2	76.1	76.1
840	77.3	77.2	77.2	77.2	77.2	77.1	77.1	77.1	77.1	77.0	77.0
850	78.2	78.2	78.1	78.1	78.1	78.1	78.0	78.0	78.0	78.0	77.9
860	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9	78.9	78.9
870	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.9	79.8	79.8	79.8
880	81.0	80.9	80.9	80.9	80.8	80.8	80.8	80.8	80.7	80.7	80.7
890	81.9	81.8	81.8	81.8	81.8	81.7	81.7	81.7	81.7	81.6	81.6
900	82.8	82.8	82.7	82.7	82.7	82.7	82.6	82.6	82.6	82.6	82.5
910	83.7	83.7	83.7	83.6	83.6	83.6	83.5	83.5	83.5	83.5	83.4
920	84.6	84.6	84.6	84.5	84.5	84.5	84.5	84.4	84.4	84.4	84.4
930	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.4	85.3	85.3	85.3
940	86.5	86.4	86.4	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2
950	87.4	87.4	87.3	87.3	87.3	87.3	87.2	87.2	87.2	87.1	87.1
960	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1	88.1	88.0
970	89.2	89.2	89.2	89.1	89.1	89.1	89.1	89.0	89.0	89.0	88.9
980	90.2	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9	89.9	89.9
990	91.1	91.0	91.0	91.0	91.0	90.9	90.9	90.9	90.8	90.8	90.8
1,000	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.8	91.7	91.7
1,010	92.9	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.6	92.6
1,020	93.8	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.6	93.5
1,030	94.8	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
1,040	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.5	95.4	95.4	95.4
1,050	96.6	96.6	96.5	96.5	96.5	96.4	96.4	96.4	96.3	96.3	96.3
1,060	97.5	97.5	97.4	97.4	97.4	97.4	97.3	97.3	97.3	97.2	97.2
1,070	98.4	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1
1,080	99.4	99.3	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.1	99.0
1,090	100.3	100.2	100.2	100.2	100.1	100.1	100.1	100.0	100.0	100.0	99.9
1,100	101.2	101.2	101.1	101.1	101.1	101.0	101.0	101.0	100.9	100.9	100.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	38.0
700	64.2	64.2	64.1	64.1	64.1	64.1	64.1	64.0	64.0	64.0	64.0
710	65.1	65.1	65.1	65.0	65.0	65.0	65.0	65.0	64.9	64.9	64.9
720	66.0	66.0	66.0	66.0	65.9	65.9	65.9	65.9	65.9	65.8	65.8
730	66.9	66.9	66.9	66.9	66.9	66.8	66.8	66.8	66.8	66.7	66.7
740	67.9	67.8	67.8	67.8	67.8	67.7	67.7	67.7	67.7	67.7	67.6
750	68.8	68.7	68.7	68.7	68.7	68.7	68.6	68.6	68.6	68.6	68.5
760	69.7	69.7	69.6	69.6	69.6	69.6	69.6	69.5	69.5	69.5	69.5
770	70.6	70.6	70.6	70.5	70.5	70.5	70.5	70.4	70.4	70.4	70.4
780	71.5	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.3	71.3	71.3
790	72.4	72.4	72.4	72.4	72.3	72.3	72.3	72.3	72.3	72.2	72.2
800	73.4	73.3	73.3	73.3	73.3	73.2	73.2	73.2	73.2	73.1	73.1
810	74.3	74.2	74.2	74.2	74.2	74.2	74.1	74.1	74.1	74.1	74.0
820	75.2	75.2	75.1	75.1	75.1	75.1	75.0	75.0	75.0	75.0	74.9
830	76.1	76.1	76.1	76.0	76.0	76.0	76.0	75.9	75.9	75.9	75.9
840	77.0	77.0	77.0	76.9	76.9	76.9	76.9	76.8	76.8	76.8	76.8
850	77.9	77.9	77.9	77.9	77.8	77.8	77.8	77.8	77.7	77.7	77.7
860	78.9	78.8	78.8	78.8	78.8	78.7	78.7	78.7	78.7	78.6	78.6
870	79.8	79.7	79.7	79.7	79.7	79.6	79.6	79.6	79.6	79.5	79.5
880	80.7	80.7	80.6	80.6	80.6	80.6	80.5	80.5	80.5	80.5	80.4
890	81.6	81.6	81.6	81.5	81.5	81.5	81.5	81.4	81.4	81.4	81.3
900	82.5	82.5	82.5	82.4	82.4	82.4	82.4	82.3	82.3	82.3	82.3
910	83.4	83.4	83.4	83.4	83.3	83.3	83.3	83.3	83.2	83.2	83.2
920	84.4	84.3	84.3	84.3	84.3	84.2	84.2	84.2	84.1	84.1	84.1
930	85.3	85.2	85.2	85.2	85.2	85.1	85.1	85.1	85.1	85.0	85.0
940	86.2	86.2	86.1	86.1	86.1	86.1	86.0	86.0	86.0	85.9	85.9
950	87.1	87.1	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.9	86.8
960	88.0	88.0	88.0	87.9	87.9	87.9	87.9	87.8	87.8	87.8	87.7
970	88.9	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7	88.7	88.7
980	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.7	89.6	89.6	89.6
990	90.8	90.7	90.7	90.7	90.7	90.6	90.6	90.6	90.5	90.5	90.5
1,000	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.5	91.4	91.4
1,010	92.6	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4	92.3	92.3
1,020	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.3	93.2
1,030	94.4	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1
1,040	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1	95.1
1,050	96.3	96.2	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0	96.0
1,060	97.2	97.2	97.1	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.9
1,070	98.1	98.1	98.0	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8
1,080	99.0	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.8	98.7	98.7
1,090	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.7	99.6
1,100	100.9	100.8	100.8	100.8	100.7	100.7	100.7	100.6	100.6	100.6	100.5

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	39.0
700	64.0	64.0	63.9	63.9	63.9	63.9	63.9	63.8	63.8	63.8	63.8
710	64.9	64.9	64.9	64.8	64.8	64.8	64.8	64.7	64.7	64.7	64.7
720	65.8	65.8	65.8	65.7	65.7	65.7	65.7	65.7	65.6	65.6	65.6
730	66.7	66.7	66.7	66.7	66.6	66.6	66.6	66.6	66.6	66.5	66.5
740	67.6	67.6	67.6	67.6	67.5	67.5	67.5	67.5	67.5	67.4	67.4
750	68.5	68.5	68.5	68.5	68.5	68.4	68.4	68.4	68.4	68.4	68.3
760	69.5	69.4	69.4	69.4	69.4	69.4	69.3	69.3	69.3	69.3	69.2
770	70.4	70.4	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.2
780	71.3	71.3	71.2	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
790	72.2	72.2	72.2	72.1	72.1	72.1	72.1	72.0	72.0	72.0	72.0
800	73.1	73.1	73.1	73.0	73.0	73.0	73.0	73.0	72.9	72.9	72.9
810	74.0	74.0	74.0	74.0	73.9	73.9	73.9	73.9	73.8	73.8	73.8
820	74.9	74.9	74.9	74.9	74.9	74.8	74.8	74.8	74.8	74.7	74.7
830	75.9	75.8	75.8	75.8	75.8	75.7	75.7	75.7	75.7	75.6	75.6
840	76.8	76.8	76.7	76.7	76.7	76.7	76.6	76.6	76.6	76.6	76.5
850	77.7	77.7	77.6	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4
860	78.6	78.6	78.6	78.5	78.5	78.5	78.5	78.4	78.4	78.4	78.4
870	79.5	79.5	79.5	79.4	79.4	79.4	79.4	79.3	79.3	79.3	79.3
880	80.4	80.4	80.4	80.4	80.3	80.3	80.3	80.3	80.2	80.2	80.2
890	81.3	81.3	81.3	81.3	81.2	81.2	81.2	81.2	81.1	81.1	81.1
900	82.3	82.2	82.2	82.2	82.2	82.1	82.1	82.1	82.0	82.0	82.0
910	83.2	83.1	83.1	83.1	83.1	83.0	83.0	83.0	83.0	82.9	82.9
920	84.1	84.1	84.0	84.0	84.0	84.0	83.9	83.9	83.9	83.8	83.8
930	85.0	85.0	84.9	84.9	84.9	84.9	84.8	84.8	84.8	84.8	84.7
940	85.9	85.9	85.9	85.8	85.8	85.8	85.8	85.7	85.7	85.7	85.6
950	86.8	86.8	86.8	86.7	86.7	86.7	86.7	86.6	86.6	86.6	86.6
960	87.7	87.7	87.7	87.7	87.6	87.6	87.6	87.5	87.5	87.5	87.5
970	88.7	88.6	88.6	88.6	88.5	88.5	88.5	88.5	88.4	88.4	88.4
980	89.6	89.5	89.5	89.5	89.5	89.4	89.4	89.4	89.3	89.3	89.3
990	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3	90.3	90.2	90.2
1,000	91.4	91.4	91.3	91.3	91.3	91.3	91.2	91.2	91.2	91.1	91.1
1,010	92.3	92.3	92.3	92.2	92.2	92.2	92.1	92.1	92.1	92.0	92.0
1,020	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0	93.0	92.9
1,030	94.1	94.1	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8
1,040	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.8
1,050	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.8	95.7	95.7	95.7
1,060	96.9	96.9	96.8	96.8	96.8	96.7	96.7	96.7	96.6	96.6	96.6
1,070	97.8	97.8	97.7	97.7	97.7	97.6	97.6	97.6	97.5	97.5	97.5
1,080	98.7	98.7	98.6	98.6	98.6	98.6	98.5	98.5	98.5	98.4	98.4
1,090	99.6	99.6	99.6	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3
1,100	100.5	100.5	100.5	100.4	100.4	100.4	100.4	100.3	100.3	100.3	100.2

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	40.0
700	63.8	63.8	63.7	63.7	63.7	63.7	63.7	63.6	63.6	63.6	63.6
710	64.7	64.7	64.6	64.6	64.6	64.6	64.6	64.5	64.5	64.5	64.5
720	65.6	65.6	65.6	65.5	65.5	65.5	65.5	65.5	65.4	65.4	65.4
730	66.5	66.5	66.5	66.4	66.4	66.4	66.4	66.4	66.3	66.3	66.3
740	67.4	67.4	67.4	67.4	67.3	67.3	67.3	67.3	67.2	67.2	67.2
750	68.3	68.3	68.3	68.3	68.2	68.2	68.2	68.2	68.2	68.1	68.1
760	69.2	69.2	69.2	69.2	69.2	69.1	69.1	69.1	69.1	69.0	69.0
770	70.2	70.1	70.1	70.1	70.1	70.0	70.0	70.0	70.0	70.0	69.9
780	71.1	71.0	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8
790	72.0	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8	71.8	71.7
800	72.9	72.9	72.8	72.8	72.8	72.8	72.7	72.7	72.7	72.7	72.7
810	73.8	73.8	73.7	73.7	73.7	73.7	73.7	73.6	73.6	73.6	73.6
820	74.7	74.7	74.7	74.6	74.6	74.6	74.6	74.5	74.5	74.5	74.5
830	75.6	75.6	75.6	75.5	75.5	75.5	75.5	75.4	75.4	75.4	75.4
840	76.5	76.5	76.5	76.5	76.4	76.4	76.4	76.4	76.3	76.3	76.3
850	77.4	77.4	77.4	77.4	77.3	77.3	77.3	77.3	77.2	77.2	77.2
860	78.4	78.3	78.3	78.3	78.3	78.2	78.2	78.2	78.2	78.1	78.1
870	79.3	79.2	79.2	79.2	79.2	79.1	79.1	79.1	79.1	79.0	79.0
880	80.2	80.1	80.1	80.1	80.1	80.0	80.0	80.0	80.0	79.9	79.9
890	81.1	81.1	81.0	81.0	81.0	81.0	80.9	80.9	80.9	80.9	80.8
900	82.0	82.0	81.9	81.9	81.9	81.9	81.8	81.8	81.8	81.8	81.7
910	82.9	82.9	82.9	82.8	82.8	82.8	82.7	82.7	82.7	82.7	82.6
920	83.8	83.8	83.8	83.7	83.7	83.7	83.7	83.6	83.6	83.6	83.6
930	84.7	84.7	84.7	84.6	84.6	84.6	84.6	84.5	84.5	84.5	84.5
940	85.6	85.6	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.4
950	86.6	86.5	86.5	86.5	86.4	86.4	86.4	86.4	86.3	86.3	86.3
960	87.5	87.4	87.4	87.4	87.4	87.3	87.3	87.3	87.2	87.2	87.2
970	88.4	88.3	88.3	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1
980	89.3	89.3	89.2	89.2	89.2	89.1	89.1	89.1	89.1	89.0	89.0
990	90.2	90.2	90.1	90.1	90.1	90.1	90.0	90.0	90.0	89.9	89.9
1,000	91.1	91.1	91.0	91.0	91.0	91.0	90.9	90.9	90.9	90.8	90.8
1,010	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.8	91.7
1,020	92.9	92.9	92.9	92.8	92.8	92.8	92.8	92.7	92.7	92.7	92.6
1,030	93.8	93.8	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.5
1,040	94.8	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.4
1,050	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4	95.4	95.4
1,060	96.6	96.5	96.5	96.5	96.4	96.4	96.4	96.4	96.3	96.3	96.3
1,070	97.5	97.5	97.4	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.2
1,080	98.4	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.1
1,090	99.3	99.3	99.2	99.2	99.2	99.1	99.1	99.1	99.1	99.0	99.0
1,100	100.2	100.2	100.2	100.1	100.1	100.1	100.0	100.0	100.0	99.9	99.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	41.0
700	63.6	63.6	63.5	63.5	63.5	63.5	63.4	63.4	63.4	63.4	63.4
710	64.5	64.5	64.4	64.4	64.4	64.4	64.4	64.3	64.3	64.3	64.3
720	65.4	65.4	65.3	65.3	65.3	65.3	65.3	65.2	65.2	65.2	65.2
730	66.3	66.3	66.3	66.2	66.2	66.2	66.2	66.1	66.1	66.1	66.1
740	67.2	67.2	67.2	67.1	67.1	67.1	67.1	67.1	67.0	67.0	67.0
750	68.1	68.1	68.1	68.0	68.0	68.0	68.0	68.0	67.9	67.9	67.9
760	69.0	69.0	69.0	69.0	68.9	68.9	68.9	68.9	68.8	68.8	68.8
770	69.9	69.9	69.9	69.9	69.8	69.8	69.8	69.8	69.8	69.7	69.7
780	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.7	70.6	70.6
790	71.7	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.5	71.5
800	72.7	72.6	72.6	72.6	72.6	72.5	72.5	72.5	72.5	72.4	72.4
810	73.6	73.5	73.5	73.5	73.5	73.4	73.4	73.4	73.4	73.4	73.3
820	74.5	74.4	74.4	74.4	74.4	74.4	74.3	74.3	74.3	74.3	74.2
830	75.4	75.4	75.3	75.3	75.3	75.3	75.2	75.2	75.2	75.2	75.1
840	76.3	76.3	76.2	76.2	76.2	76.2	76.1	76.1	76.1	76.1	76.0
850	77.2	77.2	77.1	77.1	77.1	77.1	77.0	77.0	77.0	77.0	76.9
860	78.1	78.1	78.1	78.0	78.0	78.0	78.0	77.9	77.9	77.9	77.9
870	79.0	79.0	79.0	78.9	78.9	78.9	78.9	78.8	78.8	78.8	78.8
880	79.9	79.9	79.9	79.8	79.8	79.8	79.8	79.7	79.7	79.7	79.7
890	80.8	80.8	80.8	80.7	80.7	80.7	80.7	80.6	80.6	80.6	80.6
900	81.7	81.7	81.7	81.7	81.6	81.6	81.6	81.6	81.5	81.5	81.5
910	82.6	82.6	82.6	82.6	82.5	82.5	82.5	82.5	82.4	82.4	82.4
920	83.6	83.5	83.5	83.5	83.4	83.4	83.4	83.4	83.3	83.3	83.3
930	84.5	84.4	84.4	84.4	84.4	84.3	84.3	84.3	84.2	84.2	84.2
940	85.4	85.3	85.3	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1
950	86.3	86.2	86.2	86.2	86.2	86.1	86.1	86.1	86.1	86.0	86.0
960	87.2	87.2	87.1	87.1	87.1	87.0	87.0	87.0	87.0	86.9	86.9
970	88.1	88.1	88.0	88.0	88.0	88.0	87.9	87.9	87.9	87.8	87.8
980	89.0	89.0	88.9	88.9	88.9	88.9	88.8	88.8	88.8	88.7	88.7
990	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7	89.7	89.7	89.6
1,000	90.8	90.8	90.8	90.7	90.7	90.7	90.6	90.6	90.6	90.6	90.5
1,010	91.7	91.7	91.7	91.6	91.6	91.6	91.5	91.5	91.5	91.5	91.4
1,020	92.6	92.6	92.6	92.5	92.5	92.5	92.5	92.4	92.4	92.4	92.3
1,030	93.5	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.2
1,040	94.4	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.1
1,050	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1	95.1
1,060	96.3	96.2	96.2	96.2	96.1	96.1	96.1	96.1	96.0	96.0	96.0
1,070	97.2	97.1	97.1	97.1	97.0	97.0	97.0	97.0	96.9	96.9	96.9
1,080	98.1	98.1	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.8
1,090	99.0	99.0	98.9	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.7
1,100	99.9	99.9	99.8	99.8	99.8	99.7	99.7	99.7	99.6	99.6	99.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	42.0
700	63.4	63.3	63.3	63.3	63.3	63.3	63.2	63.2	63.2	63.2	63.2
710	64.3	64.3	64.2	64.2	64.2	64.2	64.2	64.1	64.1	64.1	64.1
720	65.2	65.2	65.1	65.1	65.1	65.1	65.1	65.0	65.0	65.0	65.0
730	66.1	66.1	66.0	66.0	66.0	66.0	66.0	65.9	65.9	65.9	65.9
740	67.0	67.0	66.9	66.9	66.9	66.9	66.9	66.8	66.8	66.8	66.8
750	67.9	67.9	67.9	67.8	67.8	67.8	67.8	67.7	67.7	67.7	67.7
760	68.8	68.8	68.8	68.7	68.7	68.7	68.7	68.6	68.6	68.6	68.6
770	69.7	69.7	69.7	69.6	69.6	69.6	69.6	69.6	69.5	69.5	69.5
780	70.6	70.6	70.6	70.5	70.5	70.5	70.5	70.5	70.4	70.4	70.4
790	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.4	71.3	71.3	71.3
800	72.4	72.4	72.4	72.4	72.3	72.3	72.3	72.3	72.2	72.2	72.2
810	73.3	73.3	73.3	73.3	73.2	73.2	73.2	73.2	73.1	73.1	73.1
820	74.2	74.2	74.2	74.2	74.1	74.1	74.1	74.1	74.0	74.0	74.0
830	75.1	75.1	75.1	75.1	75.0	75.0	75.0	75.0	74.9	74.9	74.9
840	76.0	76.0	76.0	76.0	75.9	75.9	75.9	75.9	75.8	75.8	75.8
850	76.9	76.9	76.9	76.9	76.9	76.8	76.8	76.8	76.8	76.7	76.7
860	77.9	77.8	77.8	77.8	77.8	77.7	77.7	77.7	77.7	77.6	77.6
870	78.8	78.7	78.7	78.7	78.7	78.6	78.6	78.6	78.6	78.5	78.5
880	79.7	79.6	79.6	79.6	79.6	79.5	79.5	79.5	79.5	79.4	79.4
890	80.6	80.5	80.5	80.5	80.5	80.4	80.4	80.4	80.4	80.3	80.3
900	81.5	81.4	81.4	81.4	81.4	81.3	81.3	81.3	81.3	81.2	81.2
910	82.4	82.4	82.3	82.3	82.3	82.2	82.2	82.2	82.2	82.1	82.1
920	83.3	83.3	83.2	83.2	83.2	83.2	83.1	83.1	83.1	83.0	83.0
930	84.2	84.2	84.1	84.1	84.1	84.1	84.0	84.0	84.0	83.9	83.9
940	85.1	85.1	85.0	85.0	85.0	85.0	84.9	84.9	84.9	84.9	84.8
950	86.0	86.0	85.9	85.9	85.9	85.9	85.8	85.8	85.8	85.8	85.7
960	86.9	86.9	86.9	86.8	86.8	86.8	86.7	86.7	86.7	86.7	86.6
970	87.8	87.8	87.8	87.7	87.7	87.7	87.6	87.6	87.6	87.6	87.5
980	88.7	88.7	88.7	88.6	88.6	88.6	88.5	88.5	88.5	88.5	88.4
990	89.6	89.6	89.6	89.5	89.5	89.5	89.5	89.4	89.4	89.4	89.3
1,000	90.5	90.5	90.5	90.4	90.4	90.4	90.4	90.3	90.3	90.3	90.2
1,010	91.4	91.4	91.4	91.3	91.3	91.3	91.3	91.2	91.2	91.2	91.1
1,020	92.3	92.3	92.3	92.2	92.2	92.2	92.2	92.1	92.1	92.1	92.0
1,030	93.2	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0	92.9
1,040	94.1	94.1	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.8
1,050	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.8
1,060	96.0	95.9	95.9	95.9	95.8	95.8	95.8	95.7	95.7	95.7	95.7
1,070	96.9	96.8	96.8	96.8	96.7	96.7	96.7	96.6	96.6	96.6	96.6
1,080	97.8	97.7	97.7	97.7	97.6	97.6	97.6	97.6	97.5	97.5	97.5
1,090	98.7	98.6	98.6	98.6	98.5	98.5	98.5	98.5	98.4	98.4	98.4
1,100	99.6	99.5	99.5	99.5	99.5	99.4	99.4	99.4	99.3	99.3	99.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	43.0
700	63.2	63.1	63.1	63.1	63.1	63.1	63.0	63.0	63.0	63.0	63.0
710	64.1	64.1	64.0	64.0	64.0	64.0	63.9	63.9	63.9	63.9	63.9
720	65.0	65.0	64.9	64.9	64.9	64.9	64.8	64.8	64.8	64.8	64.8
730	65.9	65.9	65.8	65.8	65.8	65.8	65.8	65.7	65.7	65.7	65.7
740	66.8	66.8	66.7	66.7	66.7	66.7	66.7	66.6	66.6	66.6	66.6
750	67.7	67.7	67.6	67.6	67.6	67.6	67.6	67.5	67.5	67.5	67.5
760	68.6	68.6	68.5	68.5	68.5	68.5	68.5	68.4	68.4	68.4	68.4
770	69.5	69.5	69.4	69.4	69.4	69.4	69.4	69.3	69.3	69.3	69.3
780	70.4	70.4	70.3	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2
790	71.3	71.3	71.2	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
800	72.2	72.2	72.1	72.1	72.1	72.1	72.1	72.0	72.0	72.0	72.0
810	73.1	73.1	73.0	73.0	73.0	73.0	73.0	72.9	72.9	72.9	72.9
820	74.0	74.0	73.9	73.9	73.9	73.9	73.9	73.8	73.8	73.8	73.8
830	74.9	74.9	74.9	74.8	74.8	74.8	74.8	74.7	74.7	74.7	74.7
840	75.8	75.8	75.8	75.7	75.7	75.7	75.7	75.6	75.6	75.6	75.6
850	76.7	76.7	76.7	76.6	76.6	76.6	76.6	76.5	76.5	76.5	76.5
860	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4	77.4	77.4	77.4
870	78.5	78.5	78.5	78.4	78.4	78.4	78.4	78.3	78.3	78.3	78.3
880	79.4	79.4	79.4	79.3	79.3	79.3	79.3	79.2	79.2	79.2	79.2
890	80.3	80.3	80.3	80.2	80.2	80.2	80.2	80.1	80.1	80.1	80.1
900	81.2	81.2	81.2	81.1	81.1	81.1	81.1	81.0	81.0	81.0	81.0
910	82.1	82.1	82.1	82.0	82.0	82.0	82.0	81.9	81.9	81.9	81.9
920	83.0	83.0	83.0	82.9	82.9	82.9	82.9	82.8	82.8	82.8	82.8
930	83.9	83.9	83.9	83.8	83.8	83.8	83.8	83.7	83.7	83.7	83.7
940	84.8	84.8	84.8	84.7	84.7	84.7	84.7	84.6	84.6	84.6	84.6
950	85.7	85.7	85.7	85.6	85.6	85.6	85.6	85.5	85.5	85.5	85.5
960	86.6	86.6	86.6	86.5	86.5	86.5	86.5	86.4	86.4	86.4	86.4
970	87.5	87.5	87.5	87.4	87.4	87.4	87.4	87.3	87.3	87.3	87.3
980	88.4	88.4	88.4	88.4	88.3	88.3	88.3	88.2	88.2	88.2	88.2
990	89.3	89.3	89.3	89.3	89.2	89.2	89.2	89.1	89.1	89.1	89.1
1,000	90.2	90.2	90.2	90.2	90.1	90.1	90.1	90.0	90.0	90.0	90.0
1,010	91.1	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9	90.9
1,020	92.0	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8	91.8
1,030	92.9	92.9	92.9	92.9	92.8	92.8	92.8	92.7	92.7	92.7	92.7
1,040	93.8	93.8	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6	93.6
1,050	94.8	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.5
1,060	95.7	95.6	95.6	95.6	95.5	95.5	95.5	95.4	95.4	95.4	95.4
1,070	96.6	96.5	96.5	96.5	96.4	96.4	96.4	96.3	96.3	96.3	96.3
1,080	97.5	97.4	97.4	97.4	97.3	97.3	97.3	97.2	97.2	97.2	97.2
1,090	98.4	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.1	98.1
1,100	99.3	99.2	99.2	99.2	99.1	99.1	99.1	99.0	99.0	99.0	98.9

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	44.0
700	63.0	62.9	62.9	62.9	62.9	62.9	62.8	62.8	62.8	62.8	62.8
710	63.9	63.8	63.8	63.8	63.8	63.8	63.7	63.7	63.7	63.7	63.7
720	64.8	64.7	64.7	64.7	64.7	64.7	64.6	64.6	64.6	64.6	64.6
730	65.7	65.6	65.6	65.6	65.6	65.6	65.5	65.5	65.5	65.5	65.5
740	66.6	66.5	66.5	66.5	66.5	66.5	66.4	66.4	66.4	66.4	66.4
750	67.5	67.4	67.4	67.4	67.4	67.4	67.3	67.3	67.3	67.3	67.3
760	68.4	68.3	68.3	68.3	68.3	68.3	68.2	68.2	68.2	68.2	68.1
770	69.3	69.2	69.2	69.2	69.2	69.2	69.1	69.1	69.1	69.1	69.0
780	70.2	70.1	70.1	70.1	70.1	70.1	70.0	70.0	70.0	70.0	69.9
790	71.1	71.0	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8
800	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8	71.8	71.8	71.7
810	72.9	72.8	72.8	72.8	72.8	72.7	72.7	72.7	72.7	72.7	72.6
820	73.8	73.7	73.7	73.7	73.7	73.6	73.6	73.6	73.6	73.6	73.5
830	74.7	74.6	74.6	74.6	74.6	74.5	74.5	74.5	74.5	74.5	74.4
840	75.6	75.5	75.5	75.5	75.5	75.4	75.4	75.4	75.4	75.3	75.3
850	76.5	76.4	76.4	76.4	76.4	76.3	76.3	76.3	76.3	76.2	76.2
860	77.4	77.3	77.3	77.3	77.3	77.2	77.2	77.2	77.2	77.1	77.1
870	78.3	78.2	78.2	78.2	78.2	78.1	78.1	78.1	78.1	78.0	78.0
880	79.2	79.1	79.1	79.1	79.1	79.0	79.0	79.0	79.0	78.9	78.9
890	80.1	80.0	80.0	80.0	80.0	79.9	79.9	79.9	79.9	79.8	79.8
900	81.0	80.9	80.9	80.9	80.9	80.8	80.8	80.8	80.8	80.7	80.7
910	81.9	81.8	81.8	81.8	81.8	81.7	81.7	81.7	81.7	81.6	81.6
920	82.8	82.7	82.7	82.7	82.7	82.6	82.6	82.6	82.5	82.5	82.5
930	83.7	83.6	83.6	83.6	83.6	83.5	83.5	83.5	83.4	83.4	83.4
940	84.6	84.5	84.5	84.5	84.5	84.4	84.4	84.4	84.3	84.3	84.3
950	85.5	85.4	85.4	85.4	85.3	85.3	85.3	85.3	85.2	85.2	85.2
960	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.2	86.1	86.1	86.1
970	87.3	87.2	87.2	87.2	87.1	87.1	87.1	87.1	87.0	87.0	87.0
980	88.2	88.1	88.1	88.1	88.0	88.0	88.0	88.0	87.9	87.9	87.9
990	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.9	88.8	88.8	88.8
1,000	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.8	89.7	89.7	89.7
1,010	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.7	90.6	90.6	90.6
1,020	91.8	91.7	91.7	91.7	91.6	91.6	91.6	91.6	91.5	91.5	91.5
1,030	92.7	92.6	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4	92.4
1,040	93.6	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3	93.3
1,050	94.5	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.2
1,060	95.4	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1	95.1
1,070	96.3	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0	96.0	95.9
1,080	97.2	97.1	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.9	96.8
1,090	98.1	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.8	97.7
1,100	98.9	98.9	98.9	98.9	98.8	98.8	98.8	98.7	98.7	98.7	98.6

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	45.0
700	62.8	62.7	62.7	62.7	62.7	62.7	62.7	62.6	62.6	62.6	62.6
710	63.7	63.6	63.6	63.6	63.6	63.6	63.5	63.5	63.5	63.5	63.5
720	64.6	64.5	64.5	64.5	64.5	64.5	64.4	64.4	64.4	64.4	64.4
730	65.5	65.4	65.4	65.4	65.4	65.4	65.3	65.3	65.3	65.3	65.3
740	66.4	66.3	66.3	66.3	66.3	66.3	66.2	66.2	66.2	66.2	66.1
750	67.3	67.2	67.2	67.2	67.2	67.1	67.1	67.1	67.1	67.1	67.0
760	68.1	68.1	68.1	68.1	68.1	68.0	68.0	68.0	68.0	68.0	67.9
770	69.0	69.0	69.0	69.0	69.0	68.9	68.9	68.9	68.9	68.9	68.8
780	69.9	69.9	69.9	69.9	69.9	69.8	69.8	69.8	69.8	69.7	69.7
790	70.8	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6
800	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.6	71.5	71.5
810	72.6	72.6	72.6	72.6	72.5	72.5	72.5	72.5	72.5	72.4	72.4
820	73.5	73.5	73.5	73.5	73.4	73.4	73.4	73.4	73.3	73.3	73.3
830	74.4	74.4	74.4	74.4	74.3	74.3	74.3	74.3	74.2	74.2	74.2
840	75.3	75.3	75.3	75.3	75.2	75.2	75.2	75.2	75.1	75.1	75.1
850	76.2	76.2	76.2	76.1	76.1	76.1	76.1	76.1	76.0	76.0	76.0
860	77.1	77.1	77.1	77.0	77.0	77.0	77.0	76.9	76.9	76.9	76.9
870	78.0	78.0	78.0	77.9	77.9	77.9	77.9	77.8	77.8	77.8	77.8
880	78.9	78.9	78.9	78.8	78.8	78.8	78.8	78.7	78.7	78.7	78.7
890	79.8	79.8	79.8	79.7	79.7	79.7	79.7	79.6	79.6	79.6	79.6
900	80.7	80.7	80.7	80.6	80.6	80.6	80.6	80.5	80.5	80.5	80.5
910	81.6	81.6	81.5	81.5	81.5	81.5	81.5	81.4	81.4	81.4	81.3
920	82.5	82.5	82.4	82.4	82.4	82.4	82.3	82.3	82.3	82.3	82.2
930	83.4	83.4	83.3	83.3	83.3	83.3	83.2	83.2	83.2	83.2	83.1
940	84.3	84.3	84.2	84.2	84.2	84.2	84.1	84.1	84.1	84.1	84.0
950	85.2	85.2	85.1	85.1	85.1	85.1	85.0	85.0	85.0	84.9	84.9
960	86.1	86.1	86.0	86.0	86.0	85.9	85.9	85.9	85.9	85.8	85.8
970	87.0	87.0	86.9	86.9	86.9	86.8	86.8	86.8	86.8	86.7	86.7
980	87.9	87.8	87.8	87.8	87.8	87.7	87.7	87.7	87.7	87.6	87.6
990	88.8	88.7	88.7	88.7	88.7	88.6	88.6	88.6	88.6	88.5	88.5
1,000	89.7	89.6	89.6	89.6	89.6	89.5	89.5	89.5	89.4	89.4	89.4
1,010	90.6	90.5	90.5	90.5	90.5	90.4	90.4	90.4	90.3	90.3	90.3
1,020	91.5	91.4	91.4	91.4	91.3	91.3	91.3	91.3	91.2	91.2	91.2
1,030	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.2	92.1	92.1	92.1
1,040	93.3	93.2	93.2	93.2	93.1	93.1	93.1	93.1	93.0	93.0	93.0
1,050	94.2	94.1	94.1	94.1	94.0	94.0	94.0	93.9	93.9	93.9	93.9
1,060	95.1	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.8
1,070	95.9	95.9	95.9	95.9	95.8	95.8	95.8	95.7	95.7	95.7	95.6
1,080	96.8	96.8	96.8	96.8	96.7	96.7	96.7	96.6	96.6	96.6	96.5
1,090	97.7	97.7	97.7	97.6	97.6	97.6	97.6	97.5	97.5	97.5	97.4
1,100	98.6	98.6	98.6	98.5	98.5	98.5	98.5	98.4	98.4	98.4	98.3

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	46.0
700	62.6	62.6	62.5	62.5	62.5	62.5	62.5	62.4	62.4	62.4	62.4
710	63.5	63.4	63.4	63.4	63.4	63.4	63.3	63.3	63.3	63.3	63.3
720	64.4	64.3	64.3	64.3	64.3	64.3	64.2	64.2	64.2	64.2	64.2
730	65.3	65.2	65.2	65.2	65.2	65.2	65.1	65.1	65.1	65.1	65.0
740	66.1	66 1	66.1	56.1	66.1	66.0	66.0	66.0	66.0	66.0	65.9
750	67 0	67.0	67.0	67.0	67.0	66.9	66 9	66.9	66.9	66.9	66.8
760	67.9	67.9	67.9	67 9	67.9	67.8	67.8	67.8	67.8	67.7	67.7
770	68 8	68.8	68.8	68 8	68.7	68.7	68.7	68 7	68.7	68.6	68.6
780	69 7	69 7	69.7	69.7	69.6	69.6	69 6	69.6	69.5	69.5	69.5
790	70 6	70 6	70.6	70 6	70.5	70 5	70 5	70 5	70.4	70.4	70.4
800	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.4	71.3	71.3	71.3
810	72.4	72.4	72.4	72 3	72.3	72.3	72.3	72.2	72.2	72.2	72.2
820	73.3	73 3	73.3	73 2	73.2	73.2	73 2	73.1	73.1	73.1	73.1
830	74.2	74.2	74.1	74.1	74.1	74.1	74.1	74.0	74.0	74 0	74 0
840	75.1	75.1	75.0	75.0	75.0	75.0	74.9	74.9	74.9	74.9	74.9
850	76 0	76.0	75.9	75.9	75.9	75.9	75.8	75.8	75.8	75.8	75.7
860	76.9	76.9	76.8	76 8	76.8	76.8	76.7	76.7	76.7	76.7	76.6
870	77.8	77.7	77.7	77.7	77.7	77.6	77.6	77.6	77.6	77.5	77.5
880	78.7	78 6	78.6	78.6	78.6	78.5	78 5	78.5	78.5	78.4	78.4
890	79.6	79.5	79.5	79 5	79.5	79.4	79.4	79.4	79.4	79.3	79.3
900	80.5	80.4	80.4	80.4	80 3	80.3	80.3	80.3	80.2	80.2	80.2
910	81.3	81.3	81.3	81.3	81.2	81.2	81.2	81.2	81.1	81.1	81.1
920	82.2	82 2	82.2	82 2	82.1	82.1	82 1	82.1	82.0	82.0	82.0
930	83.1	83.1	83.1	83 1	83.0	83 0	83.0	82.9	82.9	82.9	82.9
940	84.0	84.0	84.0	83.9	83 9	83.9	83 9	83.8	83.8	83.8	83.8
950	84.9	84.9	84.9	84.8	84.8	84.8	84 8	84.7	84.7	84.7	84.7
960	85.8	85.8	85.8	85.7	85.7	85.7	85 7	85.6	85.6	85.6	85.5
970	86.7	86.7	86 7	86.6	86.6	86.6	86.5	86.5	86.5	86.5	86.4
980	87.6	87.6	87.5	87.5	87.5	87.5	87.4	87.4	87.4	87.4	87.3
990	88.5	88 5	88.4	88.4	88.4	88 4	88.3	88.3	88.3	88.2	88.2
1,000	89.4	89.4	89 3	89.3	89 3	89 2	89.2	89.2	89.2	89.1	89.1
1,010	90.3	90 3	90.2	90 2	90.2	90.1	90.1	90.1	90.1	90.0	90.0
1,020	91.2	91.1	91.1	91.1	91.1	91.0	91.0	91.0	90.9	90.9	90.9
1,030	92.1	92.0	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8	91.8
1,040	93.0	92 9	92.9	92 9	92.8	92.8	92.8	92.8	92.7	92.7	92.7
1,050	93.9	93.8	93.8	93 8	93.7	93.7	93.7	93.7	93.6	93.6	93.6
1,060	94.8	94.7	94.7	94 7	94.6	94.6	94.6	94.5	94.5	94.5	94.5
1,070	95.6	95 6	95.6	95.6	95.5	95.5	95.5	95.4	95.4	95 4	95.3
1,080	96.5	96 5	96 5	96 4	96.4	96.4	96.4	96.3	96.3	96.3	96.2
1,090	97.4	97.4	97.4	97.3	97.3	97.3	97.3	97.2	97.2	97.2	97.1
1,100	98.3	98.3	98.3	98.2	98.2	98.2	98.1	98.1	98.1	98.1	98.0

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	47.0
700	62.4	62.4	62.3	62.3	62.3	62.3	62.3	62.2	62.2	62.2	62.2
710	63.3	63.2	63.2	63.2	63.2	63.2	63.1	63.1	63.1	63.1	63.1
720	64.2	64.1	64.1	64.1	64.1	64.1	64.0	64.0	64.0	64.0	64.0
730	65.0	65.0	65.0	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.8
740	65.9	65.9	65.9	65.9	65.9	65.8	65.8	65.8	65.8	65.8	65.7
750	66.8	66.8	66.8	66.8	66.7	66.7	66.7	66.7	66.7	66.6	66.6
760	67.7	67.7	67.7	67.7	67.6	67.6	67.6	67.6	67.6	67.5	67.5
770	68.6	68.6	68.6	68.5	68.5	68.5	68.5	68.5	68.4	68.4	68.4
780	69.5	69.5	69.5	69.4	69.4	69.4	69.4	69.4	69.3	69.3	69.3
790	70.4	70.4	70.4	70.3	70.3	70.3	70.3	70.2	70.2	70.2	70.2
800	71.3	71.3	71.2	71.2	71.2	71.2	71.2	71.1	71.1	71.1	71.1
810	72.2	72.2	72.1	72.1	72.1	72.1	72.0	72.0	72.0	72.0	72.0
820	73.1	73.0	73.0	73.0	73.0	73.0	72.9	72.9	72.9	72.9	72.8
830	74.0	73.9	73.9	73.9	73.9	73.8	73.8	73.8	73.8	73.8	73.7
840	74.9	74.8	74.8	74.8	74.8	74.7	74.7	74.7	74.7	74.6	74.6
850	75.7	75.7	75.7	75.7	75.6	75.6	75.6	75.6	75.6	75.5	75.5
860	76.6	76.6	76.6	76.6	76.5	76.5	76.5	76.5	76.4	76.4	76.4
870	77.5	77.5	77.5	77.5	77.4	77.4	77.4	77.4	77.3	77.3	77.3
880	78.4	78.4	78.4	78.3	78.3	78.3	78.3	78.2	78.2	78.2	78.2
890	79.3	79.3	79.3	79.2	79.2	79.2	79.2	79.1	79.1	79.1	79.1
900	80.2	80.2	80.1	80.1	80.1	80.1	80.0	80.0	80.0	80.0	79.9
910	81.1	81.1	81.0	81.0	81.0	81.0	80.9	80.9	80.9	80.9	80.8
920	82.0	82.0	81.9	81.9	81.9	81.9	81.8	81.8	81.8	81.7	81.7
930	82.9	82.8	82.8	82.8	82.8	82.8	82.7	82.7	82.7	82.6	82.6
940	83.8	83.7	83.7	83.7	83.7	83.6	83.6	83.6	83.6	83.5	83.5
950	84.7	84.6	84.6	84.6	84.5	84.5	84.5	84.5	84.4	84.4	84.4
960	85.5	85.5	85.5	85.5	85.4	85.4	85.4	85.4	85.3	85.3	85.3
970	86.4	86.4	86.4	86.4	86.3	86.3	86.3	86.2	86.2	86.2	86.2
980	87.3	87.3	87.3	87.2	87.2	87.2	87.2	87.1	87.1	87.1	87.1
990	88.2	88.2	88.2	88.1	88.1	88.1	88.1	88.0	88.0	88.0	87.9
1,000	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9	88.9	88.8
1,010	90.0	90.0	89.9	89.9	89.9	89.9	89.8	89.8	89.8	89.7	89.7
1,020	90.9	90.9	90.8	90.8	90.8	90.7	90.7	90.7	90.7	90.6	90.6
1,030	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.6	91.6	91.5	91.5
1,040	92.7	92.6	92.6	92.6	92.6	92.5	92.5	92.5	92.4	92.4	92.4
1,050	93.6	93.5	93.5	93.5	93.4	93.4	93.4	93.4	93.3	93.3	93.3
1,060	94.5	94.4	94.4	94.4	94.3	94.3	94.3	94.2	94.2	94.2	94.2
1,070	95.3	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1	95.0
1,080	96.2	96.2	96.2	96.1	96.1	96.1	96.1	96.0	96.0	96.0	95.9
1,090	97.1	97.1	97.1	97.0	97.0	97.0	96.9	96.9	96.9	96.9	96.8
1,100	98.0	98.0	98.0	97.9	97.9	97.9	97.8	97.8	97.8	97.7	97.7

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	48.0
700	62.2	62.2	62.1	62.1	62.1	62.1	62.1	62.0	62.0	62.0	62.0
710	63.1	63.1	63.0	63.0	63.0	63.0	63.0	62.9	62.9	62.9	62.9
720	64.0	63.9	63.9	63.9	63.9	63.9	63.8	63.8	63.8	63.8	63.8
730	64.8	64.8	64.8	64.8	64.8	64.7	64.7	64.7	64.7	64.7	64.6
740	65.7	65.7	65.7	65.7	65.7	65.6	65.6	65.6	65.6	65.6	65.5
750	66.6	66.6	66.6	66.6	66.5	66.5	66.5	66.5	66.5	66.4	66.4
760	67.5	67.5	67.5	67.4	67.4	67.4	67.4	67.4	67.3	67.3	67.3
770	68.4	68.4	68.4	68.3	68.3	68.3	68.3	68.3	68.2	68.2	68.2
780	69.3	69.3	69.2	69.2	69.2	69.2	69.2	69.1	69.1	69.1	69.1
790	70.2	70.2	70.1	70.1	70.1	70.1	70.0	70.0	70.0	70.0	70.0
800	71.1	71.0	71.0	71.0	71.0	71.0	70.9	70.9	70.9	70.9	70.8
810	72.0	71.9	71.9	71.9	71.9	71.8	71.8	71.8	71.8	71.8	71.7
820	72.8	72.8	72.8	72.8	72.8	72.7	72.7	72.7	72.7	72.6	72.6
830	73.7	73.7	73.7	73.7	73.6	73.6	73.6	73.6	73.5	73.5	73.5
840	74.6	74.6	74.6	74.5	74.5	74.5	74.5	74.5	74.4	74.4	74.4
850	75.5	75.5	75.5	75.4	75.4	75.4	75.4	75.3	75.3	75.3	75.3
860	76.4	76.4	76.3	76.3	76.3	76.3	76.3	76.2	76.2	76.2	76.2
870	77.3	77.3	77.2	77.2	77.2	77.2	77.1	77.1	77.1	77.1	77.0
880	78.2	78.1	78.1	78.1	78.1	78.0	78.0	78.0	78.0	78.0	77.9
890	79.1	79.0	79.0	79.0	79.0	78.9	78.9	78.9	78.9	78.8	78.8
900	79.9	79.9	79.9	79.9	79.8	79.8	79.8	79.8	79.7	79.7	79.7
910	80.8	80.8	80.8	80.8	80.7	80.7	80.7	80.7	80.6	80.6	80.6
920	81.7	81.7	81.7	81.6	81.6	81.6	81.6	81.5	81.5	81.5	81.5
930	82.6	82.6	82.6	82.5	82.5	82.5	82.5	82.4	82.4	82.4	82.4
940	83.5	83.5	83.4	83.4	83.4	83.4	83.3	83.3	83.3	83.3	83.2
950	84.4	84.4	84.3	84.3	84.3	84.3	84.2	84.2	84.2	84.2	84.1
960	85.3	85.3	85.2	85.2	85.2	85.1	85.1	85.1	85.1	85.0	85.0
970	86.2	86.1	86.1	86.1	86.1	86.0	86.0	86.0	86.0	85.9	85.9
980	87.1	87.0	87.0	87.0	86.9	86.9	86.9	86.9	86.8	86.8	86.8
990	87.9	87.9	87.9	87.9	87.8	87.8	87.8	87.8	87.7	87.7	87.7
1,000	88.8	88.8	88.8	88.7	88.7	88.7	88.7	88.6	88.6	88.6	88.6
1,010	89.7	89.7	89.7	89.6	89.6	89.6	89.6	89.5	89.5	89.5	89.4
1,020	90.6	90.6	90.6	90.5	90.5	90.5	90.4	90.4	90.4	90.4	90.3
1,030	91.5	91.5	91.4	91.4	91.4	91.4	91.3	91.3	91.3	91.2	91.2
1,040	92.4	92.4	92.3	92.3	92.3	92.2	92.2	92.2	92.2	92.1	92.1
1,050	93.3	93.2	93.2	93.2	93.2	93.1	93.1	93.1	93.0	93.0	93.0
1,060	94.2	94.1	94.1	94.1	94.0	94.0	94.0	94.0	93.9	93.9	93.9
1,070	95.0	95.0	95.0	95.0	94.9	94.9	94.9	94.8	94.8	94.8	94.8
1,080	95.9	95.9	95.9	95.8	95.8	95.8	95.8	95.7	95.7	95.7	95.6
1,090	96.8	96.8	96.8	96.7	96.7	96.7	96.6	96.6	96.6	96.6	96.5
1,100	97.7	97.7	97.7	97.6	97.6	97.6	97.5	97.5	97.5	97.4	97.4

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	49.0
700	62.0	62.0	61.9	61.9	61.9	61.9	61.9	61.9	61.8	61.8	61.8
710	62.9	62.9	62.8	62.8	62.8	62.8	62.8	62.7	62.7	62.7	62.7
720	63.8	63.7	63.7	63.7	63.7	63.7	63.6	63.6	63.6	63.6	63.6
730	64.6	64.6	64.6	64.6	64.6	64.5	64.5	64.5	64.5	64.5	64.4
740	65.5	65.5	65.5	65.5	65.4	65.4	65.4	65.4	65.4	65.3	65.3
750	66.4	66.4	66.4	66.4	66.3	66.3	66.3	66.3	66.3	66.2	66.2
760	67.3	67.3	67.3	67.2	67.2	67.2	67.2	67.2	67.1	67.1	67.1
770	68.2	68.2	68.1	68.1	68.1	68.1	68.1	68.0	68.0	68.0	68.0
780	69.1	69.1	69.0	69.0	69.0	69.0	68.9	68.9	68.9	68.9	68.9
790	70.0	69.9	69.9	69.9	69.9	69.8	69.8	69.8	69.8	69.8	69.7
800	70.8	70.8	70.8	70.8	70.8	70.7	70.7	70.7	70.7	70.6	70.6
810	71.7	71.7	71.7	71.7	71.6	71.6	71.6	71.6	71.6	71.5	71.5
820	72.6	72.6	72.6	72.5	72.5	72.5	72.5	72.5	72.4	72.4	72.4
830	73.5	73.5	73.5	73.4	73.4	73.4	73.4	73.3	73.3	73.3	73.3
840	74.4	74.4	74.3	74.3	74.3	74.3	74.2	74.2	74.2	74.2	74.2
850	75.3	75.2	75.2	75.2	75.2	75.2	75.1	75.1	75.1	75.1	75.0
860	76.2	76.1	76.1	76.1	76.1	76.0	76.0	76.0	76.0	75.9	75.9
870	77.0	77.0	77.0	77.0	76.9	76.9	76.9	76.9	76.9	76.8	76.8
880	77.9	77.9	77.9	77.9	77.8	77.8	77.8	77.8	77.7	77.7	77.7
890	78.8	78.8	78.8	78.7	78.7	78.7	78.7	78.6	78.6	78.6	78.6
900	79.7	79.7	79.6	79.6	79.6	79.6	79.6	79.5	79.5	79.5	79.5
910	80.6	80.6	80.5	80.5	80.5	80.5	80.4	80.4	80.4	80.4	80.3
920	81.5	81.4	81.4	81.4	81.4	81.3	81.3	81.3	81.3	81.2	81.2
930	82.4	82.3	82.3	82.3	82.3	82.2	82.2	82.2	82.2	82.1	82.1
940	83.2	83.2	83.2	83.2	83.1	83.1	83.1	83.1	83.0	83.0	83.0
950	84.1	84.1	84.1	84.0	84.0	84.0	84.0	83.9	83.9	83.9	83.9
960	85.0	85.0	85.0	84.9	84.9	84.9	84.9	84.8	84.8	84.8	84.7
970	85.9	85.9	85.8	85.8	85.8	85.8	85.7	85.7	85.7	85.7	85.6
980	86.8	86.8	86.7	86.7	86.7	86.6	86.6	86.6	86.6	86.5	86.5
990	87.7	87.6	87.6	87.6	87.6	87.5	87.5	87.5	87.5	87.4	87.4
1,000	88.6	88.5	88.5	88.5	88.4	88.4	88.4	88.4	88.3	88.3	88.3
1,010	89.4	89.4	89.4	89.4	89.3	89.3	89.3	89.2	89.2	89.2	89.2
1,020	90.3	90.3	90.3	90.2	90.2	90.2	90.2	90.1	90.1	90.1	90.0
1,030	91.2	91.2	91.2	91.1	91.1	91.1	91.0	91.0	91.0	91.0	90.9
1,040	92.1	92.1	92.0	92.0	92.0	92.0	91.9	91.9	91.9	91.8	91.8
1,050	93.0	93.0	92.9	92.9	92.9	92.8	92.8	92.8	92.8	92.7	92.7
1,060	93.9	93.8	93.8	93.8	93.8	93.7	93.7	93.7	93.6	93.6	93.6
1,070	94.8	94.7	94.7	94.7	94.6	94.6	94.6	94.5	94.5	94.5	94.5
1,080	95.6	95.6	95.6	95.5	95.5	95.5	95.5	95.4	95.4	95.4	95.3
1,090	96.5	96.5	96.5	96.4	96.4	96.4	96.3	96.3	96.3	96.3	96.2
1,100	97.4	97.4	97.3	97.3	97.3	97.3	97.2	97.2	97.2	97.1	97.1

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-5. *True Surface Density (Percent of Standard)—Continued*

Pressure, millibars	Virtual temperature, degrees Celsius										
	49.0	49.1	49.2	49.3	49.4	49.5	49.6	49.7	49.8	49.9	50.0
700	61.8	61.8	61.8	61.7	61.7	61.7	61.7	61.7	61.6	61.6	61.6
710	62.7	62.7	62.6	62.6	62.6	62.6	62.6	62.5	62.5	62.5	62.5
720	63.6	63.5	63.5	63.5	63.5	63.5	63.4	63.4	63.4	63.4	63.4
730	64.4	64.4	64.4	64.4	64.4	64.3	64.3	64.3	64.3	64.3	64.2
740	65.3	65.3	65.3	65.3	65.2	65.2	56.2	65.2	65.2	65.1	65.1
750	66.2	66.2	66.2	66.1	66.1	66.1	66.1	66.1	66.0	66.0	66.0
760	67.1	67.1	67.1	67.0	67.0	67.0	67.0	66.9	66.9	66.9	66.9
770	68.0	68.0	67.9	67.9	67.9	67.9	67.8	67.8	67.8	67.8	67.8
780	68.9	68.8	68.8	68.8	68.8	68.8	68.7	68.7	68.7	68.7	68.6
790	69.7	69.7	69.7	69.7	69.7	69.6	69.6	69.6	69.6	69.5	69.5
800	70.6	70.6	70.6	70.6	70.5	70.5	70.5	70.5	70.4	70.4	70.4
810	71.5	71.5	71.5	71.4	71.4	71.4	71.4	71.4	71.3	71.3	71.3
820	72.4	72.4	72.3	72.3	72.3	72.3	72.3	72.2	72.2	72.2	72.2
830	73.3	73.2	73.2	73.2	73.2	73.2	73.1	73.1	73.1	73.1	73.0
840	74.2	74.1	74.1	74.1	74.1	74.0	74.0	74.0	74.0	73.9	73.9
850	75.0	75.0	75.0	75.0	74.9	74.9	74.9	74.9	74.9	74.8	74.8
860	75.9	75.9	75.9	75.8	75.8	75.8	75.8	75.8	75.7	75.7	7.57
870	76.8	76.8	76.8	76.7	76.7	76.7	76.7	76.6	76.6	76.6	76.6
880	77.7	77.7	77.6	77.6	77.6	77.6	77.5	77.5	77.5	77.5	77.4
890	78.6	78.5	78.5	78.5	78.5	78.4	78.4	78.4	78.4	78.3	78.3
900	79.5	79.4	79.4	79.4	79.4	79.3	79.3	79.3	79.3	79.2	79.2
910	80.3	80.3	80.3	80.3	80.2	80.2	80.2	80.2	80.1	80.1	80.1
920	81.2	81.2	81.2	81.1	81.1	81.1	81.1	81.0	81.0	81.0	81.0
930	82.1	82.1	82.0	82.0	82.0	82.0	81.9	81.9	81.9	81.9	81.8
940	83.0	83.0	82.9	82.9	82.9	82.9	82.8	82.8	82.8	82.8	82.7
950	83.9	83.8	83.8	83.8	83.8	83.7	83.7	83.7	83.7	83.6	83.6
960	84.7	84.7	84.7	84.7	84.6	84.6	84.6	84.6	84.5	84.5	84.5
970	85.6	85.6	85.6	85.6	85.5	85.5	85.5	85.4	85.4	85.4	85.4
980	86.5	86.5	86.5	86.4	86.4	86.4	86.4	86.3	86.3	86.3	86.2
990	87.4	87.4	87.3	87.3	87.3	87.3	87.2	87.2	87.2	87.2	87.1
1,000	88.3	88.3	88.2	88.2	88.2	88.1	88.1	88.1	88.1	88.0	88.0
1,010	89.2	89.1	89.1	89.1	89.1	89.0	89.0	89.0	88.9	88.9	88.9
1,020	90.0	90.0	90.0	90.0	89.9	89.9	89.9	89.8	89.8	89.8	89.8
1,030	90.9	90.9	90.9	90.8	90.8	90.8	90.8	90.7	90.7	90.7	90.6
1,040	91.8	91.8	91.8	91.7	91.7	91.7	91.6	91.6	91.6	91.6	91.5
1,050	92.7	92.7	92.6	92.6	92.6	92.5	92.5	92.5	92.5	92.4	92.4
1,060	93.6	93.5	93.5	93.5	93.5	93.4	93.4	93.4	93.3	93.3	93.3
1,070	94.5	94.4	94.4	94.4	94.3	94.3	94.3	94.3	94.2	94.2	94.2
1,080	95.3	95.3	95.3	95.3	95.2	95.2	95.2	95.1	95.1	95.1	95.0
1,090	96.2	96.2	96.2	96.1	96.1	96.1	96.0	96.0	96.0	96.0	95.9
1,100	97.1	97.1	97.0	97.0	97.0	97.0	96.9	96.9	96.9	96.8	96.8

Enter table with pressure to nearest millibar and virtual temperature to nearest tenth of a degree Celsius. Obtain density to nearest tenth of a percent. Interpolate if necessary.

$$\text{Density} = \frac{(348.4)\,(\text{pressure})}{(\text{temperature}+273.16)} \qquad \text{Percent density} = \frac{\text{density}}{1225}$$

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 1*

Line No.	Departures from mean surface density, percent, afternoon												
	-13.0	-12.0	-11.0	-10.0	-9.0	-8.0	-7.0	-6.0	-5.0	-4.0	-3.0	-2.0	-1.0
1	−12.4	−11.4	−10.4	−09.4	−08.4	−07.5	−06.5	−05.6	−04.6	−03.7	−02.7	−01.6	−00.7
2	−12.3	−11.2	−10.2	−09.3	−08.3	−07.4	−06.4	−05.5	−04.6	−03.7	−02.7	−01.7	−00.7
3	−11.9	−10.8	−09.7	−08.9	−08.0	−07.1	−06.2	−05.3	−04.6	−03.6	−02.7	−01.8	−00.9
4	−11.6	−10.5	−09.4	−08.7	−07.9	−07.0	−06.1	−05.4	−04.6	−03.8	−02.9	−02.0	−01.3
5	−11.4	−10.2	−09.3	−08.5	−07.7	−06.9	−06.2	−05.4	−04.7	−03.9	−03.1	−02.4	−01.7
6	−10.8	−09.9	−08.9	−08.2	−07.5	−06.8	−06.2	−05.5	−04.8	−04.1	−03.5	−02.9	−02.2
7	−10.2	−09.3	−08.6	−07.9	−07.3	−06.7	−06.0	−05.5	−04.9	−04.2	−03.6	−03.1	−02.6
8	−09.5	−08.7	−08.1	−07.5	−07.0	−06.4	−05.8	−05.3	−04.7	−04.1	−03.6	−03.2	−02.7
9	−08.6	−08.0	−07.4	−06.8	−06.3	−05.8	−05.3	−04.7	−04.3	−03.9	−03.4	−03.0	−02.5
10	−07.0	−06.4	−05.9	−05.5	−05.0	−04.6	−04.1	−03.8	−03.3	−02.9	−02.6	−02.2	−01.9
11	−03.6	−03.1	−02.6	−02.2	−01.8	−01.4	−01.0	−00.8	−00.4	00.0	00.2	00.4	00.6
12	−00.2	00.2	00.6	01.1	01.4	01.7	01.9	02.1	02.4	02.7	02.8	02.8	02.8
13	10.7	11.1	11.6	11.3	12.1	12.3	12.3	12.2	12.5	12.7	12.4	12.2	12.0
14	21.9	22.4	22.8	22.8	23.0	23.1	22.7	22.4	22.6	22.6	22.2	21.9	21.4
15	33.8	34.2	34.4	34.2	34.4	34.2	33.7	33.2	33.4	33.2	32.6	32.2	31.5

Line No.	Departures from mean surface density, percent, transition											
	-10.0	-9.0	-8.0	-7.0	-6.0	-5.0	-4.0	-3.0	-2.0	-1.0	0	+1.0
1	−09.6	−08.6	−07.6	−06.7	−05.8	−04.8	−03.9	−02.9	−01.9	−01.0	−00.1	00.9
2	−09.7	−08.6	−07.7	−06.8	−05.9	−05.0	−04.2	−03.2	−02.2	−01.2	−00.4	00.5
3	−09.5	−08.5	−07.7	−06.7	−05.9	−05.2	−04.3	−03.4	−02.5	−01.5	−00.7	00.2
4	−09.4	−08.5	−07.7	−06.8	−06.0	−05.3	−04.5	−03.7	−02.7	−01.9	−01.1	−00.3
5	−09.4	−08.4	−07.6	−06.8	−06.2	−05.4	−04.6	−03.9	−03.0	−02.3	−01.6	−00.8
6	−09.1	−08.2	−07.5	−06.8	−06.2	−05.5	−04.8	−04.0	−03.5	−02.8	−02.2	−01.4
7	−08.7	−07.9	−07.3	−06.7	−06.1	−05.6	−04.8	−04.2	−03.7	−03.1	−02.6	−01.9
8	−08.2	−07.5	−07.0	−06.4	−05.8	−05.3	−04.7	−04.1	−03.7	−03.2	−02.6	−02.1
9	−07.5	−06.9	−06.3	−05.9	−05.3	−04.7	−04.3	−03.9	−03.5	−02.9	−02.5	−02.1
10	−05.9	−05.6	−05.0	−04.6	−04.2	−03.7	−03.3	−03.0	−02.5	−02.1	−01.9	−01.5
11	−02.7	−02.2	−01.7	−01.4	−01.1	−00.7	−00.4	−00.2	00.2	00.6	00.7	00.9
12	00.6	01.1	01.4	01.7	02.0	02.2	02.4	02.5	02.8	03.0	03.1	03.0
13	11.6	11.8	12.2	12.3	12.5	12.7	12.5	12.4	12.5	12.8	12.5	12.2
14	22.8	23.1	23.1	23.1	23.2	23.1	22.8	22.4	22.6	22.4	22.2	21.6
15	34.5	34.7	34.5	34.2	34.2	33.9	33.5	32.9	33.1	32.8	32.5	31.9

Line No.	Departure from mean surface density, percent, night											
	-10.0	-9.0	-8.0	-7.0	-6.0	-5.0	-4.0	-3.0	-2.0	-1.0	0	+1.0
1	−09.7	−08.7	−07.7	−06.8	−05.9	−05.0	−04.1	−03.2	−02.1	−01.2	−00.3	00.7
2	−09.9	−08.8	−07.9	−07.1	−06.2	−05.3	−04.6	−03.7	−02.7	−01.7	−00.8	00.1
3	−09.9	−08.8	−08.1	−07.3	−06.5	−05.7	−04.9	−04.0	−03.1	−02.2	−01.3	−00.4
4	−10.1	−09.0	−08.3	−07.5	−06.7	−05.9	−05.2	−04.4	−03.5	−02.6	−01.8	−01.0
5	−10.1	−09.0	−08.2	−07.5	−06.8	−06.1	−05.3	−04.6	−03.8	−03.0	−02.3	−01.5
6	−09.9	−08.8	−08.1	−07.4	−06.8	−06.2	−05.5	−04.7	−04.1	−03.5	−02.8	−02.1
7	−09.4	−08.6	−07.9	−07.3	−06.7	−06.1	−05.5	−04.9	−04.3	−03.7	−03.1	−02.6
8	−08.9	−08.0	−07.5	−07.0	−06.4	−05.9	−05.3	−04.7	−04.2	−03.6	−03.2	−02.7
9	−08.1	−07.4	−06.9	−06.4	−05.8	−05.3	−04.8	−04.3	−03.9	−03.4	−03.0	−02.6
10	−06.5	−06.0	−05.5	−05.1	−04.6	−04.2	−03.8	−03.4	−02.9	−02.5	−02.2	−01.9
11	−03.2	−02.7	−02.2	−01.8	−01.5	−01.1	−00.7	−00.5	00.1	00.2	00.5	00.7
12	00.1	00.6	01.0	01.4	01.7	01.9	02.2	02.3	02.7	02.9	03.0	02.9
13	11.0	11.5	12.0	12.1	12.3	12.5	12.5	12.4	12.7	12.7	12.5	12.3
14	22.3	22.8	23.1	23.1	23.2	23.1	22.8	22.6	22.7	22.6	22.3	21.9
15	34.2	34.5	34.7	34.4	34.4	34.2	33.8	33.2	33.2	33.2	32.8	32.2

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 1—Continued*

Line No.	Departures from mean surface density, percent, afternoon												
	0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0	+12.0
1	00.1	01.1	02.1	03.1	04.1	04.9	05.8	06.8	07.7	08.7	09.6	10.5	11.5
2	00.0	00.9	01.9	02.8	03.8	04.5	05.4	06.3	07.2	08.1	09.0	09.8	10.7
3	−00.2	00.8	01.6	02.5	03.4	04.1	04.9	05.7	06.5	07.4	08.1	09.0	09.9
4	−00.4	00.5	01.3	02.0	02.7	03.5	04.3	05.0	05.7	06.5	07.2	07.9	08.8
4	−00.7	00.1	00.7	01.4	02.1	02.8	03.5	04.1	04.6	05.4	06.0	06.6	07.2
6	−01.3	−00.6	−00.1	00.6	01.1	01.8	02.4	02.9	03.4	04.0	04.5	05.1	05.6
7	−01.8	−01.1	−00.7	00.0	00.5	01.0	01.6	02.0	02.5	03.0	03.5	03.8	04.3
8	−01.9	−01.4	−01.0	−00.4	00.0	00.6	01.1	01.4	01.9	02.3	02.8	03.1	03.5
9	−01.8	−01.3	−00.9	−00.5	−00.1	00.4	00.8	01.0	01.5	01.8	02.1	02.4	02.6
10	−01.1	−00.8	−00.4	−00.1	00.3	00.6	01.0	01.1	01.4	01.7	01.8	02.0	02.2
11	01.6	01.8	02.0	02.1	02.5	02.7	02.9	02.8	03.0	03.3	03.3	03.3	03.2
12	03.9	04.0	04.0	04.0	04.2	04.3	04.2	04.0	04.1	04.3	04.1	03.8	03.5
13	13.5	13.5	13.3	13.0	13.1	13.1	12.9	12.5	12.5	12.7	12.3	12.0	11.6
14	23.1	23.0	22.6	22.3	22.3	22.2	21.9	21.4	21.5	21.5	21.1	20.7	20.2
15	33.5	33.2	32.8	32.3	32.3	32.2	31.8	31.0	31.2	31.2	30.7	30.3	29.7

Line No.	Departures from mean surface density, percent, transition										
	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0	+12.0
1	02.0	03.0	04.0	04.8	05.8	06.7	07.7	08.6	09.5	10.4	11.3
2	01.7	02.6	03.5	04.4	05.3	06.2	07.0	07.9	08.8	09.6	10.5
3	01.2	02.1	03.0	03.7	04.5	05.5	06.2	06.9	07.9	08.6	09.5
4	00.7	01.6	02.2	03.0	03.8	04.6	05.3	06.0	06.7	07.5	08.3
5	00.2	00.9	01.6	02.3	03.1	03.7	04.2	04.9	05.5	06.3	06.9
6	−00.5	00.1	00.6	01.3	01.9	02.5	03.0	03.5	04.4	04.7	05.3
7	−01.1	−00.5	00.0	00.6	01.1	01.6	02.0	02.5	03.7	03.7	04.0
8	−01.4	−00.9	−00.4	00.1	00.7	01.1	01.5	01.9	02.3	02.9	03.2
9	−01.3	−00.9	−00.4	−00.1	00.5	00.8	01.1	01.5	01.8	02.3	02.5
10	−00.7	−00.4	00.0	00.2	00.7	00.9	01.1	01.4	01.7	02.1	02.1
11	01.8	02.1	02.7	02.4	02.8	03.0	02.9	03.1	03.2	03.6	03.5
12	04.0	04.1	04.2	04.1	04.5	04.5	04.2	04.1	04.3	04.5	04.2
13	13.6	13.5	13.4	13.1	13.3	13.1	12.8	12.5	12.7	12.7	12.3
★14	23.1	23.0	22.7	22.3	22.4	22.2	21.8	21.4	21.5	21.5	21.0
15	33.5	33.2	32.9	32.3	32.3	32.0	31.6	31.2	31.2	31.2	30.6

Line No.	Departure from mean surface density, percent, night												
	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0	+12.0	+13.0	+14.0
1	01.9	02.9	03.9	04.7	05.7	06.6	07.6	08.5	09.4	10.3	11.1	12.0	12.8
2	01.4	02.4	03.3	04.2	05.0	05.9	06.8	07.6	08.5	09.3	10.1	10.9	11.6
3	00.8	01.7	02.5	03.4	04.2	05.0	05.9	06.6	07.4	08.2	08.9	09.7	10.4
4	00.1	01.0	01.8	02.5	03.3	04.1	04.9	05.5	06.1	06.9	07.6	08.3	09.0
5	−00.4	00.4	01.0	01.7	02.5	03.2	03.8	04.4	05.0	05.7	06.3	06.8	07.3
6	−01.1	−00.4	00.1	00.7	01.3	02.0	02.6	03.0	03.6	04.1	04.7	05.1	05.6
7	−01.7	−01.1	−00.6	00.0	00.6	01.0	01.6	02.2	02.6	03.1	03.5	03.8	04.3
8	−01.9	−01.4	−00.9	−00.4	00.1	00.6	01.1	01.6	01.9	02.4	02.8	03.1	03.5
9	−01.8	−01.3	−00.9	−00.5	−00.1	00.4	00.8	01.2	01.5	01.9	02.1	02.4	02.6
10	−01.1	−00.8	−00.4	−00.1	00.3	00.6	01.0	01.3	01.4	01.7	01.8	02.0	02.2
11	01.5	01.8	02.0	02.1	02.5	02.7	02.9	03.0	03.1	03.3	03.3	03.3	03.3
12	03.9	04.0	04.1	04.0	04.2	04.3	04.2	04.2	04.2	04.3	04.1	03.9	03.6
13	13.6	13.5	13.4	13.1	13.3	13.3	13.0	12.8	12.8	12.8	12.4	12.1	11.7
14	23.2	23.1	22.7	22.4	22.4	22.3	22.0	21.6	21.6	21.6	21.2	20.9	20.3
15	33.8	33.4	33.1	32.5	32.5	32.3	31.9	31.5	31.3	31.3	30.9	30.4	29.9

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures From Mean Surface Density (Percent), Type 3 Message, Region 2*

Line No.	Departures from mean surface density, percent, afternoon														
	−13.0	−12.0	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	0	+1.0
1	−12.4	−11.5	−10.5	−09.4	−08.5	−07.5	−06.5	−05.6	−04.6	−03.7	−02.7	−01.6	−00.8	00.1	01.0
2	−12.3	−11.3	−10.2	−09.3	−08.4	−07.4	−06.5	−05.5	−04.6	−03.7	−02.7	−01.7	−00.9	−00.1	00.8
3	−11.9	−11.0	−09.9	−09.1	−08.1	−07.2	−06.3	−05.3	−04.6	−03.6	−02.7	−01.8	−01.0	−00.3	00.5
4	−11.7	−10.8	−09.8	−08.9	−08.0	−07.1	−06.2	−05.4	−04.6	−03.8	−02.9	−02.1	−01.5	−00.7	00.0
5	−11.5	−10.6	−09.7	−08.8	−07.9	−07.0	−06.3	−05.4	−04.6	−03.9	−03.1	−02.5	−01.8	−01.1	−00.6
6	−11.1	−10.2	−09.3	−08.5	−07.6	−06.8	−06.1	−05.4	−04.7	−04.0	−03.4	−02.8	−02.2	−01.6	−01.1
7	−10.6	−09.7	−08.9	−08.1	−07.3	−06.6	−05.9	−05.3	−04.7	−04.1	−03.4	−02.9	−02.5	−02.0	−01.5
8	−09.9	−09.1	−08.3	−07.5	−06.9	−06.3	−05.6	−05.0	−04.4	−03.9	−03.4	−03.0	−02.5	−02.0	−01.6
9	−08.9	−08.3	−07.5	−06.8	−06.1	−05.6	−05.0	−04.5	−04.0	−03.5	−03.1	−02.7	−02.3	−02.0	−01.7
10	−07.2	−06.5	−05.9	−05.4	−04.8	−04.3	−03.8	−03.4	−03.0	−02.5	−02.2	−01.9	−01.7	−01.4	−01.2
11	−03.8	−03.1	−02.5	−01.9	−01.5	−01.1	−00.7	−00.4	00.0	00.3	00.5	00.6	00.7	00.9	00.9
12	−00.3	00.3	00.7	01.3	01.7	02.0	02.2	02.3	02.7	02.9	02.9	02.9	02.8	02.7	02.4
13	10.8	11.3	11.7	12.0	12.3	12.4	12.3	12.3	12.4	12.5	12.3	12.1	11.8	11.5	11.1
14	22.2	22.6	22.8	22.8	23.0	22.8	22.6	22.2	22.3	22.2	21.9	21.4	21.0	20.6	20.2
15	33.7	34.1	34.2	34.1	34.1	33.9	33.4	32.8	32.8	32.6	32.2	31.5	31.0	30.4	30.0

Line No.	Departures from mean surface density, percent, transition													
	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	0	+1.0	+2.0	+3.0
1	−09.7	−08.7	−07.7	−06.8	−05.9	−04.9	−04.0	−03.0	−02.0	−01.1	−00.2	00.8	01.7	02.6
2	−09.9	−08.9	−07.9	−07.0	−06.1	−05.2	−04.2	−03.2	−02.3	−01.4	−00.5	00.3	01.2	02.0
3	−09.8	−08.9	−08.0	−07.1	−06.1	−05.3	−04.4	−03.5	−02.6	−01.7	−00.9	−00.1	00.7	01.4
4	−09.8	−09.0	−08.1	−07.2	−06.3	−05.5	−04.7	−03.7	−02.9	−02.1	−01.4	−00.7	00.1	00.7
5	−09.8	−09.0	−08.0	−07.1	−06.4	−05.6	−04.8	−03.9	−03.1	−02.5	−01.8	−01.2	−00.6	00.0
6	−09.6	−08.8	−07.9	−07.0	−06.3	−05.6	−04.9	−04.1	−03.5	−02.9	−02.3	−01.7	−01.2	−00.7
7	−09.2	−08.4	−07.6	−06.9	−06.1	−05.6	−04.9	−04.2	−03.6	−03.1	−02.6	−02.1	−01.6	−01.2
8	−08.5	−07.9	−07.1	−06.5	−05.8	−05.2	−04.6	−04.0	−03.6	−03.1	−02.6	−02.2	−01.7	−01.3
9	−07.8	−07.1	−06.4	−05.8	−05.3	−04.7	−04.2	−03.7	−03.3	−02.7	−02.4	−02.0	−01.7	−01.4
10	−06.1	−05.6	−05.0	−04.5	−04.0	−03.5	−03.1	−02.7	−02.3	−01.9	−01.7	−01.4	−01.1	−01.0
11	−02.7	−02.2	−01.7	−01.3	−00.8	−00.4	−00.1	00.1	00.4	00.8	00.9	01.0	01.1	01.1
12	00.6	01.2	01.5	01.8	02.2	02.4	02.7	02.7	03.3	03.2	03.1	03.1	02.9	02.8
13	11.6	12.0	12.2	12.3	12.5	12.7	12.5	12.4	12.5	12.7	12.4	12.1	11.8	11.5
14	22.8	23.1	23.0	22.8	22.8	22.8	22.6	22.2	22.2	22.2	21.8	21.4	21.0	20.6
15	34.2	34.4	34.2	33.9	33.8	33.5	33.1	32.5	32.5	32.3	31.9	31.3	30.9	30.3

Line No.	Departure from mean surface density, percent, night														
	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	0	+1.0	+2.0	+3.0	+4.0
1	−09.8	−08.9	−07.9	−07.0	−06.2	−05.2	−04.3	−03.3	−02.3	−01.3	−00.5	00.5	01.4	02.3	03.3
2	−10.2	−09.3	−08.4	−07.4	−06.5	−05.5	−04.8	−03.8	−02.8	−01.8	−01.0	−00.2	00.7	01.6	02.4
3	−10.4	−09.6	−08.7	−07.8	−06.8	−05.9	−05.1	−04.2	−03.3	−02.4	−01.6	−00.8	00.1	00.8	01.6
4	−10.7	−09.8	−09.0	−08.1	−07.2	−06.3	−05.5	−04.6	−03.7	−02.9	−02.1	−01.4	−00.6	00.1	00.9
5	−10.7	−09.9	−09.0	−08.1	−07.2	−06.4	−05.6	−04.8	−04.0	−03.2	−02.6	−01.9	−01.2	−00.6	00.0
6	−10.6	−09.8	−08.8	−08.0	−07.1	−06.5	−05.7	−05.0	−04.2	−03.6	−03.0	−02.4	−01.8	−01.2	−00.7
7	−10.2	−09.3	−08.5	−07.7	−07.0	−06.3	−05.7	−05.0	−04.3	−03.7	−03.1	−02.6	−02.2	−01.7	−01.2
8	−09.5	−08.8	−08.0	−07.2	−06.7	−06.0	−05.4	−04.7	−04.1	−03.6	−03.2	−02.7	−02.2	−01.8	−01.3
9	−08.6	−08.0	−07.2	−06.5	−05.9	−05.4	−04.8	−04.3	−03.8	−03.3	−02.9	−02.5	−02.1	−01.8	−01.5
10	−07.0	−06.3	−05.7	−05.2	−04.6	−04.1	−03.6	−03.2	−02.8	−02.3	−02.0	−01.7	−01.5	−01.3	−01.0
11	−03.6	−02.9	−02.3	−01.8	−01.3	−00.9	−00.6	−00.3	00.1	00.4	00.6	00.8	00.9	01.0	01.1
12	−00.1	00.4	01.0	01.4	01.8	02.1	02.3	02.4	02.9	03.0	03.0	03.0	02.9	02.8	02.5
13	10.9	11.4	11.8	12.1	12.4	12.5	12.4	12.4	12.7	12.7	12.4	12.2	12.0	11.6	11.3
14	22.3	22.7	23.0	23.0	23.1	23.0	22.7	22.3	22.4	22.3	21.9	21.5	21.1	20.7	20.3
15	33.8	34.2	34.4	34.2	34.1	33.9	33.5	32.9	32.9	32.8	32.2	31.6	31.2	30.4	30.2

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 2—Continued*

Line No.	Departures from mean surface density, percent, afternoon														
	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0	+12.0	+13.0	+14.0	+15.0	+16.0
1	02.0	03.0	04.0	04.7	05.7	06.6	07.5	08.5	09.4	10.3	11.2	12.1	13.1	13.9	14.8
2	01.7	02.7	03.5	04.3	05.2	06.0	06.7	07.6	08.6	09.4	10.2	11.0	12.0	12.7	13.5
3	01.4	02.2	03.0	03.6	04.4	05.1	05.7	06.5	07.4	08.1	08.9	09.7	10.7	11.3	12.0
4	00.9	01.6	02.2	02.8	03.5	04.1	04.7	05.3	06.1	06.8	07.6	08.3	09.3	09.9	10.5
5	00.4	01.0	01.5	02.0	02.6	03.2	03.7	04.2	04.9	05.6	06.3	06.9	07.7	08.0	08.7
6	−00.3	00.2	00.6	01.1	01.6	02.1	02.5	03.0	03.6	04.2	04.8	05.4	06.0	06.4	07.0
7	−00.8	−00.3	00.0	00.5	00.9	01.3	01.7	02.1	02.7	03.3	03.8	04.2	04.8	05.3	05.8
8	−01.0	−00.6	−00.2	00.1	00.5	00.9	01.2	01.6	02.2	02.7	03.2	03.5	04.1	04.6	05.1
9	−00.8	−00.5	−00.2	00.0	00.4	00.7	00.9	01.3	01.7	02.2	02.5	02.9	03.3	03.6	04.0
10	−00.3	−00.1	00.2	00.3	00.6	00.9	01.1	01.2	01.6	01.9	02.2	02.4	02.6	02.8	03.0
11	02.2	02.4	02.5	02.5	02.7	02.9	02.9	02.9	03.2	03.4	03.5	03.6	03.7	03.6	03.7
12	04.2	04.3	04.3	04.1	04.3	04.3	04.1	04.0	04.3	04.5	04.3	04.2	04.2	04.0	04.0
13	13.5	13.5	13.3	13.0	13.1	13.0	12.8	12.5	12.8	12.9	12.7	12.5	12.3	12.1	12.1
14	22.8	22.7	22.4	22.0	22.2	22.0	21.6	21.4	21.6	21.8	21.5	21.2	21.0	20.9	20.6
15	32.9	32.6	32.3	32.0	32.0	32.0	31.5	31.2	31.5	31.6	31.3	31.0	30.9	30.4	30.4

Line No.	Departures from mean surface density, percent, transition											
	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0	+12.0	+13.0	+14.0	+15.0	+16.0
1	03.9	04.8	05.6	06.5	07.5	08.5	09.3	10.0	11.1	12.0	12.9	13.7	14.5
2	03.3	04.1	04.9	05.7	06.6	07.6	08.3	09.1	10.0	10.8	11.7	12.3	13.0
3	02.5	03.4	04.1	04.8	05.5	06.3	07.0	07.7	08.5	09.3	10.1	10.7	11.4
4	01.8	02.4	03.0	03.7	04.3	05.0	05.6	06.2	07.1	07.8	08.6	09.2	09.9
5	01.1	01.6	02.2	02.7	03.3	03.9	04.4	04.9	05.7	06.5	07.1	07.6	08.1
6	00.1	00.7	01.2	01.6	02.1	02.7	03.1	03.5	04.3	04.8	05.5	06.0	06.4
7	−00.4	00.1	00.5	00.9	01.3	01.8	02.2	02.7	03.3	03.8	04.3	04.8	05.2
8	−00.6	−00.2	00.1	00.5	00.9	01.3	01.7	02.1	02.7	03.1	03.6	04.0	04.5
9	−00.5	−00.2	00.1	00.3	00.7	01.0	01.3	01.6	02.2	02.6	03.0	03.3	03.6
10	00.0	00.1	00.4	00.6	00.9	01.1	01.3	01.5	01.9	02.3	02.5	02.7	02.8
11	02.3	02.5	02.7	02.8	03.0	03.1	03.1	03.1	03.5	03.8	03.8	03.9	03.9
12	04.5	04.5	04.5	04.3	04.3	04.6	04.3	04.1	04.6	04.7	04.7	04.6	04.5
13	13.6	13.6	13.4	13.0	13.1	13.1	12.8	12.5	12.9	13.1	12.8	12.7	12.5
14	22.8	22.7	22.4	22.0	22.2	22.0	21.8	21.4	21.8	21.9	21.6	21.4	21.1
15	32.9	32.8	32.3	32.0	32.0	32.0	31.6	31.3	31.6	31.6	31.5	31.2	30.9

Line No.	Departure from mean surface density, percent, night														
	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0	+12.0	+13.0	+14.0	+15.0	+16.0	+17.0	+18.0	+19.0
1	04.6	05.6	06.4	07.3	08.2	09.2	09.9	10.8	11.8	12.7	13.5	14.2	14.8	15.5	16.2
2	03.9	04.7	05.6	06.4	07.3	08.2	08.9	09.5	10.4	11.3	11.9	12.5	13.1	13.7	14.1
3	03.0	03.7	04.5	05.2	06.0	06.7	07.3	07.9	08.7	09.5	10.1	10.6	11.3	11.8	12.4
4	02.0	02.7	03.3	03.9	04.6	05.3	05.8	06.3	07.1	07.8	08.4	09.0	09.7	10.2	10.8
5	01.2	01.8	02.4	02.8	03.5	04.1	04.4	04.9	05.7	06.4	06.9	07.4	07.8	08.4	08.9
6	00.2	00.7	01.2	01.6	02.2	02.7	03.0	03.5	04.1	04.7	05.3	05.7	06.2	06.6	07.2
7	−00.4	00.1	00.5	00.8	01.3	01.7	02.1	02.6	03.1	03.7	04.1	04.5	05.0	05.4	05.9
8	−00.7	−00.2	00.0	00.4	00.8	01.3	01.6	02.0	02.5	03.0	03.4	03.8	04.3	04.7	05.2
9	−00.5	−00.2	00.1	00.3	00.7	01.0	01.3	01.5	02.0	02.5	02.8	03.1	03.4	03.7	04.1
10	−00.1	−00.1	00.4	00.5	00.8	01.1	01.2	01.4	01.8	02.1	02.3	02.5	02.6	02.9	03.1
11	02.3	02.6	02.7	02.7	02.9	03.1	03.0	03.1	03.4	03.6	03.7	03.7	03.7	03.7	03.8
12	04.5	04.5	04.5	04.3	04.5	04.6	04.3	04.1	04.5	04.7	04.6	04.3	04.3	04.1	04.0
13	13.7	13.6	13.4	13.1	13.3	13.1	12.9	12.7	13.0	13.0	12.8	12.5	12.4	12.2	12.1
14	23.0	22.8	22.6	22.2	22.3	22.2	21.8	21.5	21.8	21.8	21.6	21.2	21.0	20.9	20.6
15	33.1	32.8	32.5	32.2	32.2	32.2	31.6	31.3	31.6	31.6	31.5	31.0	30.9	30.6	30.4

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 3*

Line No.	Departures from mean surface density, percent, afternoon											
	−14.0	−13.0	−12.0	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0
1	−13.4	−12.4	−11.5	−10.4	−09.4	−08.4	−07.4	−06.5	−05.5	−04.5	−03.6	−02.6
2	−13.3	−12.3	−11.2	−10.2	−09.3	−08.3	−07.3	−06.3	−05.4	−04.5	−03.6	−02.6
3	−13.0	−12.0	−10.9	−09.9	−09.0	−08.1	−07.0	−06.1	−05.3	−04.4	−03.5	−02.6
4	−12.8	−11.8	−10.7	−09.7	−08.9	−07.9	−06.9	−06.0	−05.2	−04.3	−03.5	−02 7
5	−12.6	−11.5	−10.5	−09.6	−08.7	−07.8	−06.7	−05.9	−05.2	−04.3	−03.5	−02.8
6	−11.9	−10.9	−10.1	−09.1	−08.3	−07.4	−06.6	−05.8	−05.0	−04.2	−03.6	−03.0
7	−11.2	−10.3	−09.4	−08.7	−07.8	−07.0	−06.2	−05.6	−04.8	−04.2	−03.6	−03.0
8	−10.3	−09.6	−08.7	−08.0	−07.2	−06.6	−05.8	−05.2	−04.5	−03.9	−03.4	−03.0
9	−09.4	−08.6	−07.9	−07.2	−06.5	−05.8	−05.2	−04.6	−04.1	−03.5	−03.0	−02.6
10	−07.5	−06.9	−06.2	−05.7	−05.1	−04.5	−04.0	−03.4	−02.9	−02.4	−02.1	−01.8
11	−04.0	−03.4	−02.7	−02.2	−01.6	−01.2	−00.7	−00.4	00.1	00.4	00.6	00.8
12	−00.3	00.2	00.7	01.2	01.6	01.9	02.2	02.3	02.7	03.0	03.0	03.0
13	10.9	11.3	11.7	11.8	12.2	12.3	12.3	12.2	12.4	12.7	12.5	12.3
14	22.7	22.7	22.8	22.7	22.8	22.8	22.6	22.3	22.4	22.4	22.2	21.9
15	34.7	34.5	34.4	34.1	33.9	33.9	33.4	32.9	33.1	33.1	32.5	32.2

Line No.	Departures from mean surface density, percent, transition										
	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0
1	−10.7	−09.7	−08.7	−07.7	−06.7	−05.8	−04.8	−03.9	−02.9	−01.9	−01.0
2	−10.8	−09.9	−08.9	−07.9	−06.9	−05.9	−05.0	−04.1	−03.2	−02.2	−01.3
3	−10.8	−09.8	−08.9	−07.8	−06.9	−05.9	−05.1	−04.1	−03.3	−02.4	−01.6
4	−10.7	−09.8	−08.9	−07.8	−06.9	−06.0	−05.1	−04.3	−03.4	−02.7	−01.9
5	−10.7	−09.8	−08.7	−07.7	−06.8	−06.0	−05.1	−04.3	−03.5	−02.8	−02.2
6	−10.1	−09.4	−08.3	−07.5	−06.7	−05.8	−05.0	−04.3	−03.6	−03.0	−02.3
7	−09.6	−08.9	−07.9	−07.1	−06.4	−05.7	−04.9	−04.3	−03.6	−03.0	−02.5
8	−08.9	−08.1	−07.3	−06.7	−06.0	−05.3	−04.6	−04.0	−03.5	−02.9	−02.4
9	−08.1	−07.4	−06.6	−05.9	−05.3	−04.7	−04.2	−03.6	−03.1	−02.6	−02.1
10	−06.3	−05.7	−05.2	−04.6	−04.0	−03.4	−03.0	−02.6	−02.1	−01.7	−01.4
11	−02.9	−02.3	−01.7	−01.3	−00.8	−00.3	−00.1	00.2	00.6	01.0	01.1
12	00.7	01.2	01.5	01.8	02.2	02.5	02.8	02.9	03.2	03.3	03.3
13	11.7	12.5	12.2	12.3	12.5	12.7	12.5	12.4	12.7	12.8	12.7
14	22.8	23.1	22.8	22.8	23.0	22.8	22.6	22.2	22.4	22.4	22.2
15	34.8	34.5	34.2	33.9	33.9	33.7	33.2	32.6	32.9	32.9	32.5

Line No.	Departure from mean surface density, percent, night											
	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	0
1	−11.0	−10.0	−09.0	−08.0	−07.0	−06.1	−05.2	−04.2	−03.2	−02.2	−01.2	−00.4
2	−11.3	−10.3	−09.4	−08.4	−07.4	−06.4	−05.4	−04.5	−03.6	−02.7	−01.7	−00.9
3	−11.5	−10.5	−09.6	−08.6	−07.6	−06.6	−05.7	−04.8	−03.9	−03.0	−02.1	−01.3
4	−11.6	−10.7	−09.7	−08.8	−07.8	−06.8	−05.8	−05.1	−04.2	−03.3	−02.5	−01.7
5	−11.6	−10.6	−09.6	−08.7	−07.7	−06.8	−05.9	−05.1	−04.2	−03.5	−02.8	−02.1
6	−11.1	−10.2	−09.2	−08.4	−07.5	−06.7	−05.8	−05.0	−04.3	−03.6	−02.9	−02.4
7	−10.5	−09.7	−08.8	−08.0	−07.2	−06.4	−05.7	−05.0	−04.3	−03.6	−03.0	−02.6
8	−09.8	−09.0	−08.2	−07.4	−06.7	−06.1	−05.3	−04.7	−04.0	−03.5	−02.9	−02.5
9	−08.8	−08.2	−07.4	−06.6	−05.9	−05.3	−04.7	−04.2	−03.6	−03.1	−02.6	−02.2
10	−07.1	−06.4	−05.8	−05.2	−04.6	−04.0	−03.5	−03.1	−02.5	−02.1	−01.7	−01.4
11	−03.6	−02.9	−02.3	−01.8	−01.3	−00.8	−00.4	−00.1	00.3	00.6	00.9	01.0
12	00.1	00.6	01.0	01.5	01.8	02.2	02.4	02.7	02.9	03.2	03.2	03.2
13	11.3	11.6	11.8	12.1	12.4	12.5	12.5	12.4	12.7	12.8	12.7	12.4
14	22.8	23.0	23.0	22.8	22.8	22.8	22.6	22.3	22.4	22.4	22.2	21.9
15	34.8	34.7	34.4	34.1	34.1	33.9	33.4	32.9	33.1	33.1	32.5	32.2

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 3—Continued*

Line No.	Departures from mean surface density, percent, afternoon												
	−2.0	−1.0	0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0
1	−01.7	−00.8	00.1	01.1	02.1	03.0	03.9	04.7	05.7	06.7	07.5	08.4	09.4
2	−01.8	−00.9	−00.1	00.8	01.8	02.6	03.5	04.3	05.1	06.0	06.8	07.6	08.5
3	−01.8	−01.0	−00.3	00.6	01.4	02.1	02.9	03.5	04.3	05.2	05.9	06.6	07.4
4	−02.0	−01.3	−00.5	00.2	00.9	01.6	02.2	02.8	03.5	04.3	04.9	05.6	06.2
5	−02.2	−01.5	−00.8	−00.2	00.4	01.0	01.5	02.0	02.7	03.4	03.9	04.5	05.0
6	−02.3	−01.7	−01.2	−00.7	−00.3	00.3	00.8	01.2	01.8	02.4	02.9	03.3	03.8
7	−02.5	−02.0	−01.4	−01.0	−00.6	−00.1	00.3	00.6	01.1	01.6	02.0	02.5	02.9
8	−02.4	−01.9	−01.4	−01.1	−00.7	−00.3	00.0	00.3	00.8	01.2	01.6	02.0	02.4
9	−02.0	−01.6	−01.2	−00.9	−00.5	−00.2	00.0	00.2	00.6	01.0	01.2	01.3	01.5
10	−01.1	−00.8	−00.5	−00.2	00.0	00.3	00.4	00.5	00.8	00.9	00.9	00.9	00.9
11	01.8	01.9	02.1	02.2	02.5	02.6	02.5	02.4	02.6	02.7	02.6	02.5	02.3
12	04.0	04.1	04.2	04.1	04.2	04.3	04.1	03.8	04.0	04.0	03.8	03.6	03.2
13	13.7	13.6	13.6	13.4	13.5	13.4	13.0	12.7	12.8	12.8	12.4	12.1	11.7
14	23.5	23.3	23.1	22.8	22.8	22.8	22.3	21.9	22.0	21.9	21.5	21.0	20.6
15	33.9	33.7	33.4	33.1	33.1	32.9	32.5	32.0	32.0	31.9	31.5	31.0	30.4

Line No.	Departures from mean surface density, percent, transition										
	0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0
1	−00.1	00.9	01.9	02.8	03.8	04.5	05.5	06.3	07.4	08.3	09.3
2	−00.5	00.5	01.4	02.2	03.2	04.0	04.7	05.5	06.4	07.3	08.2
3	−00.8	00.1	00.9	01.6	02.4	03.2	03.8	04.6	05.4	06.2	07.0
4	−01.2	−00.4	00.4	01.0	01.7	02.4	03.0	03.6	04.4	05.1	05.8
5	−01.4	−00.7	−00.1	00.5	01.1	01.7	02.2	02.8	03.4	04.2	04.6
6	−01.8	−01.2	−00.6	−00.2	00.3	00.9	01.3	01.8	02.4	03.0	03.4
7	−01.9	−01.5	−01.0	−00.6	00.0	00.4	00.7	01.1	01.6	02.1	02.5
8	−01.9	−01.5	−01.1	−00.7	−00.3	00.0	00.4	00.8	01.2	01.6	02.0
9	−01.6	−01.2	−00.9	−00.5	−00.2	00.1	00.3	00.5	01.0	01.2	01.4
10	−00.8	−00.5	−00.2	00.0	00.3	00.5	00.6	00.7	00.9	01.1	01.1
11	02.0	02.2	02.4	02.4	02.7	02.7	02.6	02.5	02.7	02.8	02.7
12	04.2	04.3	04.3	04.2	04.5	04.3	04.1	03.8	04.0	04.1	03.8
13	13.7	13.8	13.6	13.4	13.5	13.4	13.0	12.7	12.8	12.8	12.4
14	23.5	23.3	23.1	23.0	22.8	22.7	22.3	21.9	21.9	21.8	21.4
15	33.9	33.8	33.5	33.1	32.9	32.9	32.3	31.9	31.9	31.9	31.3

Line No.	Departure from mean surface density, percent, night											
	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0	+12.0
1	00.7	01.7	02.6	03.6	04.3	05.3	06.2	07.0	08.1	09.1	09.7	10.6
2	00.1	01.0	01.9	02.7	03.6	04.4	05.2	05.9	06.9	07.8	08.5	09.3
3	−00.5	00.4	01.1	01.9	02.8	03.5	04.2	04.8	05.7	06.5	07.1	07.8
4	−01.0	−00.2	00.5	01.2	01.9	02.5	03.2	03.7	04.5	05.2	05.9	06.4
5	−01.3	−00.6	00.0	00.7	01.2	01.7	02.3	02.8	03.5	04.1	04.6	05.2
6	−01.7	−01.1	−00.5	−00.2	00.4	00.9	01.4	01.8	02.4	02.9	03.4	03.9
7	−01.9	−01.4	−00.9	−00.5	−00.1	00.4	00.7	01.1	01.6	02.1	02.6	03.0
8	−01.9	−01.5	−01.0	−00.7	−00.3	00.0	00.4	00.8	01.2	01.6	02.0	02.4
9	−01.6	−01.2	−00.9	−00.5	−00.2	00.0	00.3	00.5	00.9	01.2	01.5	01.7
10	−00.7	−00.5	−00.2	00.0	00.3	00.5	00.6	00.7	00.9	01.1	01.1	01.1
11	02.0	02.2	02.3	02.4	02.7	02.7	02.7	02.5	02.7	02.8	02.7	02.6
12	04.2	04.3	04.5	04.3	04.5	04.5	04.2	03.9	04.1	04.1	03.9	03.6
13	13.8	13.7	13.7	13.4	13.6	13.5	13.1	12.8	12.9	12.8	12.4	12.1
14	23.5	23.3	23.2	23.0	23.0	22.8	22.4	21.9	22.0	21.9	21.5	21.1
15	33.9	33.8	33.5	33.1	33.1	33.1	32.5	31.9	32.0	31.9	31.5	31.0

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 4*

Line No.	Departures from mean surface density, percent, afternoon											
	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	−0	+1.0
1	−09.6	−08.6	−07.6	−06.6	−05.7	−04.7	−03.8	−02.8	−01.8	−01.0	−00.1	00.7
2	−09.7	−08.7	−07.7	−06.7	−05.7	−04.8	−03.9	−03.0	−02.0	−01.2	−00.5	00.1
3	−09.7	−08.7	−07.7	−06.7	−05.7	−04.9	−04.0	−03.1	−02.3	−01.6	−01.0	−00.5
4	−09.7	−08.8	−07.8	−06.8	−05.8	−05.0	−04.2	−03.4	−02.6	−02.0	−01.5	−01.0
5	−09.9	−08.9	−07.9	−06.9	−06.0	−05.1	−04.3	−03.6	−02.9	−02.5	−01.9	−01.5
6	−09.7	−08.8	−07.8	−06.9	−06.1	−05.3	−04.5	−03.8	−03.3	−02.9	−02.4	−02.0
7	−09.2	−08.5	−07.6	−06.7	−06.0	−05.3	−04.6	−04.0	−03.4	−03.0	−02.6	−02.4
8	−08.6	−07.8	−07.1	−06.4	−05.7	−05.0	−04.3	−03.8	−03.4	−03.0	−02.7	−02.4
9	−07.8	−07.1	−06.4	−05.7	−05.1	−04.4	−03.9	−03.4	−03.0	−02.7	−02.5	−02.2
10	−06.2	−05.6	−05.0	−04.4	−03.8	−03.3	−02.8	−02.3	−02.0	−01.8	−01.6	−01.4
11	−02.6	−02.1	−01.6	−01.1	−00.6	−00.1	00.3	00.6	00.9	01.1	01.2	01.3
12	01.0	01.3	01.7	02.1	02.5	02.9	03.2	03.4	03.7	03.8	03.8	03.8
13	11.7	12.0	12.2	12.4	12.9	13.1	13.3	13.4	13.6	13.7	13.7	13.6
14	22.6	22.8	23.0	23.1	23.3	23.5	23.3	23.3	23.6	23.7	23.6	23.5
15	34.1	34.2	34.2	34.2	34.4	34.4	34.2	33.9	34.2	34.5	34.1	33.9

Line No.	Departures from mean surface density, percent, transition									
	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	0	+1.0
1	−07.7	−06.7	−05.8	−04.8	−03.8	−02.8	−01.9	−01.2	−00.2	00.6
2	−07.9	−06.9	−05.9	−05.0	−04.0	−03.2	−02.3	−01.5	−00.7	−00.1
3	−08.1	−07.1	−06.1	−05.2	−04.3	−03.4	−02.7	−02.0	−01.3	−00.6
4	−08.4	−07.4	−06.4	−05.5	−04.7	−03.9	−03.1	−02.4	−01.8	−01.0
5	−08.6	−07.6	−06.6	−05.7	−04.9	−04.1	−03.4	−02.8	−02.3	−01.8
6	−08.6	−07.6	−06.8	−05.9	−05.1	−04.3	−03.7	−03.3	−02.7	−02.3
7	−08.3	−07.5	−06.7	−05.8	−05.2	−04.5	−03.8	−03.4	−02.9	−02.6
8	−07.7	−07.0	−06.3	−05.6	−04.8	−04.3	−03.7	−03.3	−03.0	−02.6
9	−07.0	−06.3	−05.7	−04.9	−04.3	−03.8	−03.4	−03.0	−02.7	−02.3
10	−05.6	−05.0	−04.4	−03.8	−03.2	−02.6	−02.8	−02.0	−01.7	−01.5
11	−02.1	−01.5	−00.9	−00.5	−00.1	00.4	00.6	00.8	01.1	01.3
12	01.4	01.8	02.3	02.7	03.0	03.3	03.5	03.6	03.8	04.0
13	12.2	12.4	12.7	12.9	13.1	13.6	13.5	13.6	13.7	14.0
14	23.0	23.1	23.3	23.3	23.5	23.7	23.6	23.5	23.7	23.9
15	34.2	34.4	34.5	34.4	34.5	34.5	34.2	34.1	34.4	34.5

Line No.	Departures from mean surface density, percent, night											
	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	0	+1.0	+2.0	+3.0
1	−07.8	−06.8	−05.9	−04.9	−03.9	−02.9	−02.1	−01.2	−00.4	00.5	01.3	02.0
2	−08.1	−07.1	−06.1	−05.2	−04.2	−03.4	−02.6	−01.8	−01.0	−00.4	00.3	00.8
3	−08.4	−07.4	−06.4	−05.5	−04.6	−03.8	−03.1	−02.4	−01.7	−01.0	−00.6	−00.1
4	−08.9	−07.9	−06.9	−06.0	−05.1	−04.3	−03.5	−02.8	−02.2	−01.7	−01.2	−00.7
5	−09.2	−08.2	−07.2	−06.4	−05.4	−04.6	−03.8	−03.2	−02.7	−02.2	−01.7	−01.2
6	−09.3	−08.4	−07.4	−06.6	−05.7	−04.9	−04.1	−03.6	−03.1	−02.7	−02.2	−01.8
7	−09.0	−08.1	−07.3	−06.4	−05.7	−05.0	−04.3	−03.7	−03.2	−02.9	−02.6	−02.3
8	−08.3	−07.6	−06.9	−06.2	−05.4	−04.8	−04.1	−03.6	−03.2	−02.9	−02.6	−02.3
9	−07.6	−06.9	−06.2	−05.5	−04.8	−04.3	−03.7	−03.2	−02.9	−02.6	−02.4	−02.1
10	−06.0	−05.5	−04.9	−04.3	−03.7	−03.1	−02.7	−02.2	−01.9	−01.7	−01.6	−01.4
11	−02.5	−02.0	−01.4	−00.9	−00.5	00.0	00.4	00.7	01.0	01.1	01.2	01.3
12	01.1	01.4	01.9	02.2	02.7	03.0	03.3	03.5	03.8	03.9	03.8	03.8
13	11.8	12.1	12.3	12.5	13.0	13.3	13.4	13.5	13.7	13.8	13.7	13.6
14	22.7	23.0	23.1	23.2	23.5	23.6	23.5	23.3	23.7	23.7	23.6	23.5
15	34.1	34.2	34.4	34.4	34.5	34.4	34.2	33.9	34.4	34.5	34.2	33.9

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 5*

Line No.	Departures from mean surface density, percent, afternoon									
	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0	−2.0	−1.0	0	+1.0
1	−07. 5	−06. 6	−05. 7	−04. 7	−03. 8	−02. 8	−01. 8	−00. 9	00. 0	00. 9
2	−07. 5	−06. 6	−05. 6	−04. 8	−03. 9	−02. 9	−02. 0	−01. 1	−00. 3	00. 5
3	−07. 3	−06. 5	−05. 6	−04. 8	−03. 9	−03. 1	−02. 2	−01. 3	−00. 6	00. 2
4	−07. 3	−06. 4	−05. 6	−04. 9	−04. 1	−03. 3	−02. 4	−01. 6	−01. 0	−00. 2
5	−07. 1	−06. 4	−05. 6	−04. 8	−04. 1	−03. 3	−02. 7	−01. 9	−01. 3	−00. 6
6	−06. 8	−06. 1	−05. 5	−04. 8	−04. 1	−03. 5	−02. 8	−02. 2	−01. 6	−01. 0
7	−06. 5	−05. 8	−05. 3	−04. 7	−04. 1	−03. 5	−02. 9	−02. 4	−01. 9	−01. 4
8	−06. 1	−05. 6	−05. 0	−04. 4	−03. 9	−03. 4	−02. 9	−02. 4	−01. 9	−01. 4
9	−05. 5	−05. 0	−04. 5	−04. 0	−03. 5	−03. 0	−02. 6	−02. 2	−01. 7	−01. 3
10	−04. 2	−03. 8	−03. 4	−03. 0	−02. 6	−02. 1	−01. 8	−01. 5	−01. 1	−00. 8
11	−00. 9	−00. 6	−00. 4	−00. 2	00. 2	00. 4	00. 6	00. 7	01. 1	01. 2
12	02. 1	02. 2	02. 4	02. 4	02. 5	02. 7	02. 5	02. 3	02. 7	02. 8
13	12. 5	12. 4	12. 3	12. 1	12. 0	11. 7	11. 5	11. 1	11. 3	11. 4
14	22. 8	22. 4	22. 2	21. 5	21. 4	21. 1	20. 6	20. 1	20. 2	20. 2
15	33. 7	33. 2	32. 6	31. 9	31. 6	31. 3	30. 6	29. 9	30. 0	29. 9

Line No.	Departures from mean surface density, percent, transition									
	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0	+8.0	+9.0	+10.0	+11.0
1	01. 9	02. 9	03. 7	04. 6	05. 5	06. 3	07. 1	07. 9	08. 9	09. 7
2	01. 5	02. 4	03. 1	03. 8	04. 6	05. 3	06. 0	06. 6	07. 6	08. 3
3	01. 0	01. 8	02. 4	03. 0	03. 5	04. 1	04. 7	05. 2	05. 9	06. 5
4	00. 5	01. 2	01. 7	02. 2	02. 6	03. 1	03. 6	04. 0	04. 6	05. 1
5	00. 1	00. 7	01. 0	01. 5	01. 8	02. 3	02. 7	03. 0	03. 5	03. 9
6	−00. 4	00. 0	00. 3	00. 7	01. 0	01. 4	01. 6	01. 9	02. 3	02. 6
7	−00. 8	−00. 4	−00. 1	00. 2	00. 5	00. 7	00. 9	01. 1	01. 5	01. 8
8	−00. 9	−00. 5	−00. 2	−00. 1	00. 2	00. 4	00. 6	00. 8	01. 1	01. 3
9	−00. 7	−00. 4	−00. 2	00. 0	00. 2	00. 4	00. 5	00. 6	00. 9	01. 1
10	−00. 2	00. 0	00. 4	00. 3	00. 5	00. 7	00. 7	00. 7	01. 0	01. 1
11	02. 1	02. 2	02. 3	02. 2	02. 3	02. 5	02. 3	02. 2	02. 5	02. 6
12	03. 7	03. 7	03. 6	03. 4	03. 6	03. 5	03. 3	03. 2	03. 5	03. 6
13	12. 3	12. 3	12. 1	11. 8	11. 8	11. 8	11. 6	11. 4	11. 6	11. 8
14	21. 2	21. 1	20. 9	20. 5	20. 5	20. 5	20. 1	19. 8	20. 2	20. 3
15	31. 0	30. 7	30. 4	29. 9	30. 0	29. 9	29. 6	29. 3	29. 6	29. 6

Line No.	Departure from mean surface density, percent, night								
	+12.0	+13.0	+14.0	+15.0	+16.0	+17.0	+18.0	+19.0	+20.0
1	11. 0	11. 8	12. 7	13. 5	14. 6	15. 4	16. 3	17. 2	18. 3
2	09. 5	10. 2	11. 0	11. 8	12. 8	13. 7	14. 4	15. 3	16. 4
3	07. 6	08. 2	09. 0	09. 8	10. 8	11. 7	12. 4	13. 3	14. 4
4	06. 0	06. 5	07. 3	08. 1	09. 1	10. 0	10. 8	11. 7	12. 8
5	04. 7	05. 3	06. 0	06. 7	07. 7	08. 5	09. 2	10. 0	11. 1
6	03. 2	03. 8	04. 5	05. 1	06. 0	06. 7	07. 5	08. 2	09. 2
7	02. 3	02. 8	03. 5	04. 0	04. 8	05. 6	06. 3	06. 9	07. 8
8	01. 8	02. 2	02. 8	03. 3	04. 0	04. 8	05. 5	06. 2	06. 9
9	01. 7	02. 0	02. 5	03. 0	03. 8	04. 3	04. 9	05. 5	06. 3
10	01. 8	02. 1	02. 3	02. 7	03. 4	03. 9	04. 4	04. 9	05. 7
11	03. 5	03. 6	03. 8	04. 1	04. 7	05. 2	05. 6	05. 9	06. 8
12	04. 7	04. 7	04. 9	05. 0	05. 4	05. 9	06. 1	06. 4	07. 1
13	13. 0	12. 9	13. 0	13. 1	13. 6	14. 1	14. 2	14. 3	15. 1
14	21. 5	21. 5	21. 6	21. 6	22. 0	22. 6	22. 6	22. 7	23. 5
15	31. 0	31. 0	31. 0	30. 9	31. 5	31. 9	31. 9	32. 3	32. 8

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 6*

Line No.	Departures from mean surface density, percent, afternoon							
	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0
1	−10. 5	−09. 5	−08. 5	−07. 4	−06. 5	−05. 5	−04. 5	−03. 5
2	−10. 2	−09. 4	−08. 3	−07. 3	−06. 3	−05. 3	−04. 4	−03. 3
3	−09. 8	−09. 0	−08. 0	−07. 0	−06. 1	−05. 2	−04. 1	−03. 1
4	−09. 6	−08. 8	−07. 9	−06. 8	−05. 9	−05. 0	−04. 0	−03. 0
5	−09. 5	−08. 7	−07. 7	−06. 7	−05. 9	−04. 9	−03. 9	−03. 0
6	−09. 2	−08. 4	−07. 6	−06. 8	−05. 9	−04. 9	−04. 0	−03. 3
7	−08. 9	−08. 2	−07. 4	−06. 6	−05. 8	−05. 0	−04. 3	−03. 5
8	−08. 3	−07. 7	−07. 1	−06. 4	−05. 7	−04. 9	−04. 3	−03. 6
9	−07. 7	−07. 2	−06. 6	−05. 9	−05. 2	−04. 5	−04. 1	−03. 5
10	−06. 2	−05. 7	−05. 3	−04. 8	−04. 2	−03. 6	−03. 1	−02. 6
11	−03. 0	−02. 6	−02. 1	−01. 6	−01. 1	−00. 6	−00. 1	00. 4
12	00. 1	00. 6	01. 2	01. 6	02. 1	02. 5	02. 9	03. 3
13	11. 3	11. 7	12. 2	12. 5	12. 9	13. 3	13. 5	13. 7
14	23. 0	23. 3	23. 7	23. 9	24. 3	24. 5	24. 7	24. 8
15	35. 4	35. 7	36. 0	36. 1	36. 4	36. 6	36. 6	36. 6

Line No.	Departures from mean surface density, percent, transition					
	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0
1	−08. 5	−07. 5	−06. 5	−05. 6	−04. 6	−03. 6
2	−08. 5	−07. 5	−06. 5	−05. 5	−04. 6	−03. 6
3	−08. 3	−07. 4	−06. 4	−05. 4	−04. 5	−03. 5
4	−08. 2	−07. 3	−06. 4	−05. 5	−04. 5	−03. 5
5	−08. 2	−07. 3	−06. 4	−05. 5	−04. 5	−03. 5
6	−08. 0	−07. 2	−06. 4	−05. 5	−04. 5	−03. 7
7	−07. 9	−07. 1	−06. 3	−05. 6	−04. 7	−03. 9
8	−07. 5	−06. 9	−06. 2	−05. 4	−04. 6	−04. 0
9	−06. 9	−06. 3	−05. 7	−04. 9	−04. 3	−03. 8
10	−05. 6	−05. 2	−04. 6	−04. 0	−03. 4	−02. 8
11	−02. 4	−01. 9	−01. 3	−00. 9	−00. 4	00. 2
12	00. 9	01. 4	01. 8	02. 3	02. 7	03. 2
13	12. 0	12. 3	12. 8	13. 1	13. 5	13. 7
14	23. 7	23. 9	24. 3	24. 4	24. 7	24. 9
15	36. 0	36. 3	36. 4	36. 4	36. 7	37. 0

Line No.	Departure from mean surface density, percent, night						
	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0
1	−08. 6	−07. 6	−06. 6	−05. 7	−04. 7	−03. 7	−02. 7
2	−08. 6	−07. 7	−06. 7	−05. 7	−04. 9	−03. 9	−02. 9
3	−08. 5	−07. 7	−06. 7	−05. 8	−04. 9	−04. 0	−03. 0
4	−08. 6	−07. 7	−06. 8	−05. 9	−05. 0	−04. 1	−03. 1
5	−08. 6	−07. 8	−06. 8	−06. 0	−05. 0	−04. 1	−03. 2
6	−08. 4	−07. 7	−06. 8	−06. 0	−05. 1	−04. 2	−03. 5
7	−08. 3	−07. 6	−06. 8	−06. 0	−05. 2	−04. 4	−03. 7
8	−07. 8	−07. 3	−06. 6	−05. 9	−05. 1	−04. 4	−03. 7
9	−07. 3	−06. 7	−06. 1	−05. 4	−04. 7	−04. 2	−03. 6
10	−05. 9	−05. 5	−04. 9	−04. 4	−03. 8	−03. 2	−02. 8
11	−02. 7	−02. 3	−01. 7	−01. 3	−00. 7	−00. 2	−00. 2
12	00. 5	01. 1	01. 5	01. 9	02. 4	02. 9	03. 2
13	11. 6	12. 1	12. 5	12. 8	13. 3	13. 5	13. 7
14	23. 3	23. 7	24. 0	24. 1	24. 5	24. 8	24. 9
15	35. 7	36. 0	36. 3	36. 3	36. 6	36. 9	36. 9

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departures from Mean Surface Density (Percent), Type 3 Message, Region 7*

Line No.	Departures from mean surface density, percent, afternoon								
	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0
1	−10. 9	−09. 9	−08. 6	−07. 7	−06. 7	−05. 8	−05. 0	−03. 8	−02. 9
2	−10. 9	−10. 1	−09. 1	−07. 9	−06. 7	−05. 7	−05. 0	−03. 8	−02. 9
3	−10. 5	−09. 6	−08. 9	−07. 8	−06. 9	−05. 7	−05. 0	−03. 8	−02. 8
4	−10. 0	−09. 3	−08. 6	−07. 7	−06. 7	−05. 8	−05. 1	−04. 0	−03. 0
5	−09. 8	−09. 0	−08. 4	−07. 5	−06. 6	−06. 0	−05. 1	−04. 1	−03. 2
6	−08. 9	−08. 2	−07. 8	−07. 2	−06. 6	−06. 0	−05. 1	−04. 3	−03. 5
7	−08. 8	−08. 2	−07. 5	−07. 1	−06. 5	−05. 9	−05. 1	−04. 5	−03. 7
8	−08. 2	−07. 7	−07. 0	−06. 9	−06. 3	−05. 7	−05. 0	−04. 5	−03. 7
9	−07. 6	−07. 1	−06. 4	−06. 2	−05. 6	−05. 2	−04. 7	−04. 3	−03. 5
10	−06. 2	−05. 8	−05. 2	−05. 1	−04. 6	−04. 3	−03. 9	−03. 3	−02. 7
11	−03. 0	−02. 6	−01. 9	−02. 0	−01. 5	−01. 3	−01. 0	−00. 4	00. 0
12	00. 3	00. 5	01. 1	00. 9	01. 2	01. 5	01. 5	01. 8	02. 3
13	10. 8	10. 9	10. 9	10. 5	10. 8	11. 3	10. 7	10. 9	11. 5
14	20. 9	20. 9	21. 4	20. 3	20. 5	20. 9	20. 1	20. 3	20. 9
15	31. 8	31. 8	32. 2	31. 0	31. 2	31. 8	30. 9	31. 2	31. 6

Line No.	Departures from mean surface density, percent; transition								
	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0
1	−11. 3	−10. 2	−09. 0	−08. 4	−07. 4	−06. 0	−04. 9	−03. 9	−02. 9
2	−10. 6	−09. 7	−08. 7	−07. 8	−07. 0	−05. 9	−04. 9	−03. 8	−02. 9
3	−10. 0	−09. 3	−08. 4	−07. 6	−06. 9	−05. 9	−04. 9	−03. 8	−02. 9
4	−09. 7	−09. 0	−08. 3	−07. 4	−06. 8	−06. 0	−05. 1	−04. 0	−03. 1
5	−09. 6	−08. 8	−08. 1	−07. 3	−06. 8	−06. 2	−05. 2	−04. 2	−03. 3
6	−09. 0	−08. 4	−07. 8	−07. 2	−06. 8	−06. 3	−05. 3	−04. 5	−03. 6
7	−08. 8	−08. 2	−07. 6	−07. 1	−06. 5	−06. 1	−05. 4	−04. 7	−03. 9
8	−08. 3	−07. 7	−07. 1	−06. 9	−06. 4	−06. 0	−05. 2	−04. 7	−03. 9
9	−07. 7	−07. 2	−06. 6	−06. 3	−05. 7	−05. 5	−04. 9	−04. 4	−03. 7
10	−06. 4	−06. 0	−05. 6	−05. 4	−04. 7	−04. 6	−04. 1	−03. 5	−03. 0
11	−03. 1	−02. 8	−02. 3	−02. 2	−01. 7	−01. 6	−01. 2	−00. 7	−00. 2
12	00. 1	00. 3	00. 6	00. 6	01. 1	01. 3	01. 5	01. 7	02. 1
13	10. 5	10. 8	10. 8	10. 5	10. 8	11. 0	10. 8	10. 8	11. 3
14	20. 7	20. 9	21. 0	20. 5	20. 9	20. 7	20. 2	20. 3	20. 5
15	31. 6	31. 6	31. 9	31. 3	31. 6	31. 6	31. 0	31. 0	31. 3

Line No.	Departures from mean surface density, percent, night								
	−11.0	−10.0	−9.0	−8.0	−7.0	−6.0	−5.0	−4.0	−3.0
1	−11. 5	−10. 5	−09. 4	−09. 1	−08. 2	−06. 1	−04. 7	−03. 9	−02. 9
2	−10. 2	−09. 3	−08. 4	−07. 8	−07. 3	−06. 0	−04. 7	−03. 9	−02. 9
3	−09. 6	−08. 8	−07. 9	−07. 3	−06. 9	−06. 0	−04. 8	−03. 8	−03. 0
4	−09. 3	−08. 7	−07. 9	−07. 2	−06. 9	−06. 2	−05. 0	−04. 0	−03. 2
5	−09. 3	−08. 6	−07. 8	−07. 2	−06. 9	−06. 4	−05. 2	−04. 3	−03. 5
6	−09. 1	−08. 5	−07. 8	−07. 2	−07. 0	−06. 5	−05. 4	−04. 6	−03. 9
7	−08. 8	−08. 2	−07. 6	−07. 1	−06. 6	−06. 3	−05. 6	−04. 8	−04. 2
8	−08. 3	−07. 8	−07. 2	−06. 9	−06. 4	−06. 2	−05. 4	−04. 8	−04. 1
9	−07. 8	−07. 3	−06. 8	−06. 5	−05. 9	−05. 8	−05. 1	−04. 6	−04. 0
10	−06. 6	−06. 2	−05. 8	−05. 6	−04. 9	−04. 9	−04. 3	−03. 8	−03. 3
11	−03. 4	−03. 0	−02. 7	−02. 4	−01. 9	−01. 9	−01. 4	−01. 0	−00. 5
12	−00. 1	00. 1	00. 3	00. 5	01. 0	01. 1	01. 3	01. 5	01. 9
13	10. 3	10. 5	10. 7	10. 7	11. 0	10. 8	10. 8	10. 7	11. 0
14	20. 6	20. 7	20. 7	20. 6	21. 2	20. 5	20. 3	20. 2	20. 2
15	31. 5	31. 5	31. 5	31. 5	32. 0	31. 3	31. 2	31. 0	31. 0

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-6. *Departure from Mean Surface Density (Percent), Type 3 Message, Region 7—Continued*

Line No.	Departures from mean surface density, percent, afternoon									
	−2.0	−1.0	0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0
1	−01.8	−00.9	00.0	01.0	01.7	02.9	04.0	04.7	05.7	06.7
2	−01.9	−00.9	−00.1	00.8	01.4	02.5	03.7	04.3	05.1	06.1
3	−01.8	−00.8	00.0	00.8	01.2	02.2	03.2	03.8	04.6	05.5
4	−02.1	−01.2	−00.3	00.6	00.7	01.9	02.7	03.4	04.2	05.0
5	−02.4	−01.5	−00.8	00.3	00.4	01.4	02.1	02.6	03.5	04.2
6	−02.7	−01.9	−01.3	−00.4	−00.5	00.3	00.9	01.5	02.2	02.9
7	−02.9	−02.3	−01.7	−00.9	−01.1	−00.3	00.2	00.6	01.2	01.8
8	−03.1	−02.4	−01.8	−01.2	−01.4	−00.7	−00.2	00.1	00.7	01.2
9	−02.9	−02.2	−01.7	−01.2	−01.4	−00.9	−00.4	−00.2	00.3	00.8
10	−02.1	−01.7	−01.2	−00.9	−00.9	−00.7	−00.3	−00.1	00.4	00.8
11	00.6	00.9	01.2	01.3	01.7	01.3	01.6	01.8	02.2	02.6
12	03.2	03.4	03.5	03.4	03.6	03.0	03.0	03.1	03.6	03.9
13	12.7	12.2	12.3	12.0	12.4	11.6	11.7	11.8	12.2	12.5
14	21.9	20.9	21.4	20.9	22.2	21.5	21.6	21.6	22.2	22.6
15	32.9	31.9	32.3	31.8	33.1	32.5	32.3	32.3	32.9	33.4

Line No.	Departures from mean surface density, percent, transition									
	−2.0	−1.0	0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0
1	−01.8	−00.9	00.1	00.9	01.8	03.1	04.1	04.9	05.8	06.7
2	−02.0	−01.0	−00.1	00.7	01.6	02.8	03.8	04.5	05.3	06.2
3	−02.0	−00.9	−00.1	00.7	01.4	02.5	03.5	04.1	04.9	05.7
4	−02.3	−01.3	−00.4	00.4	01.0	02.2	03.0	03.7	04.5	05.2
5	−02.7	−01.6	−00.8	00.1	00.7	01.8	02.5	03.2	03.9	04.5
6	−03.0	−02.0	−01.3	−00.4	00.0	01.0	01.6	02.2	02.8	03.4
7	−03.2	−02.4	−01.7	−00.9	−00.4	00.4	00.8	01.3	01.9	02.5
8	−03.3	−02.5	−01.8	−01.2	−00.8	−00.2	00.3	00.7	01.3	01.8
9	−03.0	−02.2	−01.7	−01.1	−00.8	−00.4	−00.1	00.3	00.8	01.2
10	−02.2	−01.7	−01.1	−00.8	−00.6	−00.3	00.0	00.2	00.7	01.1
11	00.5	00.8	01.2	01.5	01.8	01.8	01.9	02.0	02.5	02.8
12	03.1	03.3	03.6	03.5	03.4	03.2	03.2	03.2	03.7	04.0
13	12.5	12.4	12.4	12.3	12.2	12.1	12.1	12.2	12.5	12.8
14	21.8	21.4	21.6	21.5	21.9	22.0	22.0	22.0	22.4	22.8
15	32.8	32.3	32.5	32.3	32.8	32.9	32.8	32.8	33.2	33.7

Line No.	Departures from mean surface density, percent, night									
	−2.0	−1.0	0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0
1	−01.9	−00.9	00.1	00.7	01.9	03.2	04.1	05.0	05.8	06.7
2	−02.0	−01.0	−00.1	00.6	01.8	03.1	03.9	04.7	05.5	06.3
3	−02.1	−01.1	−00.3	00.5	01.6	02.9	03.6	04.4	05.2	06.0
4	−02.6	−01.4	−00.5	00.3	01.3	02.5	03.3	04.0	04.8	05.5
5	−02.9	−01.7	−00.9	00.1	01.0	02.2	02.9	03.6	04.2	04.9
6	−03.3	−02.1	−01.3	−00.4	00.5	01.7	02.2	02.8	03.4	04.0
7	−03.5	−02.5	−01.7	−00.9	00.2	00.9	01.4	01.9	02.6	03.2
8	−03.5	−02.6	−01.8	−01.1	−00.2	00.4	00.9	01.3	01.9	02.4
9	−03.2	−02.3	−01.7	−01.0	−00.3	00.1	00.4	00.8	01.4	01.8
10	−02.4	−01.7	−01.1	−00.7	−00.2	00.1	00.4	00.6	01.1	01.5
11	00.3	00.8	01.2	01.7	01.9	02.0	02.1	02.2	02.7	03.0
12	03.0	03.3	03.6	03.6	03.2	03.4	03.4	03.4	03.8	04.1
13	12.4	12.7	12.7	12.5	12.0	12.5	12.5	12.5	12.9	13.1
14	21.5	21.8	21.9	22.2	21.6	22.6	22.4	22.4	22.8	23.2
15	32.5	32.6	32.8	33.1	32.5	33.4	33.2	33.1	33.7	33.9

Enter table with line number and departures from mean surface density to the nearest percent. Obtain departure from mean ballistic density to the nearest tenth of a percent. Do not interpolate.

Table 2-7. *Wind Speed at Surface (Knots), 15-Second Reading, and Wind Speed for Zone 1 (Knots), 54-Second Reading, 30-Gram Balloon*

This table was computed for a 30-gram balloon with a constant rate of rise of 220 meters per minute. This table may be used to determine surface wind speed, 15-second reading, to a 30-gram balloon if anemometer is not available.

Elevation angle, degrees	Speed, knots	Elevation angle, degrees	Speed, knots	Elevation angle, degrees	Speed, knots
8.1-8.2	50	12.1-12.4	33	23.8-24.7	16
8.3-8.4	49	12.5-12.8	32	24.8-26.2	15
8.5-8.6	48	12.9-13.3	31	26.3-28.1	14
8.7-8.7	47	13.4-13.7	30	28.2-30.0	13
8.8-8.9	46	13.8-14.1	29	30.1-32.4	12
9.0-9.1	45	14.2-14.6	28	32.5-34.1	11
9.2-9.4	44	14.7-15.2	27	34.2-36.9	10
9.5-9.5	43	15.3-15.8	26	37.0-40.4	9
9.6-9.8	42	15.9-16.2	25	40.5-44.2	8
9.9-10.0	41	16.3-16.9	24	44.3-47.1	7
10.1-10.3	40	17.0-17.7	23	47.2-52.3	6
10.4-10.6	39	17.8-18.5	22	52.4-57.8	5
10.7-10.8	38	18.6-19.4	21	57.9-64.7	4
10.9-11.1	37	19.5-20.1	20	64.8-71.8	3
11.2-11.4	36	20.2-21.2	19	71.9-77.1	2
11.5-11.8	35	21.3-22.3	18	77.2-82.7	1
11.9-12.0	34	22.4-23.7	17	82.6-90.0	0

Table 2-8. Wind Speed at Surface (Knots), 10-Second Reading, and Wind Speed for Zone 1 (Knots), 36-Second Reading, 100-Gram Balloon

This table was computed for a 100-gram balloon with a constant rate of rise of 334 meters per minute. This table may be used to determine surface wind speed, 10-second reading, to a 100-gram balloon if anemometer is not available.

Elevation angle, degrees	Speed, knots	Elevation angle, degrees	Speed, knots	Elevation angle, degrees	Speed, knots
12.1-12.3	50	17.8-18.2	33	33.3-35.0	16
12.4-12.5	49	18.3-18.8	32	35.1-36.9	15
12.6-12.8	48	18.9-19.4	31	37.9-39.1	14
12.9-13.0	47	19.5-20.1	30	39.2-41.5	13
13.1-13.3	46	20.2-20.8	29	41.6-44.2	12
13.4-13.6	45	20.9-21.5	28	44.3-45.7	11
13.7-13.9	44	21.6-22.0	27	45.8-48.8	10
14.0-14.2	43	22.1-22.8	26	48.9-52.3	9
14.3-14.6	42	22.9-23.7	25	52.4-53.9	8
14.7-14.8	41	23.8-24.7	24	54.0-57.8	7
14.9-15.2	40	24.8-25.7	23	57.9-62.1	6
15.3-15.6	39	25.8-26.8	22	62.2-66.8	5
15.7-16.0	38	26.9-28.1	21	66.9-71.8	4
16.1-16.5	37	28.2-28.6	20	71.9-77.1	3
16.6-16.9	36	28.7-30.0	19	77.2-82.7	2
17.0-17.4	35	30.1-31.5	18	82.8-85.8	1
17.5-17.7	34	31.6-33.2	17	85.9-90.0	0

Enter table with elevation angle to the nearest tenth of a degree. Obtain wind speed to nearest knot. Do not interpolate. Do not use when offset is more than 49 meters.

2-10. Weighted Wind Speed Tables (Type 3 Message)

a. The weighted wind speed tables may be, used to convert zone winds to the weighted effect of these winds on the various line values of the meteorological message.

b. The Line-Zone Number values are the product of zone wind values and the weighting factor values shown in table 2-9. The values of Line-Zone Number 21 are the product of zone wind speeds and the weighting factor (.20), line 2 of Zone Number 1, table 2-9.

Table 2-9. *Wind Weighting Factors (Type 3 Message)*

Line No.	Zone No.														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.20	.80													
3	.09	.19	.72												
4	.06	.12	.26	.56											
5	.04	.08	.15	.20	.53										
6	.03	.05	.08	.09	.12	.63									
7	.02	.03	.07	.07	.08	.20	.53								
8	.02	.02	.06	.06	.06	.14	.19	.45							
9	.02	.02	.05	.05	.05	.12	.13	.20	.36						
10	.01	.02	.02	.04	.03	.07	.08	.09	.09	.55					
11	.00	.00	.01	.04	.03	.08	.08	.09	.09	.20	.38				
12	.00	.01	.01	.02	.04	.07	.07	.07	.08	.17	.16	.30			
13	.00	.01	.01	.01	.03	.07	.07	.07	.07	.15	.14	.13	.24		
14	.00	.01	.01	.01	.02	.07	.07	.07	.07	.13	.13	.13	.10	.18	
15	.00	.01	.01	.01	.02	.07	.07	.07	.07	.12	.12	.11	.10	.08	.14

Table 2-10. *Weighted Wind (Type 3 Message) Zone 1*

Wind speed, knots	Line-zone No.													
	21	31	41	51	61	71	81	91	01	11	21	31	41	51
2	.4	.2	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	.8	.4	.2	.2	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0
6	1.2	.5	.4	.2	.2	.1	.1	.1	.1	.0	.0	.0	.0	.0
8	1.6	.7	.5	.3	.2	.2	.2	.2	.1	.0	.0	.0	.0	.0
10	2.0	.9	.6	.4	.3	.2	.2	.2	.1	.0	.0	.0	.0	.0
12	2.4	1.1	.7	.5	.4	.2	.2	.2	.1	.0	.0	.0	.0	.0
14	2.8	1.3	.8	.6	.4	.3	.3	.3	.1	.0	.0	.0	.0	.0
16	3.2	1.4	1.0	.6	.5	.3	.3	.3	.2	.0	.0	.0	.0	.0
18	3.6	1.6	1.1	.7	.5	.4	.4	.4	.2	.0	.0	.0	.0	.0
20	4.0	1.8	1.2	.8	.6	.4	.4	.4	.2	.0	.0	.0	.0	.0
22	4.4	2.0	1.3	.9	.7	.4	.4	.4	.2	.0	.0	.0	.0	.0
24	4.8	2.2	1.4	1.0	.7	.5	.5	.5	.2	.0	.0	.0	.0	.0
26	5.2	2.3	1.6	1.0	.8	.5	.5	.5	.3	.0	.0	.0	.0	.0
28	5.6	2.5	1.7	1.1	.8	.6	.6	.6	.3	.0	.0	.0	.0	.0
30	6.0	2.7	1.8	1.2	.9	.6	.6	.6	.3	.0	.0	.0	.0	.0
32	6.4	2.9	1.9	1.3	1.0	.6	.6	.6	.3	.0	.0	.0	.0	.0
34	6.8	3.1	2.0	1.4	1.0	.7	.7	.7	.3	.0	.0	.0	.0	.0
36	7.2	3.2	2.2	1.4	1.1	.7	.7	.7	.4	.0	.0	.0	.0	.0
38	7.6	3.4	2.3	1.5	1.1	.8	.8	.8	.4	.0	.0	.0	.0	.0
40	8.0	3.6	2.4	1.6	1.2	.8	.8	.8	.4	.0	.0	.0	.0	.0
42	8.4	3.8	2.5	1.7	1.3	.8	.8	.8	.4	.0	.0	.0	.0	.0
44	8.8	4.0	2.6	1.8	1.3	.9	.9	.9	.4	.0	.0	.0	.0	.0
46	9.2	4.1	2.8	1.8	1.4	.9	.9	.9	.5	.0	.0	.0	.0	.0
48	9.6	4.3	2.9	1.9	1.4	1.0	1.0	1.0	.5	.0	.0	.0	.0	.0
50	10.0	4.5	3.0	2.0	1.5	1.0	1.0	1.0	.5	.0	.0	.0	.0	.0
52	10.4	4.7	3.1	2.1	1.6	1.0	1.0	1.0	.5	.0	.0	.0	.0	.0
54	10.8	4.9	3.2	2.2	1.6	1.1	1.1	1.1	.5	.0	.0	.0	.0	.0
56	11.2	5.0	3.4	2.2	1.7	1.1	1.1	1.1	.6	.0	.0	.0	.0	.0
58	11.6	5.2	3.5	2.3	1.7	1.2	1.2	1.2	.6	.0	.0	.0	.0	.0
60	12.0	5.4	3.6	2.4	1.8	1.2	1.2	1.2	.6	.0	.0	.0	.0	.0
62	12.4	5.6	3.7	2.5	1.9	1.2	1.2	1.2	.6	.0	.0	.0	.0	.0
64	12.8	5.8	3.8	2.6	1.9	1.3	1.3	1.3	.6	.0	.0	.0	.0	.0
66	13.2	5.9	4.0	2.6	2.0	1.3	1.3	1.3	.7	.0	.0	.0	.0	.0
68	13.6	6.1	4.1	2.7	2.0	1.4	1.4	1.4	.7	.0	.0	.0	.0	.0
70	14.0	6.3	4.2	2.8	2.1	1.4	1.4	1.4	.7	.0	.0	.0	.0	.0
72	14.4	6.5	4.3	2.9	2.2	1.4	1.4	1.4	.7	.0	.0	.0	.0	.0
74	14.8	6.7	4.4	3.0	2.2	1.5	1.5	1.5	.7	.0	.0	.0	.0	.0
76	15.2	6.8	4.6	3.0	2.3	1.5	1.5	1.5	.8	.0	.0	.0	.0	.0
78	15.6	7.0	4.7	3.1	2.3	1.6	1.6	1.6	.8	.0	.0	.0	.0	.0
80	16.0	7.2	4.8	3.2	2.4	1.6	1.6	1.6	.8	.0	.0	.0	.0	.0

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary

Table 2-10. *Weighted Wind Speeds, (Type 3 Message) Zone 2*

Wind speed, knots	Line-zone No.													
	22	32	42	52	62	72	82	92	02	12	22	32	42	52
2	1.6	.4	.2	.2	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0
4	3.2	.8	.5	.3	.2	.1	.1	.1	.1	.0	.0	.0	.0	.0
6	4.8	1.1	.7	.5	.3	.2	.1	.1	.1	.0	.1	.1	.1	.1
8	6.4	1.5	1.0	.6	.4	.2	.2	.2	.2	.0	.1	.1	.1	.1
10	8.0	1.9	1.2	.8	.5	.3	.2	.2	.2	.0	.1	.1	.1	.1
12	9.6	2.3	1.4	1.0	.6	.4	.2	.2	.2	.0	.1	.1	.1	.1
14	11.2	2.7	1.7	1.1	.7	.4	.3	.3	.3	.0	.1	.1	.1	.1
16	12.8	3.0	1.9	1.3	.8	.5	.3	.3	.3	.0	.2	.2	.2	.2
18	14.4	3.4	2.2	1.4	.9	.5	.4	.4	.4	.0	.2	.2	.2	.2
20	16.0	3.8	2.4	1.6	1.0	.6	.4	.4	.4	.0	.2	.2	.2	.2
22	17.6	4.2	2.6	1.8	1.1	.7	.4	.4	.4	.0	.2	.2	.2	.2
24	19.2	4.6	2.9	1.9	1.2	.7	.5	.5	.5	.0	.2	.2	.2	.2
26	20.8	4.9	3.1	2.1	1.3	.8	.5	.5	.5	.0	.3	.3	.3	.3
28	22.4	5.3	3.4	2.2	1.4	.8	.6	.6	.6	.0	.3	.3	.3	.3
30	24.0	5.7	3.6	2.4	1.5	.9	.6	.6	.6	.0	.3	.3	.3	.3
32	25.6	6.1	3.8	2.6	1.6	1.0	.6	.6	.6	.0	.3	.3	.3	.3
34	27.2	6.5	4.1	2.7	1.7	1.0	.7	.7	.7	.0	3	.3	.3	.3
36	28.8	6.8	4.3	2.9	1.8	1.1	.7	.7	.7	.0	.4	.4	.4	.4
38	30.4	7.2	4.6	3.0	1.9	1.1	.8	.8	.8	.0	.4	.4	.4	.4
40	32.0	7.6	4.8	3.2	2.0	1.2	.8	.8	.8	.0	.4	.4	.4	.4
42	33.6	8.0	5.0	3.4	2.1	1.3	.8	.8	.8	.0	.4	.4	.4	.4
44	35.2	8.4	5.3	3.5	2.2	1.3	.9	.9	.9	.0	.4	.4	.4	.4
46	36.8	8.7	5.5	3.7	2.3	1.4	.9	.9	.9	.0	.5	.5	.5	.5
48	38.4	9.1	5.8	3.8	2.4	1.4	1.0	1.0	1.0	.0	.5	.5	.5	.5
50	40.0	9.5	6.0	4.0	2.5	1.5	1.0	1.0	1.0	.0	.5	.5	.5	.5
52	41.6	9.9	6.2	4.2	2.6	1.6	1.0	1.0	1.0	.0	.5	.5	.5	.5
54	43.2	10.3	6.5	4.3	2.7	1.6	1.1	1.1	1.1	.0	.5	.5	.5	.5
56	44.8	10.6	6.7	4.5	2.8	1.7	1.1	1.1	1.1	.0	.6	.6	.6	.6
58	46.4	11.0	7.0	4.6	2.9	1.7	1.2	1.2	1.2	.0	.6	.6	.6	.6
60	48.0	11.4	7.2	4.8	3.0	1.8	1.2	1.2	1.2	.0	.6	.6	.6	.6
62	49.6	11.8	7.4	5.0	3.1	1.9	1.2	1.2	1.2	.0	.6	.6	.6	.6
64	51.2	12.2	7.7	5.1	3.2	1.9	1.3	1.3	1.3	.0	.6	.6	.6	.6
66	52.8	12.5	7.9	5.3	3.3	2.0	1.3	1.3	1.3	.0	.7	.7	.7	.7
68	54.4	12.9	8.2	5.4	3.4	2.0	1.4	1.4	1.4	.0	.7	.7	.7	.7
70	56.0	13.3	8.4	5.6	3.5	2.1	1.4	1.4	1.4	.0	.7	.7	.7	.7
72	57.6	13.7	8.6	5.8	3.6	2.2	1.4	1.4	1.4	.0	.7	.7	.7	.7
74	59.2	14.1	8.9	5.9	3.7	2.2	1.5	1.5	1.5	.0	.7	.7	.7	.7
76	60.8	14.4	9.1	6.1	3.8	2.3	1.5	1.5	1.5	.0	.8	.8	.8	.8
78	62.4	14.8	9.4	6.2	3.9	2.3	1.6	1.6	1.6	.0	.8	.8	.8	.8
80	64.0	15.2	9.6	6.4	4.0	2.4	1.6	1.6	1.6	.0	.8	.8	.8	.8

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message) Zone 3*

Wind speed, knots	Line-zone No.												
	38	48	58	68	78	88	98	08	18	28	38	48	58
2	1.4	.5	.3	.2	.1	.1	.1	.0	.0	.0	.0	.0	.0
4	2.9	1.0	.6	.3	.3	.2	.2	.1	.0	.0	.0	.0	.0
6	4.3	1.6	.9	.5	.4	.4	.3	.1	.1	.1	.1	.1	.1
8	5.8	2.1	1.2	.6	.6	.5	.4	.2	.1	.1	.1	.1	.1
10	7.2	2.6	1.5	.8	.7	.6	.5	.2	.1	.1	.1	.1	.1
12	8.6	3.1	1.8	1.0	.8	.7	.6	.2	.1	.1	.1	.1	.1
14	10.1	3.6	2.1	1.1	1.0	.8	.7	.3	.1	.1	.1	.1	.1
16	11.5	4.2	2.4	1.3	1.1	1.0	.8	.3	.2	.2	.2	.2	.2
18	13.0	4.7	2.7	1.4	1.3	1.1	.9	.4	.2	.2	.2	.2	.2
20	14.4	5.2	3.0	1.6	1.4	1.2	1.0	.4	.2	.2	.2	.2	.2
22	15.8	5.7	3.3	1.8	1.5	1.3	1.1	.4	.2	.2	.2	.2	.2
24	17.3	6.2	3.6	1.9	1.7	1.4	1.2	.5	.2	.2	.2	.2	.2
26	18.7	6.8	3.9	2.1	1.8	1.6	1.3	.5	.3	.3	.3	.3	.3
28	20.2	7.3	4.2	2.2	2.0	1.7	1.4	.6	.3	.3	.3	.3	.3
30	21.6	7.8	4.5	2.4	2.1	1.8	1.5	.6	.3	.3	.3	.3	.3
32	23.0	8.3	4.8	2.6	2.2	1.9	1.6	.6	.3	.3	.3	.3	.3
34	24.5	8.8	5.1	2.7	2.4	2.0	1.7	.7	.3	.3	.3	.3	.3
36	25.9	9.4	5.4	2.9	2.5	2.2	1.8	.7	.4	.4	.4	.4	.4
38	27.4	9.9	5.7	3.0	2.7	2.3	1.9	.8	.4	.4	.4	.4	.4
40	28.8	10.4	6.0	3.2	2.8	2.4	2.0	.8	.4	.4	.4	.4	.4
42	30.2	10.9	6.3	3.4	2.9	2.5	2.1	.8	.4	.4	.4	.4	.4
44	31.7	11.4	6.6	3.5	3.1	2.6	2.2	.9	.4	.4	.4	.4	.4
46	33.1	12.0	6.9	3.7	3.2	2.8	2.3	.9	.5	.5	.5	.5	.5
48	34.6	12.5	7.2	3.8	3.4	2.9	2.4	1.0	.5	.5	.5	.5	.5
50	36.0	13.0	7.5	4.0	3.5	3.0	2.5	1.0	.5	.5	.5	.5	.5
52	37.4	13.5	7.8	4.2	3.6	3.1	2.6	1.0	.5	.5	.5	.5	.5
54	38.9	14.0	8.1	4.3	3.8	3.2	2.7	1.1	.5	.5	.5	.5	.5
56	40.3	14.6	8.4	4.5	3.9	3.4	2.8	1.1	.6	.6	.6	.6	.6
58	41.8	15.1	8.7	4.6	4.1	3.5	2.9	1.2	.6	.6	.6	.6	.6
60	43.2	15.6	9.0	4.8	4.2	3.6	3.0	1.2	.6	.6	.6	.6	.6
62	44.6	16.1	9.3	5.0	4.3	3.7	3.1	1.2	.6	.6	.6	.6	.6
64	46.1	16.6	9.6	5.1	4.5	3.8	3.2	1.3	.6	.6	.6	.6	.6
66	47.5	17.2	9.9	5.3	4.6	4.0	3.3	1.3	.7	.7	.7	.7	.7
68	49.0	17.7	10.2	5.4	4.8	4.1	2.4	1.4	.7	.7	.7	.7	.7
70	50.4	18.2	10.5	5.6	4.9	4.2	3.5	1.4	.7	.7	.7	.7	.7
72	51.8	18.7	10.8	5.8	5.0	4.3	3.6	1.4	.7	.7	.7	.7	.7
74	53.3	19.2	11.1	5.9	5.2	4.4	3.7	1.5	.7	.7	.7	.7	.7
76	54.7	19.8	11.4	6.1	5.3	4.6	3.8	1.5	.8	.8	.8	.8	.8
78	56.2	20.3	11.7	6.2	5.5	4.7	3.9	1.6	.8	.8	.8	.8	.8
80	57.6	20.8	12.0	6.4	5.6	4.8	4.0	1.6	.8	.8	.8	.8	.8

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message) Zone 4*

Wind speed, knots	Line-zone No.											
	44	54	64	74	84	94	04	14	24	34	44	54
2	1.1	.4	.2	.1	.1	.1	.1	.1	.0	.0	.0	.0
4	2.2	.8	.4	.3	.2	.2	.2	.2	.1	.0	.0	.0
6	3.4	1.2	.5	.4	.4	.3	.2	.2	.1	.1	.1	.1
8	4.5	1.6	.7	.6	.5	.4	.3	.3	.2	.1	.1	.1
10	5.6	2.0	.9	.7	.6	.5	.4	.4	.2	.1	.1	.1
12	6.7	2.4	1.1	.8	.7	.6	.5	.5	.2	.1	.1	.1
14	7.8	2.8	1.3	1.0	.8	.7	.6	.6	.3	.1	.1	.1
16	9.0	3.2	1.4	1.1	1.0	.8	.6	.6	.3	.2	.2	.2
18	10.1	3.6	1.6	1.3	1.1	.9	.7	.7	.4	.2	.2	.2
20	11.2	4.0	1.8	1.4	1.2	1.0	.8	.8	.4	.2	.2	.2
22	12.3	4.4	2.0	1.5	1.3	1.1	.9	.9	.4	.2	.2	.2
24	13.4	4.8	2.2	1.7	1.4	1.2	1.0	1.0	.5	.2	.2	.2
26	14.6	5.2	2.3	1.8	1.6	1.3	1.0	1.0	.5	.3	.3	.3
28	15.7	5.6	2.5	2.0	1.7	1.4	1.1	1.1	.6	.3	.3	.3
30	16.8	6.0	2.7	2.1	1.8	1.5	1.2	1.2	.6	.3	.3	.3
32	17.9	6.4	2.9	2.2	1.9	1.6	1.3	1.3	.6	.3	.3	.3
34	19.0	6.8	3.1	2.4	2.0	1.7	1.4	1.4	.7	.3	.3	.3
36	20.2	7.2	3.2	2.5	2.2	1.8	1.4	1.4	.7	.4	.4	.4
38	21.3	7.6	3.4	2.7	2.3	1.9	1.5	1.5	.8	.4	.4	.4
40	22.4	8.0	3.6	2.8	2.4	2.0	1.6	1.6	.8	.4	.4	.4
42	23.5	8.4	3.8	2.9	2.5	2.1	1.7	1.7	.8	.4	.4	.4
44	24.6	8.8	4.0	3.1	2.6	2.2	1.8	1.8	.9	.4	.4	.4
46	25.8	9.2	4.1	3.2	2.8	2.3	1.8	1.8	.9	.5	.5	.5
48	26.9	9.6	4.3	3.4	2.9	2.4	1.9	1.9	1.0	.5	.5	.5
50	28.0	10.0	4.5	3.5	3.0	2.5	2.0	2.0	1.0	.5	.5	.5
52	29.1	10.4	4.7	3.6	3.1	2.6	2.1	2.1	1.0	.5	.5	.5
54	30.2	10.8	4.9	3.8	3.2	2.7	2.2	2.2	1.1	.5	.5	.5
56	31.4	11.2	5.0	3.9	3.4	2.8	2.2	2.2	1.1	.6	.6	.6
58	32.5	11.6	5.2	4.1	3.5	2.9	2.3	2.3	1.2	.6	.6	.6
60	33.6	12.0	5.4	4.2	3.6	3.0	2.4	2.4	1.2	.6	.6	.6
62	34.7	12.4	5.6	4.3	3.7	3.1	2.5	2.5	1.2	.6	.6	.6
64	35.8	12.8	5.8	4.5	3.8	3.2	2.6	2.6	1.3	.6	.6	.6
66	37.0	13.2	5.9	4.6	4.0	3.3	2.6	2.6	1.3	.7	.7	.7
68	38.1	13.6	6.1	4.8	4.1	3.4	2.7	2.7	1.4	.7	.7	.7
70	39.2	14.0	6.3	4.9	4.2	3.5	2.8	2.8	1.4	.7	.7	.7
72	40.3	14.4	6.5	5.0	4.3	3.6	2.9	2.9	1.4	.7	.7	.7
74	41.4	14.8	6.7	5.2	4.4	3.7	3.0	3.0	1.5	.7	.7	.7
76	42.6	15.2	6.8	5.3	4.6	3.8	3.0	3.0	1.5	.8	.8	.8
78	43.7	15.6	7.0	5.5	4.7	3.9	3.1	3.1	1.6	.8	.8	.8
80	44.8	16.0	7.2	5.6	4.8	4.0	3.2	3.2	1.6	.8	.8	.8

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message) Zone 5*

Wind speed, knots	Line-zone No.										
	55	65	75	85	95	05	15	25	35	45	55
2	1.1	.2	.2	.1	.1	.1	.1	.1	.1	.0	.0
4	2.1	.5	.3	.2	.2	.1	.1	.2	.1	.1	.1
6	3.2	.7	.5	.4	.3	.2	.2	.2	.2	.1	.1
8	4.2	1.0	.6	.5	.4	.2	.2	.3	.2	.2	.2
10	5.3	1.2	.8	.6	.5	.3	.3	.4	.3	.2	.2
12	6.4	1.4	1.0	.7	.6	.4	.4	.5	.4	.2	.2
14	7.4	1.7	1.1	.8	.7	.4	.4	.6	.4	.3	.3
16	8.5	1.9	1.3	1.0	.8	.5	.5	.6	.5	.3	.3
18	9.5	2.2	1.4	1.1	.9	.5	.5	.7	.5	.4	.4
20	10.6	2.4	1.6	1.2	1.0	.6	.6	.8	.6	.4	.4
22	11.7	2.6	1.8	1.3	1.1	.7	.7	.9	.7	.4	.4
24	12.7	2.9	1.9	1.4	1.2	.7	.7	1.0	.7	.5	.5
26	13.8	3.1	2.1	1.6	1.3	.8	.8	1.0	.8	.5	.5
28	14.8	3.4	2.2	1.7	1.4	.8	.8	1.1	.8	.6	.6
30	15.9	3.6	2.4	1.8	1.5	.9	.9	1.2	.9	.6	.6
32	17.0	3.8	2.6	1.9	1.6	1.0	1.0	1.3	1.0	.6	.6
34	18.0	4.1	2.7	2.0	1.7	1.0	1.0	1.4	1.0	.7	.7
36	19.1	4.3	2.9	2.2	1.8	1.1	1.1	1.4	1.1	.7	.7
38	20.1	4.6	3.0	2.3	1.9	1.1	1.1	1.5	1.1	.8	.8
40	21.2	4.8	3.2	2.4	2.0	1.2	1.2	1.6	1.2	.8	.8
42	22.3	5.0	3.4	2.5	2.1	1.3	1.3	1.7	1.3	.8	.8
44	23.3	5.3	3.5	2.6	2.2	1.3	1.3	1.8	1.3	.9	.9
46	24.4	5.5	3.7	2.8	2.3	1.4	1.4	1.8	1.4	.9	.9
48	25.4	5.8	3.8	2.9	2.4	1.4	1.4	1.9	1.4	1.0	1.0
50	26.5	6.0	4.0	3.0	2.5	1.5	1.5	2.0	1.5	1.0	1.0
52	27.6	6.2	4.2	3.1	2.6	1.6	1.6	2.1	1.6	1.0	1.0
54	28.6	6.5	4.3	3.2	2.7	1.6	1.6	2.2	1.6	1.1	1.1
56	29.7	6.7	4.5	3.4	2.8	1.7	1.7	2.2	1.7	1.1	1.1
58	30.7	7.0	4.6	3.5	2.9	1.7	1.7	2.3	1.7	1.2	1.2
60	31.8	7.2	4.8	3.6	3.0	1.8	1.8	2.4	1.8	1.2	1.2
62	32.9	7.4	5.0	3.7	3.1	1.9	1.9	2.5	1.9	1.2	1.2
64	33.9	7.7	5.1	3.8	3.2	1.9	1.9	2.6	1.9	1.3	1.3
66	35.0	7.9	5.3	4.0	3.3	2.0	2.0	2.6	2.0	1.3	1.3
68	36.0	8.2	5.4	4.1	3.4	2.0	2.0	2.7	2.0	1.4	1.4
70	37.1	8.4	5.6	4.2	3.5	2.1	2.1	2.8	2.1	1.4	1.4
72	38.2	8.6	5.8	4.3	3.6	2.2	2.2	2.9	2.2	1.4	1.4
74	39.2	8.9	5.9	4.4	3.7	2.2	2.2	3.0	2.2	1.5	1.5
76	40.3	9.1	6.1	4.6	3.8	2.3	2.3	3.0	2.3	1.5	1.5
78	41.3	9.4	6.2	4.7	3.9	2.3	2.3	3.1	2.3	1.6	1.6
80	42.4	9.6	6.4	4.8	4.0	2.4	2.4	3.2	2.4	1.6	1.6

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message) Zone 6*

Wind speed, knots	Line-zone No.									
	06	76	86	96	06	16	26	36	46	56
2	1.3	.4	.3	.2	.1	.2	.1	.1	.1	.1
4	2.5	.8	.6	.5	.3	.3	.3	.3	.3	.3
6	3.8	1.2	.8	.7	.4	.5	.4	.4	.4	.4
8	5.0	1.6	1.1	1.0	.6	.6	.6	.6	.6	.6
10	6.3	2.0	1.4	1.2	.7	.8	.7	.7	.7	.7
12	7.6	2.4	1.7	1.4	.8	1.0	.8	.8	.8	.8
14	8.8	2.8	2.0	1.7	1.0	1.1	1.0	1.0	1.0	1.0
16	10.1	3.2	2.2	1.9	1.1	1.3	1.1	1.1	1.1	1.1
18	11.3	3.6	2.5	2.2	1.3	1.4	1.3	1.3	1.3	1.3
20	12.6	4.0	2.8	2.4	1.4	1.6	1.4	1.4	1.4	1.4
22	13.9	4.4	3.1	2.6	1.5	1.8	1.5	1.5	1.5	1.5
24	15.1	4.8	3.4	2.9	1.7	1.9	1.7	1.7	1.7	1.7
26	16.4	5.2	3.6	3.1	1.8	2.1	1.8	1.8	1.8	1.8
28	17.6	5.6	3.9	3.4	2.0	2.2	2.0	2.0	2.0	2.0
30	18.9	6.0	4.2	3.6	2.1	2.4	2.1	2.1	2.1	2.1
32	20.2	6.4	4.5	3.8	2.2	2.6	2.2	2.2	2.2	2.2
34	21.4	6.8	4.8	4.1	2.4	2.7	2.4	2.4	2.4	2.4
36	22.7	7.2	5.0	4.3	2.5	2.9	2.5	2.5	2.5	2.5
38	23.9	7.6	5.3	4.6	2.7	3.0	2.7	2.7	2.7	2.7
40	25.2	8.0	5.6	4.8	2.8	3.2	2.8	2.8	2.8	2.8
42	26.5	8.4	5.9	5.0	2.9	3.4	2.9	2.9	2.9	2.9
44	27.7	8.8	6.2	5.3	3.1	3.5	3.1	3.1	3.1	3.1
46	29.0	9.2	6.4	5.5	3.2	3.7	3.2	3.2	3.2	3.2
48	30.2	9.6	6.7	5.8	3.4	3.8	3.4	3.4	3.4	3.4
50	31.5	10.0	7.0	6.0	3.5	4.0	3.5	3.5	3.5	3.5
52	32.8	10.4	7.3	6.2	3.6	4.2	3.6	3.6	3.6	3.6
54	34.0	10.8	7.6	6.5	3.8	4.3	3.8	3.8	3.8	3.8
56	35.3	11.2	7.8	6.7	3.9	4.5	3.9	3.9	3.9	3.9
58	36.5	11.6	8.1	7.0	4.1	4.6	4.1	4.1	4.1	4.1
60	37.8	12.0	8.4	7.2	4.2	4.8	4.2	4.2	4.2	4.2
62	39.1	12.4	8.7	7.4	4.3	5.0	4.3	4.3	4.3	4.3
64	40.3	12.8	9.0	7.7	4.5	5.1	4.5	4.5	4.5	4.5
66	41.6	13.2	9.2	7.9	4.6	5.3	4.6	4.6	4.6	4.6
68	42.8	13.6	9.5	8.2	4.8	5.4	4.8	4.8	4.8	4.8
70	44.1	14.0	9.8	8.4	4.9	5.6	4.9	4.9	4.9	4.9
72	45.4	14.4	10.1	8.6	5.0	5.8	5.0	5.0	5.0	5.0
74	46.6	14.8	10.4	8.9	5.2	5.9	5.2	5.2	5.2	5.2
76	47.9	15.2	10.6	9.1	5.3	6.1	5.3	5.3	5.3	5.3
78	49.1	15.6	10.9	9.4	5.5	6.2	5.5	5.5	5.5	5.5
80	50.4	16.0	11.2	9.6	5.6	6.4	5.6	5.6	5.6	5.6

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message) Zone 7*

Wind speed, knots	Line-zone No.								
	77	87	97	07	17	27	37	47	57
2	1.1	.4	.3	.2	.2	.1	.1	.1	.1
4	2.1	.8	.5	.3	.3	.3	.3	.3	.3
6	3.2	1.1	.8	.5	.5	.4	.4	.4	.4
8	4.2	1.5	1.0	.6	.6	.6	.6	.6	.6
10	5.3	1.9	1.3	.8	.8	.7	.7	.7	.7
12	6.4	2.3	1.6	1.0	1.0	.8	.8	.8	.8
14	7.4	2.7	1.8	1.1	1.1	1.0	1.0	1.0	1.0
16	8.5	3.0	2.1	1.3	1.3	1.1	1.1	1.1	1.1
18	9.5	3.4	2.3	1.4	1.4	1.3	1.3	1.3	1.3
20	10.6	3.8	2.6	1.6	1.6	1.4	1.4	1.4	1.4
22	11.7	4.2	2.9	1.8	1.8	1.5	1.5	1.5	1.5
24	12.7	4.6	3.1	1.9	1.9	1.7	1.7	1.7	1.7
26	13.8	4.9	3.4	2.1	2.1	1.8	1.8	1.8	1.8
28	14.8	5.3	3.6	2.2	2.2	2.0	2.0	2.0	2.0
30	15.9	5.7	3.9	2.4	2.4	2.1	2.1	2.1	2.1
32	17.0	6.1	4.2	2.6	2.6	2.2	2.2	2.2	2.2
34	18.0	6.5	4.4	2.7	2.7	2.4	2.4	2.4	2.4
36	19.1	6.8	4.7	2.9	2.9	2.5	2.5	2.5	2.5
38	20.1	7.2	4.9	3.0	3.0	2.7	2.7	2.7	2.7
40	21.2	7.6	5.2	3.2	3.2	2.8	2.8	2.8	2.8
42	22.3	8.0	5.5	3.4	3.4	2.9	2.9	2.9	2.9
44	23.3	8.4	5.7	3.5	3.5	3.1	3.1	3.1	3.1
46	24.4	8.7	6.0	3.7	3.7	3.2	3.2	3.2	3.2
48	25.4	9.1	6.2	3.8	3.8	3.4	3.4	3.4	3.4
50	26.5	9.5	6.5	4.0	4.0	3.5	3.5	3.5	3.5
52	27.6	9.9	6.8	4.2	4.2	3.6	3.6	3.6	3.6
54	28.6	10.3	7.0	4.3	4.3	3.8	3.8	3.8	3.8
56	29.7	10.6	7.3	4.5	4.5	3.9	3.9	3.9	3.9
58	30.7	11.0	7.5	4.6	4.6	4.1	4.1	4.1	4.1
60	31.8	11.4	7.8	4.8	4.8	4.2	4.2	4.2	4.2
62	32.9	11.8	8.1	5.0	5.0	4.3	4.3	4.3	4.3
64	33.9	12.2	8.3	5.1	5.1	4.5	4.5	4.5	4.5
66	35.0	12.5	8.6	5.3	5.3	4.6	4.6	4.6	4.6
68	36.0	12.9	8.8	5.4	5.4	4.8	4.8	4.8	4.8
70	37.1	13.3	9.1	5.6	5.6	4.9	4.9	4.9	4.9
72	38.2	13.7	9.4	5.8	5.8	5.0	5.0	5.0	5.0
74	39.2	14.1	9.6	5.9	5.9	5.2	5.2	5.2	5.2
76	40.3	14.4	9.9	6.1	6.1	5.3	5.3	5.3	5.3
78	41.3	14.8	10.1	6.2	6.2	5.5	5.5	5.5	5.5
80	42.4	15.2	10.4	6.4	6.4	5.6	5.6	5.6	5.6

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message) Zone 8*

Wind speed, knots	Line-zone No.							
	88	98	08	18	28	38	48	58
2	.9	.4	.2	.2	.1	.1	.1	.1
4	1.8	.8	.4	.4	.3	.3	.3	.3
6	2.7	1.2	.5	.5	.4	.4	.4	.4
8	3.6	1.6	.7	.7	.6	.6	.6	.6
10	4.5	2.0	.9	.9	.7	.7	.7	.7
12	5.4	2.4	1.1	1.1	.8	.8	.8	.8
14	6.3	2.8	1.3	1.3	1.0	1.0	1.0	1.0
16	7.2	3.2	1.4	1.4	1.1	1.1	1.1	1.1
18	8.1	3.6	1.6	1.6	1.3	1.3	1.3	1.3
20	9.0	4.0	1.8	1.8	1.4	1.4	1.4	1.4
22	9.9	4.4	2.0	2.0	1.5	1.5	1.5	1.5
24	10.8	4.8	2.2	2.2	1.7	1.7	1.7	1.7
26	11.7	5.2	2.3	2.3	1.8	1.8	1.8	1.8
28	12.6	5.6	2.5	2.5	2.0	2.0	2.0	2.0
30	13.5	6.0	2.7	2.7	2.1	2.1	2.1	2.1
32	14.4	6.4	2.9	2.9	2.2	2.2	2.2	2.2
34	15.3	6.8	3.1	3.1	2.4	2.4	2.4	2.4
36	16.2	7.2	3.2	3.2	2.5	2.5	2.5	2.5
38	17.1	7.6	3.4	3.4	2.7	2.7	2.7	2.7
40	18.0	8.0	3.6	3.6	2.8	2.8	2.8	2.8
42	18.9	8.4	3.8	3.8	2.9	2.9	2.9	2.9
44	19.8	8.8	4.0	4.0	3.1	3.1	3.1	3.1
46	20.7	9.2	4.1	4.1	3.2	3.2	3.2	3.2
48	21.6	9.6	4.3	4.3	3.4	3.4	3.4	3.4
50	22.5	10.0	4.5	4.5	3.5	3.5	3.5	3.5
52	23.4	10.4	4.7	4.7	3.6	3.6	3.6	3.6
54	24.3	10.8	4.9	4.9	3.8	3.8	3.8	3.8
56	25.2	11.2	5.0	5.0	3.9	3.9	3.9	3.9
58	26.1	11.6	5.2	5.2	4.1	4.1	4.1	4.1
60	27.0	12.0	5.4	5.4	4.2	4.2	4.2	4.2
62	27.9	12.4	5.6	5.6	4.3	4.3	4.3	4.3
64	28.8	12.8	5.8	5.8	4.5	4.5	4.5	4.5
66	29.7	13.2	5.9	5.9	4.6	4.6	4.6	4.6
68	30.6	13.6	6.1	6.1	4.8	4.8	4.8	4.8
70	31.5	14.0	6.3	6.3	4.9	4.9	4.9	4.9
72	32.4	14.4	6.5	6.5	5.0	5.0	5.0	5.0
74	33.3	14.8	6.7	6.7	5.2	5.2	5.2	5.2
76	34.2	15.2	6.8	6.8	5.3	5.3	5.3	5.3
78	35.1	15.6	7.0	7.0	5.5	5.5	5.5	5.5
80	36.0	16.0	7.2	7.2	5.6	5.6	5.6	5.6

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message) Zone 9*

Wind speed, knots	Line-zone No.						
	90	00	10	20	30	40	50
2	.7	.2	.2	.2	.1	.1	.1
4	1.4	.4	.4	.3	.3	.3	.3
6	2.2	.5	.5	.5	.4	.4	.4
8	2.9	.7	.7	.6	.6	.6	.6
10	3.6	.9	.9	.8	.7	.7	.7
12	4.3	1.1	1.1	1.0	.8	.8	.8
14	5.0	1.3	1.3	1.1	1.0	1.0	1.0
16	5.8	1.4	1.4	1.3	1.1	1.1	1.1
18	6.5	1.6	1.6	1.4	1.3	1.3	1.3
20	7.2	1.8	1.8	1.6	1.4	1.4	1.4
22	7.9	2.0	2.0	1.8	1.5	1.5	1.5
24	8.6	2.2	2.2	1.9	1.7	1.7	1.7
26	9.4	2.3	2.3	2.1	1.8	1.8	1.8
28	10.1	2.5	2.5	2.2	2.0	2.0	2.0
30	10.8	2.7	2.7	2.4	2.1	2.1	2.1
32	11.5	2.9	2.9	2.6	2.2	2.2	2.2
34	12.2	3.1	3.1	2.7	2.4	2.4	2.4
36	13.0	3.2	3.2	2.9	2.5	2.5	2.5
38	13.7	3.4	3.4	3.0	2.7	2.7	2.7
40	14.4	3.6	3.6	3.2	2.8	2.8	2.8
42	15.1	3.8	3.8	3.4	2.9	2.9	2.9
44	15.8	4.0	4.0	3.5	3.1	3.1	3.1
46	16.6	4.1	4.1	3.7	3.2	3.2	3.2
48	17.3	4.3	4.3	3.8	3.4	3.4	3.4
50	18.0	4.5	4.5	4.0	3.5	3.5	3.5
52	18.7	4.7	4.7	4.2	3.6	3.6	3.6
54	19.4	4.9	4.9	4.3	3.8	3.8	3.8
56	20.2	5.0	5.0	4.5	3.9	3.9	3.9
58	20.9	5.2	5.2	4.6	4.1	4.1	4.1
60	21.6	5.4	5.4	4.8	4.2	4.2	4.2
62	22.3	5.6	5.6	5.0	4.3	4.3	4.3
64	23.0	5.8	5.8	5.1	4.5	4.5	4.5
66	23.8	5.9	5.9	5.3	4.6	4.6	4.6
68	24.5	6.1	6.1	5.4	4.8	4.8	4.8
70	25.2	6.3	6.3	5.6	4.9	4.9	4.9
72	25.9	6.5	6.5	5.8	5.0	5.0	5.0
74	26.6	6.7	6.7	5.9	5.2	5.2	5.2
76	27.4	6.8	6.8	6.1	5.3	5.3	5.3
78	28.1	7.0	7.0	6.2	5.5	5.5	5.5
80	28.8	7.2	7.2	6.4	5.6	5.6	5.6

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message)*

Zone 10							Zone 11					
Wind speed, knots	Line-zone No.						Wind speed, knots	Line-zone No.				
	00	10	20	30	40	50		11	21	31	41	51
2	1.1	.4	.3	.3	.3	.2	2	.8	.3	.3	.3	.2
4	2.2	.8	.7	.6	.5	.5	4	1.5	.6	.6	.5	.5
6	3.3	1.2	1.0	.9	.8	.7	6	2.3	1.0	.8	.8	.7
8	4.4	1.6	1.4	1.2	1.0	1.0	8	3.0	1.3	1.1	1.0	1.0
10	5.5	2.0	1.7	1.5	1.3	1.2	10	3.8	1.6	1.4	1.3	1.2
12	6.6	2.4	2.0	1.8	1.6	1.4	12	4.6	1.9	1.7	1.6	1.4
14	7.7	2.8	2.4	2.1	1.8	1.7	14	5.3	2.2	2.0	1.8	1.7
16	8.8	3.2	2.7	2.4	2.1	1.9	16	6.1	2.6	2.2	2.1	1.9
18	9.9	3.6	3.1	2.7	2.3	2.2	18	6.8	2.9	2.5	2.3	2.2
20	11.0	4.0	3.4	3.0	2.6	2.4	20	7.6	3.2	2.8	2.6	2.4
22	12.1	4.4	3.7	3.3	2.9	2.6	22	8.4	3.5	3.1	2.9	2.6
24	13.2	4.8	4.1	3.6	3.1	2.9	24	9.1	3.8	3.4	3.1	2.9
26	14.3	5.2	4.4	3.9	3.4	3.1	26	9.9	4.2	3.6	3.4	3.1
28	15.4	5.6	4.8	4.2	3.6	3.4	28	10.6	4.5	3.9	3.6	3.4
30	16.5	6.0	5.1	4.5	3.9	3.6	30	11.4	4.8	4.2	3.9	3.6
32	17.6	6.4	5.4	4.8	4.2	3.8	32	12.2	5.1	4.5	4.2	3.8
34	18.7	6.8	5.8	5.1	4.4	4.1	34	12.9	5.4	4.8	4.4	4.1
36	19.8	7.2	6.1	5.4	4.7	4.3	36	13.7	5.8	5.0	4.7	4.3
38	20.9	7.6	6.5	5.7	4.9	4.6	38	14.4	6.1	5.3	4.9	4.6
40	22.0	8.0	6.8	6.0	5.2	4.8	40	15.2	6.4	5.6	5.2	4.8
42	23.1	8.4	7.1	6.3	5.5	5.0	42	16.0	6.7	5.9	5.5	5.0
44	24.2	8.8	7.5	6.6	5.7	5.3	44	16.7	7.0	6.2	5.7	5.3
46	25.3	9.2	7.8	6.9	6.0	5.5	46	17.5	7.4	6.4	6.0	5.5
48	26.4	9.6	8.2	7.2	6.2	5.8	48	18.2	7.7	6.7	6.2	5.8
50	27.5	10.0	8.5	7.5	6.5	6.0	50	19.0	8.0	7.0	6.5	6.0
52	28.6	10.4	8.8	7.8	6.8	6.2	52	19.8	8.3	7.3	6.8	6.2
54	29.7	10.8	9.2	8.1	7.0	6.5	54	20.5	8.6	7.6	7.0	6.5
56	30.8	11.2	9.5	8.4	7.3	6.7	56	21.3	9.0	7.8	7.3	6.7
58	31.9	11.6	9.9	8.7	7.5	7.0	58	22.0	9.3	8.1	7.5	7.0
60	33.0	12.0	10.2	9.0	7.8	7.2	60	22.8	9.6	8.4	7.8	7.2
62	34.1	12.4	10.5	9.3	8.1	7.4	62	23.6	9.9	8.7	8.1	7.4
64	35.2	12.8	10.9	9.6	8.3*	7.7	64	24.3	10.2	9.0	8.3	7.7
66	36.3	13.2	11.2	9.9	8.6	7.9	66	25.1	10.6	9.2	8.6	7.9
68	37.4	13.6	11.6	10.2	8.8	8.2	68	25.8	10.9	9.5	8.8	8.2
70	38.5	14.0	11.9	10.5	9.1	8.4	70	26.6	11.2	9.8	9.1	8.4
72	39.6	14.4	12.2	10.8	9.4	8.6	72	27.4	11.5	10.1	9.4	8.6
74	40.7	14.8	12.6	11.1	9.6	8.9	74	28.1	11.8	10.4	9.6	8.9
76	41.8	15.2	12.9	11.4	9.9	9.1	76	28.9	12.2	10.6	9.9	9.1
78	42.9	15.6	13.3	11.7	10.1	9.4	78	29.6	12.5	10.9	10.1	9.4
80	44.0	16.0	13.6	12.0	10.4	9.6	80	30.4	12.8	11.2	10.4	9.6

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message)–Continued*

Zone 12					Zone 13			
Wind speed, knots	Line-zone No.				Wind speed, knots	Line-zone No.		
	22	32	42	52		33	43	53
2	.6	.3	.3	.2	2	.5	.2	.2
4	1.2	.5	.5	.4	4	1.0	.4	.4
6	1.8	.8	.8	.7	6	1.4	.6	.6
8	2.4	1.0	1.0	.9	8	1.9	.8	.8
10	3.0	1.3	1.3	1.1	10	2.4	1.0	1.0
12	3.6	1.6	1.6	1.3	12	2.9	1.2	1.2
14	4.2	1.8	1.8	1.5	14	3.4	1.4	1.4
16	4.8	2.1	2.1	1.8	16	3.8	1.6	1.6
18	5.4	2.3	2.3	2.0	18	4.3	1.8	1.8
20	6.0	2.6	2.6	2.2	20	4.8	2.0	2.0
22	6.6	2.9	2.9	2.4	22	5.3	2.2	2.2
24	7.2	3.1	3.1	2.6	24	5.8	2.4	2.4
26	7.8	3.4	3.4	2.9	26	6.2	2.6	2.6
28	8.4	3.6	3.6	3.1	28	6.7	2.8	2.8
30	9.0	3.9	3.9	3.3	30	7.2	3.0	3.0
32	9.6	4.2	4.2	3.5	32	7.7	3.2	3.2
34	10.2	4.4	4.4	3.7	34	8.2	3.4	3.4
36	10.8	4.7	4.7	4.0	36	8.6	3.6	3.6
38	11.4	4.9	4.9	4.2	38	9.1	3.8	3.8
40	12.0	5.2	5.2	4.4	40	9.6	4.0	4.0
42	12.6	5.5	5.5	4.6	42	10.1	4.2	4.2
44	13.2	5.7	5.7	4.8	44	10.6	4.4	4.4
46	13.8	6.0	6.0	5.1	46	11.0	4.6	4.6
48	14.4	6.2	6.2	5.3	48	11.5	4.8	4.8
50	15.0	6.5	6.5	5.5	50	12.0	5.0	5.0
52	15.6	6.8	6.8	5.7	52	12.5	5.2	5.2
54	16.2	7.0	7.0	5.9	54	13.0	5.4	5.4
56	16.8	7.3	7.3	6.2	56	13.4	5.6	5.6
58	17.4	7.5	7.5	6.4	58	13.9	5.8	5.8
60	18.0	7.8	7.8	6.6	60	14.4	6.0	6.0
62	18.6	8.1	8.1	6.8	62	14.9	6.2	6.2
64	19.2	8.3	8.3	7.0	64	15.4	6.4	6.4
66	19.8	8.6	8.6	7.3	66	15.8	6.6	6.6
68	20.4	8.8	8.8	7.5	68	16.3	6.8	6.8
70	21.0	9.1	9.1	7.7	70	16.8	7.0	7.0
72	21.6	9.4	9.4	7.9	72	17.3	7.2	7.2
74	22.2	9.6	9.6	8.1	74	17.8	7.4	7.4
76	22.8	9.9	9.9	8.4	76	18.2	7.6	7.6
78	23.4	10.1	10.1	8.6	78	18.7	7.8	7.8
80	24.0	10.4	10.4	8.8	80	19.2	8.0	8.0

Enter table with line–zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-10. *Weighted Wind Speeds (Type 3 Message)-Continued*

Zone 14			Zone 15	
Wind speed, knots	Line-zone No.		Wind speed, knots	Line-zone No.
	44	54		55
2	.4	.2	2	.3
4	.7	.3	4	.6
6	1.1	.5	6	.8
8	1.4	.6	8	1.1
10	1.8	.8	10	1.4
12	2.2	1.0	12	1.7
14	2.5	1.1	14	2.0
16	2.9	1.3	16	2.2
18	3.2	1.4	18	2.5
20	3.6	1.6	20	2.8
22	4.0	1.8	22	3.1
24	4.3	1.9	24	3.4
26	4.7	2.1	26	3.6
28	5.0	2.2	28	3.9
30	5.4	2.4	30	4.2
32	5.8	2.6	32	4.5
34	6.1	2.7	34	4.8
36	6.5	2.9	36	5.0
38	6.8	3.0	38	5.3
40	7.2	3.2	40	5.6
42	7.6	3.4	42	5.9
44	7.9	3.5	44	6.2
46	8.3	3.7	46	6.4
48	8.6	3.8	48	6.7
50	9.0	4.0	50	7.0
52	9.4	4.2	52	7.3
54	9.7	4.3	54	7.6
56	10.1	4.5	56	7.8
58	10.4	4.6	58	8.1
60	10.8	4.8	60	8.4
62	11.2	5.0	62	8.7
64	11.5	5.1	64	9.0
66	11.9	5.3	66	9.2
68	12.2	5.4	68	9.5
70	12.6	5.6	70	9.8
72	13.0	5.8	72	10.1
74	13.3	5.9	74	10.4
76	13.7	6.1	76	10.6
78	14.0	6.2	78	10.9
80	14.4	6.4	80	11.2

Enter table with line-zone number and zone wind speed to the nearest knot. Obtain weighted wind to the nearest tenth of a knot. Interpolate if necessary.

Table 2-11. *Fahrenheit to Celsius Temperatures*

°F	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
+120	+48.89	+48.94	+49.00	+49.06	+49.11	+49.17	+49.22	+49.28	+49.33	+49.39
119	48.33	48.39	48.44	48.50	48.56	48.61	48.67	48.72	48.78	48.83
118	47.78	47.83	47.89	47.94	48.00	48.06	48.11	48.17	48.22	48.28
117	47.22	47.28	47.33	47.39	47.44	47.50	47.56	47.61	47.67	47.72
116	46.67	46.72	46.78	46.83	46.89	46.94	47.00	47.06	47.11	47.17
+115	+46.11	+46.17	+46.22	+46.28	+46.33	+46.39	+46.44	+46.50	+46.56	+46.61
114	45.56	45.61	45.67	45.72	45.78	45.83	45.89	45.94	46.00	46.06
113	45.00	45.06	45.11	45.17	45.22	45.28	45.33	45.39	45.44	45.50
112	44.44	44.50	44.56	44.61	44.67	44.72	44.78	44.83	44.89	44.94
111	43.89	43.94	44.00	44.06	44.11	44.17	44.22	44.28	44.33	44.39
+110	+43.33	+43.39	+43.44	+43.50	+43.56	+43.61	+43.67	+43.72	+43.78	+43.83
109	42.78	42.83	42.89	42.94	43.00	43.06	43.11	43.17	43.22	43.28
108	42.22	42.28	42.33	42.39	42.44	42.50	42.56	42.61	42.67	42.72
107	41.67	41.72	41.78	41.83	41.89	41.94	42.00	42.06	42.11	42.17
106	41.11	41.17	41.22	41.28	41.33	41.39	41.44	41.50	41.56	41.61
+105	+40.56	+40.61	+40.67	+40.72	+40.78	+40.83	+40.89	+40.94	+41.00	+41.06
104	40.00	40.06	40.11	40.17	40.22	40.28	40.33	40.39	40.44	40.50
103	39.44	39.50	39.56	39.61	39.67	39.72	39.78	39.82	39.89	39.94
102	38.89	38.94	39.00	39.06	39.11	39.17	39.22	39.28	39.33	39.39
101	38.33	38.39	38.44	38.50	38.56	38.61	38.67	38.72	38.78	38.83
+100	+37.78	+37.83	+37.89	+37.94	+38.00	+38.06	+38.11	+38.17	+38.22	+38.28
99	37.22	37.28	37.33	37.39	37.44	37.50	37.56	37.61	37.67	37.72
98	36.67	36.72	36.78	36.83	36.89	36.94	37.00	37.06	37.11	37.17
97	36.11	36.17	36.22	36.28	36.33	36.39	36.44	36.50	36.56	36.61
96	35.56	35.61	35.67	35.72	35.78	35.83	35.89	35.94	36.00	36.06
+95	+35.00	+35.06	+35.11	+35.17	+35.22	+35.28	+35.33	+35.39	+35.44	+35.50
94	34.44	34.50	34.56	34.61	34.67	34.72	34.78	34.83	34.89	34.94
93	33.89	33.94	34.00	34.06	34.11	34.17	34.22	34.28	34.33	34.39
92	33.33	33.39	33.44	33.50	33.56	33.61	33.67	33.72	33.78	33.83
91	32.78	32.83	32.89	32.94	33.00	33.06	33.11	33.17	33.22	33.28
+90	+32.22	+32.28	+32.33	+32.39	+32.44	+32.50	+32.56	+32.61	+32.67	+32.72
89	31.67	31.72	31.78	31.83	31.89	31.94	32.00	32.06	32.11	32.17
88	31.11	31.17	31.22	31.28	31.33	31.39	31.44	31.50	31.56	31.61
87	30.56	30.61	30.67	30.72	30.78	30.83	30.89	30.94	31.00	31.06
86	30.00	30.06	30.11	30.17	30.22	30.28	30.33	30.39	30.44	30.50
+85	+29.44	+29.50	+29.56	+29.61	+29.67	+29.72	+29.78	+29.83	+29.89	+29.94
84	28.89	28.94	29.00	29.06	29.11	29.17	29.22	29.28	29.33	29.39
83	28.33	28.39	28.44	28.50	28.56	28.61	28.67	28.72	28.78	28.83
82	27.78	27.83	27.89	27.94	28.00	28.06	28.11	28.17	28.22	28.28
81	27.22	27.28	27.33	27.39	27.44	27.50	27.56	27.61	27.67	27.72
+80	+26.67	+26.72	+26.78	+26.83	+26.89	+26.94	+27.00	+27.06	+27.11	+27.17
79	26.11	26.17	26.22	26.28	26.33	26.39	26.44	26.50	26.56	26.61
78	25.56	25.61	25.67	25.72	25.78	25.83	25.89	25.94	26.00	26.06
77	25.00	25.06	25.11	25.17	25.22	25.28	25.33	25.39	25.44	25.50
76	24.44	24.50	24.56	24.61	24.67	24.72	24.78	24.83	24.89	24.94
+75	+23.89	+23.94	+24.00	+24.06	+24.11	+24.17	+24.22	+24.28	+24.33	+24.39
74	23.33	23.39	23.44	23.50	23.56	23.61	23.67	23.72	23.78	23.83
73	22.78	22.83	22.89	22.94	23.00	23.06	23.11	23.17	23.22	23.28
72	22.22	22.28	22.33	22.39	22.44	22.50	22.56	22.61	22.67	22.72
71	21.67	21.72	21.78	21.83	21.89	21.94	22.00	22.06	22.11	22.17
+70	+21.11	+21.17	+21.22	+21.28	+21.33	+21.39	+21.44	+21.50	+21.56	+21.61
69	20.56	20.61	20.67	20.72	20.78	20.83	20.89	20.94	21.00	21.06
68	20.00	20.06	20.11	20.17	20.22	20.28	20.33	20.39	20.44	20.50
67	19.44	19.50	19.56	19.61	19.67	19.72	19.78	19.83	19.89	19.94
66	18.89	18.94	19.00	19.06	19.11	19.17	19.22	19.28	19.33	19.39
+65	+18.33	+18.39	+18.44	+18.50	+18.56	+18.61	+18.67	+18.72	+18.78	+18.83
64	17.78	17.83	17.89	17.94	18.00	18.06	18.11	18.17	18.22	18.28
63	17.22	17.28	17.33	17.39	17.44	17.50	17.56	17.61	17.67	17.72
62	16.67	16.72	16.78	16.83	16.89	16.94	17.00	17.06	17.11	17.17
61	16.11	16.17	16.22	16.28	16.33	16.39	16.44	16.50	16.56	16.61

$T_C = 5/9\ [T_F - 32]$ $T_F = 32 + 9/5\ T_C$

Table 2-11. *Fahrenheit to Celsius Temperatures—Continued*

°F.	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
+60	+15.56	+15.61	+15.67	+15.72	+15.78	+15.83	+15.89	+15.94	+16.00	+16.06
59	15.00	15.06	15.11	15.17	15.22	15.28	15.33	15.39	15.44	15.50
58	14.44	14.50	14.56	14.61	14.67	14.72	14.78	14.83	14.89	14.94
57	13.89	13.94	14.00	14.06	14.11	14.17	14.22	14.28	14.33	14.39
56	13.33	13.39	13.44	13.50	13.56	13.61	13.67	13.72	13.78	13.83
+55	+12.78	+12.83	+12.89	+12.94	+13.00	+13.06	+13.11	+13.17	+13.22	+13.28
54	12.22	12.28	12.33	12.39	12.44	12.50	12.56	12.61	12.67	12.72
53	11.67	11.72	11.78	11.83	11.89	11.94	12.00	12.06	12.11	12.17
52	11.11	11.17	11.22	11.28	11.33	11.39	11.44	11.50	11.56	11.61
51	10.56	10.61	10.67	10.72	10.78	10.83	10.89	10.94	11.00	11.06
+50	+10.00	+10.06	+10.11	+10.17	+10.22	+10.28	+10.33	+10.39	+10.44	+10.50
49	9.44	9.50	9.56	9.61	9.67	9.72	9.78	9.83	9.89	9.94
48	8.89	8.94	9.00	9.06	9.11	9.17	9.22	9.28	9.33	9.39
47	8.33	8.39	8.44	8.50	8.56	8.61	8.67	8.72	8.78	8.83
46	7.78	7.83	7.89	7.94	8.00	8.06	8.11	8.17	8.22	8.28
+45	+7.22	+7.28	+7.33	+7.39	+7.44	+7.50	+7.56	+7.61	+7.67	+7.72
44	6.67	6.72	6.78	6.83	6.89	6.94	7.00	7.06	7.11	7.17
43	6.11	6.17	6.22	6.28	6.33	6.39	6.44	6.50	6.56	6.61
42	5.56	5.61	5.67	5.72	5.78	5.83	5.89	5.94	6.00	6.06
41	5.00	5.06	5.11	5.17	5.22	5.28	5.33	5.39	5.44	5.50
+40	+4.44	+4.50	+4.56	+4.61	+4.67	+4.72	+4.78	+4.83	+4.89	+4.94
39	3.89	3.94	4.00	4.06	4.11	4.17	4.22	4.28	4.33	4.39
38	3.33	3.39	3.44	3.50	3.56	3.61	3.67	3.72	3.78	3.83
37	2.78	2.83	2.89	2.94	3.00	3.06	3.11	3.17	3.22	3.28
36	2.22	2.28	2.33	2.39	2.44	2.50	2.56	2.61	2.67	2.72
+35	+1.67	+1.72	+1.78	+1.83	+1.89	+1.94	+2.00	+2.06	+2.11	+2.17
34	+1.11	+1.17	+1.22	+1.28	+1.33	+1.39	+1.44	+1.50	+1.56	+1.61
33	+.56	+.61	+.67	+.72	+.78	+.83	+.89	+.94	+1.00	+1.06
32	.00	+.06	+.11	+.17	+.22	+.28	+.33	+.39	+.44	+.50
31	−.56	−.50	−.44	−.39	−.33	−.28	−.22	−.17	−.11	−.06
+30	−1.11	−1.06	−1.00	−.94	−.89	−.83	−.78	−.72	−.67	−.61
29	1.67	1.61	1.56	1.50	1.44	1.39	1.33	1.28	1.22	1.17
28	2.22	2.17	2.11	2.06	2.00	1.94	1.89	1.83	1.78	1.72
27	2.78	2.72	2.67	2.61	2.56	2.50	2.44	2.39	2.33	2.28
26	3.33	3.28	3.22	3.17	3.11	3.06	3.00	2.94	2.89	2.83
+25	−3.89	−3.83	−3.78	−3.72	−3.67	−3.61	−3.56	−3.50	−3.44	−3.39
24	4.44	4.39	4.33	4.28	4.22	4.17	4.11	4.06	4.00	3.94
23	5.00	4.94	4.89	4.83	4.78	4.72	4.67	4.61	4.56	4.50
22	5.56	5.50	5.44	5.39	5.33	5.28	5.22	5.17	5.11	5.06
21	6.11	6.06	6.00	5.94	5.89	5.83	5.78	5.72	5.67	5.61
+20	−6.67	−6.61	−6.56	−6.50	−6.44	−6.39	−6.33	−6.28	−6.22	−6.17
19	7.22	7.17	7.11	7.06	7.00	6.94	6.89	6.83	6.78	6.72
18	7.78	7.72	7.67	7.61	7.56	7.50	7.44	7.39	7.33	7.28
17	8.33	8.28	8.22	8.17	8.11	8.06	8.00	7.94	7.89	7.83
16	8.89	8.83	8.78	8.72	8.67	8.61	8.56	8.50	8.44	8.39
+15	−9.44	−9.39	−9.33	−9.28	−9.22	−9.17	−9.11	−9.06	−9.00	−8.94
14	10.00	9.94	9.89	9.83	9.78	9.72	9.67	9.61	9.56	9.50
13	10.56	10.50	10.44	10.39	10.33	10.28	10.22	10.17	10.11	10.06
12	11.11	11.06	11.00	10.94	10.89	10.83	10.78	10.72	10.67	10.61
11	11.67	11.61	11.56	11.50	11.44	11.39	11.33	11.28	11.22	11.17
+10	−12.22	−12.17	−12.11	−12.06	−12.00	−11.94	−11.89	−11.83	−11.78	−11.72
9	12.78	12.72	12.67	12.61	12.56	12.50	12.44	12.39	12.33	12.28
8	13.33	13.28	13.22	13.17	13.11	13.06	13.00	12.94	12.89	12.83
7	13.89	13.83	13.78	13.72	13.67	13.61	13.56	13.50	13.44	13.39
6	14.44	14.39	14.33	14.28	14.22	14.17	14.11	14.06	14.00	13.94
+5	−15.00	−14.94	−14.89	−14.83	−14.78	−14.72	−14.67	−14.61	−14.56	−14.50
4	15.56	15.50	15.44	15.39	15.33	15.28	15.22	15.17	15.11	15.06
3	16.11	16.06	16.00	15.94	15.89	15.83	15.78	15.72	15.67	15.61
2	16.67	16.61	16.56	16.50	16.44	16.39	16.33	16.28	16.22	16.17
1	17.22	17.17	17.11	17.06	17.00	16.94	16.89	16.83	16.78	16.72
+0	17.78	17.72	17.67	17.61	17.56	17.50	17.44	17.39	17.33	17.28

$T_C = 5/9\ [T_F - 32]$ $T_F = 32 + 9/5\ T_C$

Table 2-11. *Fahrenheit to Celsius Temperatures—Continued*

°F.	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
−0	−17.78	−17.83	−17.89	−17.94	−18.00	−18.06	−18.11	−18.17	−18.22	−18.28
1	18.33	18.39	18.44	18.50	18.56	18.61	18.67	18.72	18.78	18.83
2	18.89	18.94	19.00	19.06	19.11	19.17	19.22	19.28	19.33	19.39
3	19.44	19.50	19.56	19.61	19.67	19.72	19.78	19.83	19.89	19.94
4	20.00	20.06	20.11	20.17	20.22	20.28	20.33	20.39	20.44	20.50
−5	−20.56	−20.61	−20.67	−20.72	−20.78	−20.83	−20.89	−20.94	−21.00	−21.06
6	21.11	21.17	21.22	21.28	21.33	21.39	21.44	21.50	21.56	21.61
7	21.67	21.72	21.78	21.83	21.89	21.94	22.00	22.06	22.11	22.17
8	22.22	22.28	22.33	22.39	22.44	22.50	22.56	22.61	22.67	22.72
9	22.78	22.83	22.89	22.94	23.00	23.06	23.11	23.17	23.22	23.28
−10	−23.33	−23.39	−23.44	−23.50	−23.56	−23.61	−23.67	−23.72	−23.78	−23.83
11	23.89	23.94	24.00	24.06	24.11	24.17	24.22	24.28	24.33	24.39
12	24.44	24.50	24.56	24.61	24.67	24.72	24.78	24.83	24.89	24.94
13	25.00	25.06	25.11	25.17	25.22	25.28	25.33	25.39	25.44	25.50
14	25.56	25.61	25.67	25.72	25.78	25.83	25.89	25.94	26.00	26.06
−15	−26.11	−26.17	−26.22	−26.28	−26.33	−26.39	−26.44	−26.50	−26.56	−26.61
16	26.67	26.72	26.78	26.83	26.89	26.94	27.00	27.06	27.11	27.17
17	27.22	27.28	27.33	27.39	27.44	27.50	27.56	27.61	27.67	27.72
18	27.78	27.83	27.89	27.94	28.00	28.06	28.11	28.17	28.22	28.28
19	28.33	28.39	28.44	28.50	28.56	28.61	28.67	28.72	28.78	28.83
−20	−28.89	−28.94	−29.00	−29.06	−29.11	−29.17	−29.22	−29.28	−29.33	−29.39
21	29.44	29.50	29.56	29.61	29.67	29.72	29.78	29.83	29.89	29.94
22	30.00	30.06	30.11	30.17	30.22	30.28	30.33	30.39	30.44	30.50
23	30.56	30.61	30.67	30.72	30.78	30.83	30.89	30.94	31.00	31.06
24	31.11	31.17	31.22	31.28	31.33	31.39	31.44	31.50	31.56	31.61
−25	−31.67	−31.72	−31.78	−31.83	−31.89	−31.94	−32.00	−32.06	−32.11	−32.17
26	32.22	32.28	32.33	32.39	32.44	32.50	32.56	32.61	32.67	32.72
27	32.78	32.83	32.89	32.94	33.00	33.06	33.11	33.17	33.22	33.28
28	33.33	33.39	33.44	33.50	33.56	33.61	33.67	33.72	33.78	33.83
29	33.89	33.94	34.00	34.06	34.11	34.17	34.22	34.28	34.33	34.39
−30	−34.44	−34.50	−34.56	−34.61	−34.67	−34.72	−34.78	−34.83	−34.89	−34.94
31	35.00	35.06	35.11	35.17	35.22	35.28	35.33	35.39	35.44	35.50
32	35.56	35.61	35.67	35.72	35.78	35.83	35.89	35.94	36.00	36.06
33	36.11	36.17	36.22	36.28	36.33	36.39	36.44	36.50	36.56	36.61
34	36.67	36.72	36.78	36.83	36.89	36.94	37.00	37.06	37.11	37.17
−35	−37.22	−37.28	−37.33	−37.39	−37.44	−37.50	−37.56	−37.61	−37.67	−37.72
36	37.78	37.83	37.89	37.94	38.00	38.06	38.11	38.17	38.22	38.28
37	38.33	38.39	38.44	38.50	38.56	38.61	38.67	38.72	38.78	38.83
38	38.89	38.94	39.00	39.06	39.11	39.17	39.22	39.28	39.33	39.39
39	39.44	39.50	39.56	39.61	39.67	39.72	39.78	39.83	39.89	39.94
−40	−40.00	−40.06	−40.11	−40.17	−40.22	−40.28	−40.33	−40.39	−40.44	−40.50
41	40.56	40.61	40.67	40.72	40.78	40.83	40.89	40.94	41.00	41.06
42	41.11	41.17	41.22	41.28	41.33	41.39	41.44	41.50	41.56	41.61
43	41.67	41.72	41.78	41.83	41.89	41.94	42.00	42.06	42.11	42.17
44	42.22	42.28	42.33	42.39	42.44	42.50	42.56	42.61	42.67	42.72
−45	−42.78	−42.83	−42.89	−42.94	−43.00	−43.06	−43.11	−43.17	−43.22	−43.28
46	43.33	43.39	43.44	43.50	43.56	43.61	43.67	43.72	43.78	43.83
47	43.89	43.94	44.00	44.06	44.11	44.17	44.22	44.28	44.33	44.39
48	44.44	44.50	44.56	44.61	44.67	44.72	44.78	44.83	44.89	44.94
49	45.00	45.06	45.11	45.17	45.22	45.28	45.33	45.39	45.44	45.50
−50	−45.56	−45.61	−45.67	−45.72	−45.78	−45.83	−45.89	−45.94	−46.00	−46.06
51	46.11	46.17	46.22	46.28	46.33	46.39	46.44	46.50	46.56	46.61
52	46.67	46.72	46.78	46.83	46.89	46.94	47.00	47.06	47.11	47.17
53	47.22	47.28	47.33	47.39	47.44	47.50	47.56	47.61	47.67	47.72
54	47.78	47.83	47.89	47.94	48.00	48.06	48.11	48.17	48.22	48.28
−55	−48.33	−48.39	−48.44	−48.50	−48.56	−48.61	−48.67	−48.72	−48.78	−48.83
56	48.89	48.94	49.00	49.06	49.11	49.17	49.22	49.28	49.33	49.39
57	49.44	49.50	49.56	49.61	49.67	49.72	49.78	49.83	49.89	49.94
58	50.00	50.06	50.11	50.17	50.22	50.28	50.33	50.39	50.44	50.50
59	50.56	50.61	50.67	50.72	50.78	50.83	50.89	50.94	51.00	51.06

$T_C = 5/9\ [T_F - 32]$ $T_F = 32 + 9/5\ T_C$

Table 2-11. *Fahrenheit to Celsius Temperatures—Continued*

°F	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
−60	−51. 11	−51. 17	−51. 22	−51. 28	−51. 33	−51. 39	−51. 44	−51. 50	−51. 56	−51. 61
61	51. 67	51. 72	51. 78	51. 83	51. 89	51. 94	52. 00	52. 06	52. 11	52. 17
62	52. 22	52. 28	52. 33	52. 39	52. 44	52. 50	52. 56	52. 61	52. 67	52. 72
63	52. 78	52. 83	52. 89	52. 94	53. 00	53. 06	53. 11	53. 17	53. 22	53. 28
64	53. 33	53. 39	53. 44	53. 50	53. 56	53. 61	53. 67	53. 72	53. 78	53. 83
−65	−53. 89	−53. 94	−54. 00	−54. 06	−54. 11	−54. 17	−54. 22	−54. 28	−54. 33	−54. 39
66	54. 44	54. 50	54. 56	54. 61	54. 67	54. 72	54. 78	54. 83	54. 89	54. 94
67	55. 00	55. 06	55. 11	55. 17	55. 22	55. 28	55. 33	55. 39	55. 44	55. 50
68	55. 56	55. 61	55. 67	55. 72	55. 78	55. 83	55. 89	55. 94	56. 00	56. 06
69	56. 11	56. 17	56. 22	56. 28	56. 33	56. 39	56. 44	56. 50	56. 56	56. 61
−70	−56. 67	−56. 72	−56. 78	−56. 83	−56. 89	−56. 94	−57. 00	−57. 06	−57. 11	−57. 17
71	57. 22	57. 28	57. 33	57. 39	57. 44	57. 50	57. 56	57. 61	57. 67	57. 72
72	57. 78	57. 83	57. 89	57. 94	58. 00	58. 06	58. 11	58. 17	58. 22	58. 28
73	58. 33	58. 39	58. 44	58. 50	58. 56	58. 61	58. 67	58. 72	58. 78	58. 83
74	58. 89	58. 94	59. 00	59. 06	59. 11	59. 17	59. 22	59. 28	59. 33	59. 39
−75	−59. 44	−59. 50	−59. 56	−59. 61	−59. 67	−59. 72	−59. 78	−59. 83	−59. 89	−59. 94
76	60. 00	60. 06	60. 11	60. 17	60. 22	60. 28	60. 33	60. 39	60. 44	60. 50
77	60. 56	60. 61	60. 67	60. 72	60. 78	60. 83	60. 89	60. 94	61. 00	61. 06
78	61. 11	61. 17	61. 22	61. 28	61. 33	61. 39	61. 44	61. 50	61. 56	61. 61
79	61. 67	61. 72	61. 78	61. 83	61. 89	61. 94	62. 00	62. 06	62. 11	62. 17
−80	−62. 22	−62. 28	−62. 33	−62. 39	−62. 44	−62. 50	−62. 56	−62. 61	−62. 67	−62. 72
81	62. 78	62. 83	62. 89	62. 94	63. 00	63. 06	63. 11	63. 17	63. 22	63. 28
82	63. 33	63. 39	63. 44	63. 50	63. 56	63. 61	63. 67	63. 72	63. 78	63. 83
83	63. 89	63. 94	64. 00	64. 06	64. 11	64. 17	64. 22	64. 28	64. 33	64. 39
84	64. 44	64. 50	64. 56	64. 61	64. 67	64. 72	64. 78	64. 83	64. 89	64. 94
−85	−65. 00	−65. 06	−65. 11	−65. 17	−65. 22	−65. 28	−65. 33	−65. 39	−65. 44	−65. 50
86	65. 56	65. 61	65. 67	65. 72	65. 78	65. 83	65. 89	65. 94	66. 00	66. 06
87	66. 11	66. 17	66. 22	66. 28	66. 33	66. 39	66. 44	66. 50	66. 56	66. 61
88	66. 67	66. 72	66. 78	66. 83	66. 89	66. 94	67. 00	67. 06	67. 11	67. 17
89	67. 22	67. 28	67. 33	67. 39	67. 44	67. 50	67. 56	67. 61	67. 67	67. 72
−90	−67. 78	−67. 83	−67. 89	−67. 94	−68. 00	−68. 06	−68. 11	−68. 17	−68. 22	−68. 28
91	68. 33	68. 39	68. 44	68. 50	68. 56	68. 61	68. 67	68. 72	68. 78	68. 83
92	68. 89	68. 94	69. 00	69. 06	69. 11	69. 17	69. 22	69. 28	69. 33	69. 39
93	69. 44	69. 50	69. 56	69. 61	69. 67	69. 72	69. 78	69. 83	69. 89	69. 94
94	70. 00	70. 06	70. 11	70. 17	70. 22	70. 28	70. 33	70. 39	70. 44	70. 50
−95	−70. 56	−70. 61	−70. 67	−70. 72	−70. 78	−70. 83	−70. 89	−70. 94	−71. 00	−71. 06
96	71. 11	71. 17	71. 22	71. 28	71. 33	71. 39	71. 44	71. 50	71. 56	71. 61
97	71. 67	71. 72	71. 78	71. 83	71. 89	71. 94	72. 00	72. 06	72. 11	72. 17
98	72. 22	72. 28	72. 33	72. 39	72. 44	72. 50	72. 56	72. 71	72. 67	72. 72
99	72. 78	72. 83	72. 89	72. 94	73. 00	73. 06	73. 11	73. 17	73. 17	73. 28
−100	−73. 33	−73. 39	−73. 44	−73. 50	−73. 56	−73. 61	−73. 67	−73. 72	−73. 78	−73. 83
101	73. 89	73. 94	74. 00	74. 06	74. 11	74. 17	74. 22	74. 28	74. 33	74. 39
102	74. 44	74. 50	74. 56	74. 61	74. 67	74. 72	74. 78	74. 83	74. 89	74. 94
103	75. 00	75. 06	75. 11	75. 17	75. 22	75. 28	75. 33	75. 39	75. 44	75. 50
104	75. 56	75. 61	75. 67	75. 72	75. 78	75. 83	75. 89	75. 94	76. 00	76. 06
−105	−76. 11	−76. 17	−76. 22	−76. 28	−76. 33	−76. 39	−76. 44	−76. 50	−76. 56	−76. 61
106	76. 67	76. 72	76. 78	76. 83	76. 89	76. 94	77. 00	77. 06	77. 11	77. 17
107	77. 22	77. 28	77. 33	77. 39	77. 44	77. 50	77. 56	77. 61	77. 67	77. 72
108	77. 78	77. 83	77. 89	77. 94	78. 00	78. 06	78. 11	78. 17	78. 22	78. 28
109	78. 33	78. 39	78. 44	78. 50	78. 56	78. 61	78. 67	78. 72	78. 78	78. 83
−110	−78. 89	−78. 94	−79. 00	−79. 06	−79. 11	−79. 17	−79. 22	−79. 28	−79. 33	−79. 39
111	79. 44	79. 50	79. 56	79. 61	79. 67	79. 72	79. 78	79. 83	79. 89	79. 94
112	80. 00	80. 06	80. 11	80. 17	80. 22	80. 28	80. 33	80. 39	80. 44	80. 50
113	80. 56	80. 61	80. 67	80. 72	80. 78	80. 83	80. 89	80. 94	81. 00	81. 06
114	81. 11	81. 17	81. 22	81. 28	81. 33	81. 39	81. 44	81. 50	81. 56	81. 61
−115	−81. 67	−81. 72	−81. 78	−81. 83	−81. 89	−81. 94	−82. 00	−82. 06	−82. 11	−82. 17
116	82. 22	82. 28	82. 33	82. 39	82. 44	82. 50	82. 56	82. 61	82. 67	82. 72
117	82. 78	82. 83	82. 89	82. 94	83. 00	83. 06	83. 11	83. 17	83. 22	83. 28
118	83. 33	83. 39	83. 44	83. 50	83. 56	83. 61	83. 67	83. 72	83. 78	83. 83
119	83. 89	83. 94	84. 00	84. 06	84. 11	84. 17	84. 22	84. 28	84. 33	84. 39

$T_C = 5/9\ [T_F - 32]$ $T_F = 32 + 9/5\ T_C$

Table 2-12. *Feet to Meters Conversion*

1 foot = 0.3048 meters

Feet	0	10	20	30	40	50	60	70	80	90
0	0.00	3.05	6.10	9.14	12.19	15.24	18.29	21.34	24.38	27.43
100	30.48	33.53	36.58	39.62	42.67	45.72	48.77	51.82	54.86	57.91
200	60.96	64.01	67.06	70.10	73.15	76.20	79.25	82.30	85.34	88.39
300	91.44	94.49	97.54	100.58	103.63	106.68	109.73	112.78	115.82	118.87
400	121.92	124.97	128.02	131.06	134.11	137.16	140.21	143.26	146.30	149.35
500	152.40	155.45	158.50	161.54	164.59	167.64	170.69	173.74	176.78	179.83
600	182.88	185.93	188.98	192.02	195.07	198.12	201.17	204.22	207.26	210.31
700	213.36	216.41	219.46	222.50	225.55	228.60	231.65	234.70	237.74	240.79
800	243.84	246.89	249.94	252.98	256.03	259.08	262.13	265.18	268.22	271.27
900	274.32	277.37	280.42	283.46	286.51	289.56	292.61	295.66	298.70	301.75
1,000	304.80	307.85	310.90	313.94	316.99	320.04	323.09	326.14	329.18	332.23
1,100	335.28	338.33	341.38	344.42	347.47	350.52	353.57	356.62	359.66	362.71
1,200	365.76	368.81	371.86	374.90	377.95	381.00	384.05	387.10	390.14	393.19
1,300	396.24	399.29	402.34	405.38	408.43	411.48	414.53	417.58	420.62	423.67
1,400	426.72	429.77	432.82	435.86	438.91	441.96	445.01	448.06	451.10	454.15
1,500	457.20	460.25	463.30	466.34	469.39	472.44	475.49	478.54	481.58	484.63
1,600	487.68	490.73	493.78	496.82	499.87	502.92	505.97	509.02	512.06	515.11
1,700	518.16	521.21	524.26	527.30	530.35	533.40	536.45	539.50	542.54	545.59
1,800	548.64	551.69	554.74	557.78	560.83	563.88	566.93	569.98	573.02	576.07
1,900	579.12	582.17	585.22	588.26	591.31	594.36	597.41	600.46	603.50	606.55
2,000	609.60	612.65	615.70	618.74	621.79	624.84	627.89	630.94	633.98	637.03
2,100	640.08	643.13	646.18	649.22	652.27	655.32	658.37	661.42	664.46	667.51
2,200	670.56	673.61	676.66	679.70	682.75	685.80	688.85	691.90	694.94	697.99
2,300	701.04	704.09	707.14	710.18	713.23	716.28	719.33	722.38	725.42	728.47
2,400	731.52	734.57	737.62	740.66	743.71	746.76	749.81	752.86	755.90	758.95
2,500	762.00	765.05	768.10	771.14	774.19	777.24	780.29	783.34	786.38	789.43
2,600	792.48	795.53	798.58	801.62	804.67	807.72	810.77	813.82	816.86	819.91
2,700	822.96	826.01	829.06	832.10	835.15	838.20	841.25	844.30	847.34	850.39
2,800	853.44	856.49	859.54	862.58	865.63	868.68	871.73	874.78	877.82	880.87
2,900	883.92	886.97	890.02	893.06	896.11	899.16	902.21	905.26	908.30	911.35
3,000	914.40	917.45	920.50	923.54	926.59	929.64	932.69	935.74	938.78	941.83
3,100	944.88	947.93	950.98	954.02	957.08	960.12	963.17	966.22	969.26	972.31
3,200	975.36	978.41	981.46	984.50	987.55	990.60	993.65	996.70	999.74	1,002.79
3,300	1,005.84	1,008.89	1,011.94	1,014.98	1,018.03	1,021.08	1,024.13	1,027.18	1,030.22	1,033.27
3,400	1,036.32	1,039.37	1,042.42	1,045.46	1,048.51	1,051.56	1,054.61	1,057.66	1,060.70	1,063.75
3,500	1,066.80	1,069.85	1,072.90	1,075.94	1,078.99	1,082.04	1,085.09	1,088.14	1,091.18	1,094.23
3,600	1,097.28	1,100.33	1,103.38	1,106.42	1,109.47	1,112.52	1,115.57	1,118.62	1,121.66	1,124.71
3,700	1,127.76	1,130.81	1,133.86	1,136.90	1,139.95	1,143.00	1,146.05	1,149.10	1,152.14	1,155.19
3,800	1,158.24	1,161.29	1,164.34	1,167.38	1,170.43	1,173.48	1,176.53	1,179.58	1,182.62	1,185.67
3,900	1,188.72	1,191.77	1,194.82	1,197.86	1,200.91	1,203.96	1,207.01	1,210.06	1,213.10	1,216.15
4,000	1,219.20	1,222.25	1,225.30	1,228.34	1,231.39	1,234.44	1,237.49	1,240.54	1,243.58	1,246.63
4,100	1,249.68	1,252.73	1,255.78	1,258.82	1,261.87	1,264.92	1,267.97	1,271.02	1,274.06	1,277.11
4,200	1,280.16	1,283.21	1,286.26	1,289.30	1,292.35	1,295.40	1,298.45	1,301.50	1,304.54	1,307.59
4,300	1,310.64	1,313.69	1,316.74	1,319.78	1,322.83	1,325.88	1,328.93	1,331.98	1,335.02	1,338.07
4,400	1,341.12	1,344.17	1,347.22	1,350.26	1,353.31	1,356.36	1,359.41	1,362.46	1,365.50	1,368.55
4,500	1,371.60	1,374.65	1,377.70	1,380.74	1,383.79	1,386.84	1,389.89	1,392.94	1,395.98	1,399.03
4,600	1,402.08	1,405.13	1,408.18	1,411.22	1,414.27	1,417.32	1,420.37	1,423.42	1,426.46	1,429.51
4,700	1,432.56	1,435.61	1,438.66	1,441.70	1,444.75	1,447.80	1,450.85	1,453.90	1,456.94	1,459.99
4,800	1,463.04	1,466.09	1,469.14	1,472.18	1,475.23	1,478.28	1,481.33	1,484.38	1,487.42	1,490.47
4,900	1,493.52	1,496.57	1,499.62	1,502.66	1,505.71	1,508.76	1,511.81	1,514.86	1,517.90	1,520.95
5,000	1,524.00	1,527.05	1,530.10	1,533.14	1,536.19	1,539.24	1,542.29	1,545.34	1,548.38	1,551.43

Proportional parts:
feet 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0
meters .30 .61 .91 1.22 1.52 1.83 2.13 2.44 2.74

Table 2-13. *Mils to Degrees Conversion*

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
5	0. 3	205	11. 5	405	22. 8	605	34. 0
10	. 6	210	11. 8	410	23. 1	610	34. 3
15	. 8	215	12. 1	415	23. 3	615	34. 6
20	1. 1	220	12. 4	420	23. 6	620	34. 9
25	1. 4	225	12. 7	425	23. 9	625	35. 2
30	1. 7	230	12. 9	430	24. 2	630	35. 4
35	2. 0	235	13. 2	435	24. 5	635	35. 7
40	2. 2	240	13. 5	440	24. 8	640	36. 0
45	2. 5	245	13. 8	445	25. 0	645	36. 3
50	2. 8	250	14. 1	450	25. 3	650	36. 6
55	3. 1	255	14. 3	455	25. 6	655	36. 8
60	3. 4	260	14. 6	460	25. 9	660	37. 1
65	3. 7	265	14. 9	465	26. 2	665	37. 4
70	3. 9	270	15. 2	470	26. 4	670	37. 7
75	4. 2	275	15. 5	475	26. 7	675	38. 0
80	4. 5	280	15. 8	480	27. 0	680	38. 2
85	4. 8	285	16. 0	485	27. 3	685	38. 5
90	5. 1	290	16. 3	490	27. 6	690	38. 8
95	5. 3	295	16. 6	495	27. 8	695	39. 1
100	5. 6	300	16. 9	500	28. 1	700	39. 4
105	5. 9	305	17. 2	505	28. 4	705	39. 7
110	6. 2	310	17. 4	510	28. 7	710	39. 9
115	6. 5	315	17. 7	515	29. 0	715	40. 2
120	6. 8	320	18. 0	520	29. 2	720	40. 5
125	7. 0	325	18. 3	525	29. 5	725	40. 8
130	7. 3	330	18. 6	530	29. 8	730	41. 1
135	7. 6	335	18. 8	535	30. 1	735	41. 3
140	7. 9	340	19. 1	540	30. 4	740	41. 6
145	8. 2	345	19. 4	545	30. 7	745	41. 9
150	8. 4	350	19. 7	550	30. 9	750	42. 2
155	8. 7	355	20. 0	555	31. 2	755	42. 5
160	9. 0	360	20. 2	560	31. 5	760	42. 8
165	9. 3	365	20. 5	565	31. 8	765	43. 0
170	9. 6	370	20. 8	570	32. 1	770	43. 3
175	9. 8	375	21. 1	575	32. 3	775	43. 6
180	10. 1	380	21. 4	580	32. 6	780	43. 9
185	10. 4	385	21. 7	585	32. 9	785	44. 2
190	10. 7	380	21. 9	590	33. 2	790	44. 4
195	11. 0	395	22. 2	595	33. 5	795	44. 7
200	11. 2	400	22. 5	600	33. 8	800	45 0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Table 2-13. Mils to Degrees Conversion—Continued

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
805	45. 3	1,005	56. 5	1,205	67. 8	1,405	79. 0
810	45. 6	1,010	56. 8	1,210	68. 1	1,410	79. 3
815	45. 8	1,015	57. 1	1,215	68. 3	1,415	79. 6
820	46. 1	1,020	57. 4	1,220	68 6	1,420	79. 9
825	46. 4	1,025	57. 7	1,225	68. 9	1,425	80. 2
830	46. 7	1,030	57. 9	1,230	69. 2	1,430	80. 4
835	47. 0	1,035	58. 2	1,235	69. 5	1,435	80. 7
840	47. 2	1,040	58. 5	1,240	69. 8	1,440	81. 0
845	47. 5	1,045	58. 8	1,245	70. 0	1,445	81. 3
850	47. 8	1,050	59. 1	1,250	70. 3	1,450	81. 6
855	48. 1	1,055	59. 3	1,255	70. 6	1,455	81. 8
860	48. 4	1,060	59. 6	1,260	70. 9	1,460	82. 1
865	48. 7	1,065	59. 9	1,265	71. 2	1,465	82. 4
870	48. 9	1,070	60. 2	1,270	71. 4	1,470	82. 7
875	49. 2	1,075	60. 5	1,275	71. 7	1,475	83. 0
880	49. 5	1,080	60. 8	1,280	72. 0	1,480	83. 2
885	49. 8	1,085	61. 0	1,285	72. 3	1,485	83. 5
890	50. 1	1,090	61. 3	1,290	72. 6	1,490	83. 8
895	50. 3	1,095	61. 6	1,295	72. 8	1,495	84. 1
900	50. 6	1,100	61. 9	1,300	73. 1	1,500	84. 4
905	50. 9	1,105	62. 2	1,305	73. 4	1,505	84. 7
910	51. 2	1,110	62. 4	1,310	73. 7	1,510	84. 9
915	51. 5	1,115	62. 7	1,315	74. 0	1,515	85. 2
920	51. 8	1,120	63. 0	1,320	74. 2	1,520	85. 5
925	52. 0	1,125	63. 3	1,325	74. 5	1,525	85. 8
930	52. 3	1,130	63. 6	1,330	74. 8	1,530	86. 1
935	52. 6	1,135	63. 8	1,335	75. 1	1,535	86. 3
940	52. 9	1,140	64. 1	1,340	75. 4	1,540	86. 6
945	53. 2	1,145	64. 4	1,345	75. 7	1,545	86. 9
950	53. 4	1,150	64. 7	1,350	75. 9	1,550	87. 2
955	53. 7	1,155	65. 0	1,355	76. 2	1,555	87. 5
960	54. 0	1,160	65. 2	1,360	76. 5	1,560	87. 8
965	54. 3	1,165	65. 5	1,365	76. 8	1,565	88. 0
970	54. 6	1,170	65. 8	1,370	77. 1	1,570	88. 3
975	54. 8	1,175	66. 1	1,375	77. 3	1,575	88. 6
980	55. 1	1,180	66. 4	1,380	77. 6	1,580	88. 9
985	55. 4	1,185	66. 7	1,385	77. 9	1,585	89. 2
990	55. 7	1,190	66. 9	1,390	78. 2	1,590	89. 4
995	56. 0	1,195	67. 2	1,395	78. 5	1,595	89. 7
1,000	56. 2	1,200	67. 5	1,400	78. 8	1,600	90. 0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Table 2-13. Mils to Degrees Conversion—Continued

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
1,605	90. 3	1,805	101. 5	2,005	112. 8	2,205	124. 0
1,610	90. 6	1,810	101. 8	2,010	113. 1	2,210	124. 3
1,615	90. 8	1,815	102. 1	2,015	113. 3	2,215	124. 6
1,620	91. 1	1,820	102. 4	2,020	113. 6	2,220	124. 9
1,625	91. 4	1,825	102. 7	2,025	113. 9	2,225	125. 2
1,630	91. 7	1,830	102. 9	2,030	114. 2	2,230	125. 4
1,635	92. 0	1,835	103. 2	2,035	114. 5	2,235	125. 7
1,640	92. 2	1,840	103. 5	2,040	114. 8	2,240	126. 0
1,645	92. 5	1,845	103. 8	2,045	115. 0	2,245	126. 3
1,650	92. 8	1,850	104. 1	2,050	115. 3	2,250	126. 6
1,655	93. 1	1,855	104. 3	2,055	115. 6	2,255	126. 8
1,660	93. 4	1,860	104. 6	2,060	115. 9	2,260	127. 1
1,665	93. 7	1,865	104. 9	2,065	116. 2	2,265	127. 4
1,670	93. 9	1,870	105. 2	2,070	116. 4	2,270	127. 7
1,675	94. 2	1,875	105. 5	2,075	116. 7	2,275	128. 0
1,680	94. 5	1,880	105. 8	2,080	117. 0	2,280	128. 2
1,685	94. 8	1,885	106. 0	2,085	117. 3	2,285	128. 5
1,690	95. 1	1,890	106. 3	2,090	117. 6	2,290	128. 8
1,695	95. 3	1,895	106. 6	2,095	117. 8	2,295	129. 1
1,700	95. 6	1,900	106. 9	2,100	118. 1	2,300	129. 4
1,705	95. 9	1,905	107. 2	2,105	118. 4	2,305	129. 7
1,710	96. 2	1,910	104. 4	2,110	118. 7	2,310	129. 9
1,715	96. 5	1,915	107. 7	2,115	119. 0	2,315	130. 2
1,720	96. 8	1,920	108. 0	2,120	119. 2	2,320	130. 5
1,725	97. 0	1,925	108. 3	2,125	119. 5	2,325	130. 8
1,730	97. 3	1,930	108. 6	2,130	119. 8	2,330	131. 1
1,735	97. 6	1,935	108. 8	2,135	120. 1	2,335	131. 3
1,740	97. 9	1,940	109. 1	2,140	120. 4	2,340	131. 6
1,745	98. 2	1,945	109. 4	2,145	120. 7	2,345	131. 9
1,750	98. 4	1,950	109. 7	2,150	120. 9	2,350	132. 2
1,755	98. 7	1,955	110. 0	2,155	121. 2	2,355	132. 5
1,760	99. 0	1,960	110. 2	2,160	121. 5	2,360	132. 8
1,765	99. 3	1,965	110. 5	2,165	121. 8	2,365	133. 0
1,770	99. 6	1,970	110. 8	2,170	122. 1	2,370	133. 3
1,775	99. 8	1,975	111. 1	2,175	122. 3	2,375	133. 6
1,780	100. 1	1,980	111. 4	2,180	122. 6	2,380	133. 9
1,785	100. 4	1,985	111. 7	2,185	122. 9	2,385	134. 2
1,790	100. 7	1,990	111. 9	2,190	123. 2	2,390	134. 4
1,795	101. 0	1,995	112. 2	2,195	123. 5	2,395	134. 7
1,800	101. 2	2,000	112. 5	2,200	123. 8	2,400	135. 0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Table 2-13. Mils to Degrees Conversion—Continued

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
2,405	135. 3	2,605	146. 5	2,805	157. 8	3,005	169. 0
2,410	135. 6	2,610	146. 8	2,810	158. 1	3,010	169. 3
2,415	135. 8	2.615	147. 1	2,815	158. 3	3,015	169. 6
2,420	136. 1	2,620	147. 4	2,820	158. 6	3,020	169. 9
2,425	136. 4	2,625	147. 7	2,825	158. 9	3,025	170. 2
2,430	136. 7	2,630	147. 9	2,830	159. 2	3,030	170. 4
2,435	137. 0	2,635	148. 2	2,835	159. 5	3,035	170. 7
2,440	137. 2	2,640	148. 5	2,840	159. 8	3,040	171. 0
2,445	137. 5	2,645	148. 8	2,845	160. 0	3,045	171. 3
2,450	137. 8	2,650	149. 1	2,850	160. 3	3,050	171. 6
2,455	138. 1	2,655	149. 3	2,855	160. 6	3,055	171. 8
2,460	138. 4	2,660	149. 6	2,860	160. 9	3,060	172. 1
2,465	138. 7	2,665	149. 9	2,865	161. 2	3,065	172. 4
2,470	138. 9	2,670	150. 2	2,870	161. 4	3,070	172. 7
2,475	139. 2	2,675	150. 5	2,875	161. 7	3,075	173. 0
2,480	139. 5	2,680	150. 8	2,880	162. 0	3,080	173. 2
2,485	139. 8	2,685	151. 0	2,885	162. 3	3,085	173. 5
2,490	140. 1	2,690	151. 3	2,890	162. 6	3,090	173. 8
2,495	140. 3	2,695	151. 6	2,895	162. 8	3,095	174. 1
2,500	140. 6	2,700	151. 9	2,900	163. 1	3,100	174. 4
2,505	140. 9	2,705	152. 2	2,905	163. 4	3,105	174. 7
2,510	141. 2	2,710	152. 4	2,910	163. 7	3,110	174. 9
2,515	141. 5	2,715	152. 7	2,915	164. 0	3,115	175. 2
2,520	141. 8	2,720	153. 0	2,920	164. 2	3,120	175. 5
2,525	142. 0	2,725	153. 3	2,925	164. 5	3,125	175. 8
2,530	142. 3	2,730	153. 6	2,930	164. 8	3,130	176. 1
2,535	142. 6	2,735	153. 8	2,935	165. 1	3,135	176. 3
2,540	142. 9	2,740	154. 1	2,940	165. 4	3,140	176. 6
2,545	143. 2	2,745	154. 4	2,945	165. 7	3,145	176. 9
2,550	143. 4	2,750	154. 7	2,950	165. 9	3,150	177. 2
2,555	143. 7	2,755	155. 0	2,955	166. 2	3,155	177. 5
2,560	144. 0	2,760	155. 2	2,960	166. 5	3,160	177. 8
2,565	144. 3	2,765	155. 5	2,965	166. 8	3,165	178. 0
2,570	144. 6	2,770	155. 8	2,970	167. 1	3,170	178. 3
2,575	144. 8	2,775	156. 1	2,975	167. 3	3,175	178. 6
2,580	145. 1	2,780	156. 4	2,980	167. 6	3,180	178. 9
2,585	145. 4	2,785	156. 7	2,985	167. 9	3,185	179. 2
2,590	145. 7	2,790	156. 9	2,990	168. 2	3,190	197. 4
2,595	146. 0	2,795	157. 2	2,995	168. 5	3,195	179. 7
2,600	146. 2	2,800	157. 5	3,000	168. 8	3,200	180. 0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Table 2-13. Mils to Degrees Conversion—Continued

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
3,205	180. 3	3,405	191. 5	3,605	202. 8	3,805	214. 0
3,210	180. 6	3,410	191. 8	3,610	203. 1	3,810	214. 3
3,215	180. 8	3,415	192. 1	3,615	203. 3	3,815	214. 6
3,220	181. 1	3,420	192. 4	3,620	203. 6	3,820	214. 9
3,225	181. 4	3,425	192. 7	3,625	203. 9	3,825	215. 2
3,230	181. 7	3,430	192. 9	3,630	204. 2	3,830	215. 4
3,235	182. 0	3,435	193. 2	3,635	204. 5	3,835	215. 7
3,240	182. 2	3,440	193. 5	3,640	204. 8	3,840	216. 0
3,245	182. 5	3,445	193. 8	3,645	205. 0	3,845	316. 3
3,250	182. 8	3,450	194. 1	3,650	205. 3	3,850	216. 6
3,255	183. 1	3,455	194. 3	3,655	205. 6	3,855	216. 8
3,260	183. 4	3,460	194. 6	3,660	205. 9	3,860	217. 1
3,265	183. 7	3,465	194. 9	3,665	206. 2	3,865	217. 4
3,270	183. 9	3,470	195. 2	3,670	206. 4	3,870	217. 7
3,275	184. 2	3,475	195. 5	3,675	206. 7	3,875	218. 0
3,280	184. 5	3,480	195. 8	3,680	207. 0	3,880	218. 2
3,285	184. 8	3,485	196. 0	3,685	207. 3	3,885	218. 5
3,290	185. 1	3,490	196. 3	3,690	207. 6	3,890	218. 8
3,295	185. 3	3,495	196. 6	3,695	207. 8	3,895	219. 1
3,300	185. 6	3,500	196. 9	3,700	208. 1	3,900	219. 4
3,305	185. 9	3,505	197. 2	3,705	208. 4	3,905	219. 7
3,310	186. 2	3,510	197. 4	3,710	208. 7	3,910	219. 9
3,315	186. 5	3,515	197. 7	3,715	209. 0	3,915	220. 2
3,320	186. 8	3,520	198. 0	3,720	209. 2	3,920	220. 5
3,325	187. 0	3,525	198. 3	3,725	209. 5	3,925	220. 8
3,330	187. 3	3,530	198. 6	3,730	209. 8	3,930	221. 1
3,335	187. 6	3,535	198. 8	3,735	210. 1	3,935	221. 3
3,340	187. 9	3,540	199. 1	3,740	210. 4	3,940	221. 6
3,345	188. 2	3,545	199. 4	3,745	210. 7	3,945	221. 9
3,350	188. 4	3,550	199. 7	3,750	210. 9	3,950	222. 2
3,355	188. 7	3,555	200. 0	3,755	211. 2	3,955	222. 5
3,360	189. 0	3,560	200. 2	3,760	211. 5	3,960	222. 8
3,365	189. 3	3,565	200. 5	3,765	211. 8	3,965	223. 0
3,370	189. 6	3,570	200. 8	3,770	212. 1	3,970	223. 3
3,375	189. 8	3,575	201. 1	3,775	212. 3	3,975	223. 6
3,380	190. 1	3,580	201. 4	3,780	212. 6	3,980	223. 9
3,385	190. 4	3,585	201. 7	3,785	212. 9	3,985	224. 2
3,390	190. 7	3,590	201. 9	3,790	213. 2	3,990	224. 4
3,395	191. 0	3,595	202. 2	3,795	213. 5	3,995	224. 7
3,400	191. 2	3,600	202. 5	3,800	213. 8	4,000	225. 0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Table 2-13. Mils to Degrees Conversion—Continued

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
4,005	225.3	4,205	236.5	4,405	247.8	4,605	259.0
4,010	225.6	4,210	236.8	4,410	248.1	4,610	259.3
4,015	225.8	4,215	237.1	4,415	248.3	4,615	259.6
4,020	226.1	4,220	237.4	4,420	248.6	4,620	259.9
4,025	226.4	4,225	237.7	4,425	248.9	4,625	260.2
4,030	226.7	4,230	237.9	4,430	249.2	4,630	260.4
4,035	227.0	4,235	238.2	4,435	249.5	4,635	260.7
4,040	227.2	4,240	238.5	4,440	249.8	4,640	261.0
4,045	227.5	4,245	238.8	4,445	250.0	4,645	261.3
4,050	227.8	4,250	239.1	4,450	250.3	4,650	261.6
4,055	228.1	4,255	239.3	4,455	250.6	4,655	261.8
4,060	228.4	4,260	239.6	4,460	250.9	4,660	262.1
4,065	228.7	4,265	239.9	4,465	251.2	4,665	262.4
4,070	228.9	4,270	240.2	4,470	251.4	4,670	262.7
4,075	229.2	4,275	240.5	4,475	251.7	4,675	263.0
4,080	229.5	4,280	240.8	4,480	252.0	4,680	263.2
4,085	229.8	4,285	241.0	4,485	252.3	4,685	263.5
4,090	230.1	4,290	241.3	4,490	252.6	4,690	263.8
4,095	230.3	4,295	241.6	4,495	252.8	4,695	264.1
4,100	230.6	4,300	241.9	4,500	253.1	4,700	264.4
4,105	230.9	4,305	242.2	4,505	253.4	4,705	264.7
4,110	231.2	4,310	242.4	4,510	253.7	4,710	264.9
4,115	231.5	4,315	242.7	4,515	254.0	4,715	265.2
4,120	231.8	4,320	243.0	4,520	254.2	4,720	265.5
4,125	232.0	4,325	243.3	4,525	254.5	4,725	265.8
4,130	232.3	4,330	243.6	4,530	254.8	4,730	266.1
4,135	232.6	4,335	243.8	4,535	255.1	4,735	266.3
4,140	232.9	4,340	244.1	4,540	255.4	4,740	266.6
4,145	233.2	4,345	244.4	4,545	255.7	4,745	266.9
4,150	233.4	4,350	244.7	4,550	255.9	4,750	267.2
4,155	233.7	4,355	245.0	4,555	256.2	4,755	267.5
4,160	234.0	4,360	245.2	4,560	256.5	4,760	267.8
4,165	234.3	4,365	245.5	4,565	256.8	4,765	268.0
4,170	234.6	4,370	245.8	4,570	257.1	4,770	268.3
4,175	234.8	4,375	246.1	4,575	257.3	4,775	268.6
4,180	235.1	4,380	246.4	4,580	257.6	4,780	268.9
4,185	235.4	4,385	246.7	4,585	257.9	4,785	269.2
4,190	235.7	4,390	246.9	4,590	258.2	4,790	269.4
4,195	236.0	4,395	247.2	4,595	258.5	4,795	269.7
4,200	236.2	4,400	247.5	4,600	258.8	4,800	270.0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Table 2-13. Mils to Degrees Conversion—Continued

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
4,805	270. 3	5,005	281. 5	5,205	292. 8	5,405	304. 0
4,810	270. 6	5,010	281. 8	5,210	293. 1	5,410	304. 3
4,815	270. 8	5,015	282. 1	5,215	293. 3	5,415	304. 6
4,820	271. 1	5,020	282. 4	5,220	293. 6	5,420	304. 9
4,825	271. 4	5,025	282. 7	5,225	293. 9	5,425	305. 2
4,830	271. 7	5,030	282. 9	5,230	294. 2	5,430	305. 4
4,835	272. 0	5,035	283. 2	5,235	295. 5	5,435	305. 7
4,840	272. 2	5,040	283. 5	5,240	294. 8	5,440	306. 0
4,845	272. 5	5,045	283. 8	5,245	295. 0	5,445	306. 3
4,850	272. 8	5,050	284. 1	5,250	295. 3	5,450	306. 6
4,855	273. 1	5,055	284. 3	5,255	295. 6	5,455	306. 8
4,860	273. 4	5,060	284. 6	5,260	295. 9	5,460	307. 1
4,865	273. 7	5,065	284. 9	5,265	296. 2	5,465	307. 4
4,870	273. 9	5,070	285. 2	5,270	296. 4	5,470	307. 7
4,875	274. 2	5,075	285. 5	5,275	296. 7	5,475	308. 0
4,880	274. 5	5,080	285. 8	5,280	297. 0	5,480	308. 2
4,885	274. 8	5,085	286. 0	5,285	297. 3	5,485	308. 5
4,890	275. 1	5,090	286. 3	5,290	297. 6	5,490	308. 8
4,895	275. 3	5,095	286. 6	5,295	297. 8	5,495	309. 1
4,900	275. 6	5,100	286. 9	5,300	298. 1	5,500	309. 4
4,905	275. 9	5,105	287. 2	5,305	298. 4	5,505	309. 7
4,910	276. 2	5,110	287. 4	5,310	298. 7	5,510	309. 9
4,915	276. 5	5,115	287. 7	5,315	299. 0	5,515	310. 2
4,920	276. 8	5,120	288. 0	5,320	299. 2	5,520	310. 5
4,925	277. 0	5,125	288. 3	5,325	299. 5	5,525	310. 8
4,930	277. 3	5,130	288. 6	5,330	299. 8	5,530	311. 1
4,935	277. 6	5,135	288. 8	5,335	300. 1	5,535	311. 3
4,940	277. 9	5,140	289. 1	5,340	300. 4	5,540	311. 6
4,945	278. 2	5,145	289. 4	5,345	300. 7	5,545	311. 9
4,950	278. 4	5,150	289. 7	5,350	300. 9	5,550	312. 2
4,955	278. 7	5,155	290. 0	5,355	301. 2	5,555	312. 5
4,960	279. 0	5,160	290. 2	5,360	301. 5	5,560	312. 8
4,965	279. 3	5,165	290. 5	5,365	301. 8	5,565	313. 0
4,970	279. 6	5,170	290. 8	5,370	302. 1	5,570	313. 3
4,975	279. 8	5,175	291. 1	5,375	302. 3	5,575	313. 6
4,980	280. 1	5,180	291. 4	5,380	302. 6	5,580	313. 9
4,985	280. 4	5,185	291. 7	5,385	302. 9	5,585	314. 2
4,990	280. 7	5,190	291. 9	5,390	303. 2	5,590	314. 4
4,995	281. 0	5,195	292. 2	5,395	303. 5	5,595	314. 7
5,000	281. 2	5,200	292. 5	5,400	303. 8	5,600	315. 0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Table 2-13. Mils to Degrees Conversion—Continued

Mils	Degrees	Mils	Degrees	Mils	Degrees	Mils	Degrees
5,605	315. 3	5,805	326. 5	6,005	337. 8	6,205	349. 0
5,610	315. 6	5,810	326. 8	6,010	338. 1	6,210	349. 3
5,615	315. 8	5,815	327. 1	6,015	338. 3	6,215	349. 6
5,620	316. 1	5,820	327. 4	6,020	338. 6	6,220	349. 9
5,625	316. 4	5,825	327. 7	6,025	338. 9	6,225	350. 2
5,630	316. 7	5,830	327. 9	6,030	339. 2	6,230	350. 4
5,635	317. 0	5,835	328. 2	6,035	339. 5	6,235	350. 7
5,640	317. 2	5,840	328. 5	6,040	339. 8	6,240	351. 0
5,645	317. 5	5,845	328. 8	6,045	340. 0	6,245	351. 3
5,650	317. 8	5,850	329. 1	6,050	340. 3	6,250	351. 6
5,655	318. 1	5,855	329. 3	6,055	340. 6	6,255	351. 8
5,660	318. 4	5,860	329. 6	6,060	340. 9	6,260	352. 1
5,665	318. 7	5,865	329. 9	6,065	341. 2	6,265	352. 4
5,670	318. 9	5,870	330. 2	6,070	341. 4	6,270	352. 7
5,675	319. 2	5,875	330. 5	6,075	341. 7	6,275	353. 0
5,680	319. 5	5,880	330. 8	6,080	342. 0	6,280	353. 2
5,685	319. 8	5,885	331. 0	6,085	342. 3	6,285	353. 5
5,690	320. 1	5,890	331. 3	6,090	342. 6	6,290	353. 8
5,695	320. 3	5,895	331. 6	6,095	342. 8	6,295	354. 1
5,700	320. 6	5,900	331. 9	6,100	343. 1	6,300	354. 4
5,705	320. 9	5,905	332. 2	6,105	343. 4	6,305	354. 7
5,710	321. 2	5,910	332. 4	6,110	343. 7	6,310	354. 9
5,715	321. 5	5,915	332. 7	6,115	344. 0	6,315	355. 2
5,720	321. 8	5,920	333. 0	6,120	344. 2	6,320	355. 5
5,725	322. 0	5,925	333. 3	6,125	344. 5	6,325	355. 8
5,730	322. 3	5,930	333. 6	6,130	344. 8	6,330	356. 1
5,735	322. 6	5,935	333. 8	6,135	345. 1	6,335	356. 3
5,740	322. 9	5,940	334. 1	6,140	345. 4	6,340	356. 6
5,745	323. 2	5,945	334. 4	6,145	345. 7	6,345	356. 9
5,750	323. 4	5,950	334. 7	6,150	345. 9	6,350	357. 2
5,755	323. 7	5,955	335. 0	6,155	346. 2	6,355	357. 5
5,760	324. 0	5,960	335. 2	6,160	346. 5	6,360	357. 8
5,765	324. 3	5,965	335. 5	6,165	346. 8	6,365	358. 0
5,770	324. 6	5,970	335. 8	6,170	347. 1	6,370	358. 3
5,775	324. 8	5,975	336. 1	6,175	347. 3	6,375	358. 6
5,780	325. 1	5,980	336. 4	6,180	347. 6	6,380	358. 9
5,785	325. 4	5,985	336. 7	6,185	347. 9	6,385	359. 2
5,790	325. 7	5,990	336. 9	6,190	348. 2	6,390	359. 4
5,795	326. 0	5,995	337. 2	6,195	348. 5	6,395	359. 7
5,800	326. 2	6,000	337. 5	6,200	348. 8	6,400	360. 0

Conversion Formulas: 1 mil = .05625°;
1° = 17.778 mils.

Next printed page is 4-1.

CHAPTER 4

LIMITED SURFACE OBSERVATION

SECTION I.
TABLES FOR LIMITED OBSERVATIONS

4-1. General

a. With the new equipment and weaponry, meteorological needs of the US Army have increased significantly over the past 10 years. Systems such as Copperhead, multiple-launch rocket system, remotely piloted vehicle, Firefinder, and meteorological data system AN/TMQ-31 will all require increased met support.

b. The responsibility to provide surface and upper air weather observations in the area forward of division command elements for Army artillery, engineers, intelligence, aviation, and medical units has always been placed on the US Army.

c. The mission of the field artillery meteorology section has been expanded to include taking and recording a limited surface observation. To assist the US Army FA meteorology crew member in taking this surface observation, the supplementary surface weather report (SUPREP) code has been adopted. The SUPREP is a standard NATO code developed to be used by nonweather people, usually with little or no weather observing equipment and with only limited weather training.

d. The artillery limited surface observation will be taken at a time which is compatible with the section's schedule for upper air soundings. These messages will be disseminated in accordance with FM 6-15, paragraph 3-7. Requests for additional observations will be coordinated with the meteorology technician.

e. It is understood that in some areas of the code, additional information may seem repetitious. Cloud information and surface winds, for example, both have additional amplification groups. Because of varied weather requirements of the many new systems, both identified and anticipated, only surf data will be considered an optional group.

4-2. SUPREP Code (Symbolic Breakdown)

The message will be transmitted in six-digit groups. The order of groups must be maintained. Only the 99 group (inclosed in brackets below) will be considered optional and may be omitted if not applicable. If an element within a group cannot be reported, it must be entered as a slash (/). The symbols of the code and order of transmittal are listed below. A series of tables explaining the code follows.

SUPRP	Code identifier (indicated SUPREP met message to follow).
Q	Octant of the globe. Same as artillery met.
LaLaLa	Latitude (tenths of degrees). Same as artillery met.
LoLoLo	Longitude (tenths of degrees). Same as artillery met.

Note: *When a coded location is desirable, the* ***Q,*** *latitude, and longitude will be an arbitrary number of digits to specify position (must be understood by receiving unit).*

Y Y	Day of month Greenwich mean time (GMT). Same as artillery met.
GGgg	Time of observation (hours and minutes, GMT).
Na	Total amount of cloud cover (table 4-l).
D	Direction of surface wind (table 4-2).
F	Force of surface wind (table 4-3).
v	Visibility at surface (table 4-4).
w	Present weather (table 4-5).
A'	Amplification of phenomenon reported by w (table 4-6).
HHH	Height of station (in tens of meters).
R	State of road in vicinity of the observation point (table 4-7).
T	State of terrain prevailing in the vicinity of the observation point (table 4-8).
A	State of water surface (table 4-9).
TT	Air temperature in whole degrees Celsius (negative temperatures are encoded by adding 50 to the absolute value of the temperature; e.g. -20° is encoded as 70).
PPPP	Pressure at the observation point (encode to tenths of a millibar; thousands digits of millibars are omitted).
dd	Direction (in tens of degrees) from which surface wind is blowing (two digits). This group will be reported as 99 when the wind speed is less than 5 knots.
ff	Wind speed in knots (two digits).
Nh	Amount of cloud reported at height ha (table 4-10).
ha	Height of lowest cloud layer observation point (table 4-11).
[99]	Indicator for surf data (when applicable).

[Hs]	Average height of breakers in meters (table 4-12).
[Ps]	Period of breakers in seconds (table 4-13).
[Dw]	Direction of wave's approach to beach with observer's back to the sea (table 4-14).
[Ws]	Width of surf zone in meters (table 4-15).

4-3. Tables

A series of tables follows. These tables are used with the SUPREP code. They give an explanation of the code for each weather element to be reported by the observer. The tables help the observer determine what symbol to report.

Table 4–1. *Na–Total Amount of Cloud Cover*

Code Figure	Explanation	For Work Sheet (Abbreviation)
0	Clear (no clouds)	CLR
2	Scattered (1/8 - 4/8)	SCTD
3	Scattered (hills in clouds)	SCTD II
5	Broken (5/8 - 7/8)	BRKN
6	Broken (hills in clouds)	BRKN
7	Overcast (8/8)	OVC
8	Overcast (hills in clouds)	OVC II

Table 4–2. *D–Direction From Which Surface Wind is Blowing*

Code Figure	Explanation	Degrees
0	Calm	
1	NE	023–067
2	E	068–112
3	SE	113–157
4	S	158–202
5	SW	203–247
6	W	248–292
7	NW	293–337
8	N	338–022
9	Variable	

Table 4-3. *F-Force of Surface Wind (Beaufort Scale)*

Code Figure	Description	Specifications	Approximate Knots
0	Calm	Smoke rises vertically	Less than 2
2	Light breeze	Wind felt on face and leaves rustle	3-8
4	Moderate breeze	Dust and loose paper fly about; small branches move	9-18
6	Strong breeze	Large branches in motion; whistling in wires	19-29
8	Gale	Twigs broken off trees; progress of person walking generally impeded	30-42

Table 4-4. *V-Visibility at Surface*

Code Figure	Explanation
0	Less than 50 meters
1	50-200 meters
2	200-500 meters
3	500-1,000 meters
4	1-2 km
5	2-4 km
6	4-10 km
7	10-20 km
8	20-50 km
9	50 km or more

Table 4-5. *w-Present Weather and Obstructions to Vision*

Code Figure	Explanation
0	No significant weather
1	Smoke or haze
2	Fog in valley
3	Sandstorm, dust storm, or blowing snow
4	Fog
5	Drizzle
6	Rain
7	Snow or rain and snow mixed
8	Shower(s)
9	Thunderstorm(s) with or without precipitation

Table 4–6. *A'–Amplification of Phenomenon Reported by w*

Code Figure	Explanation
0	No precipitation occurring
1	Light
2	Heavy
3	In the past hour, but not at the time of observation
4	Precipitation within sight
5	Freezing precipitation
9	Hail or ice pellets

Table 4–7. *R—State of Road in Vicinity of Observation Point*

Code Figure	Explanation
0	Dry
1	Wet
2	Flooded
3	Slush
4	Ice patches
5	Glazed ice
6	Snow depth 1 to 19 cm
7	Snow depth 20 cm or more
8	Snow drift

Table 4–8. *T—State of Terrain Prevailing in Vicinity of Observation Point*

Code Figure	Explanation
0	Dry
1	Wet
2	Pools of water on surface
3	Flooded
4	Ground frozen 0 to 4 cm
5	Ground frozen 5 cm or more
6	Snow depth 0 to 4 cm
7	Snow depth 5 to 24 cm
8	Snow depth 25 to 44 cm
9	Snow depth 45 cm or more

Table 4-9. *A—State of Water Surface*

Code Figure	Explanation
0	Water level normal
1	Water level much below normal
2	Water level high, but not overflowing
3	Banks overflowing
4	Floating ice (more than half)
5	Thin ice, complete cover, impassable for persons, 0-4 cm thick
6	Ice, complete cover, passable for persons, depth unknown
7	Ice, complete cover, depth 5-9 cm
8	Ice, complete cover, depth 10-24 cm
9	Ice, complete cover, depth 25 cm or more

Table 4-10. *Nh—Amount of Cloud Reported at Height ha*

Code Figure	Explanation
0	0
1	1/8 or less, but not 0
2	2/8
3	3/8
4	4/8
5	5/8
6	6/8
7	7/8 or more, but not 8/8
8	8/8
9	Sky obscured or cloud amount cannot be estimated

Table 4-11. *Ha—Height of the Lowest Cloud Layer Above the Observation Point*

Code Figure	Explanation
0	0-99 meters
1	100-199 meters
2	200-299 meters
3	300-399 meters
4	400-499 meters
5	500-599 meters
6	600-699 meters
7	700-799 meters
8	800-899 meters
9	900 meters or more or no clouds

Table 4–12. *Hs—Average Height of Breakers*

Code Figure	Explanation
0	0 to 10 seconds
1	10 to 20 seconds
2	20 to 30 seconds
3	More than 30 seconds

Table 4–13. *Ps—Period of Breakers (Seconds) (Time Required for Successive Breakers to Pass a Given Point)*

Code Figure	Explanation
0	Less than 1 meter
1	1-2 meters
2	2-3 meters
3	More than 3 meters

Table 14. *Dw—Direction of Approach of Waves to Beach (Observer's Back to Sea)*

Code Figure	Explanation
0	Waves approaching from right side
1	Waves approaching directly from rear
2	Waves approaching from left side

Table 4–15. *Ws—Width of Surf Zone (Distance From Edge of Water to the Point Seaward that the White Caps of the Surf Begin to Appear)*

Code Figure	Explanation
0	0 to 10 meters
1	10 to 20 meters
2	20 to 30 meters
3	More than 30 meters

SECTION II.
INSTRUCTIONS FOR TAKING SURFACE WEATHER OBSERVATIONS

4-4. Message Identifier

Use the five-letter SUPREP identifier followed by octant of globe for the first six-letter/number group.

4-5. Station Location

In the second six-number group, three numbers are for latitude and three are for longitude to a tenth of a degree. When the location must be coded, the code is on agreement with the receiving and transmitting units.

4-6. Date and Time

Both are given in Greenwich mean time (GMT) in hours and minutes at time of observation.

4-7. Sky Condition

Of all the weather conditions that adversely affect aircraft/flying operations, low clouds and low visibility are by far the most common. This paragraph decribes the method of observing the sky conditions

a. ***General.*** Sky condition observations consist of two elements:

(1) The amount of clouds or obscuration present.

(2) Remarks about the sky condition in the area that would be helpful to the weather forecaster or to the aviator.

b. ***Sky Cover Amounts (Na).***

(1) The total amount of the sky covered by clouds or an obscuration can be described by using one of the following words:

(a) *Clear:* Less than one-eighth of the sky is covered by clouds.

(b) *Scattered:* One-eighth to less than one-half of the sky is covered (approximately 10-50%).

(c) *Broken:* One-half or more of the sky is covered (approximately 60-90%).

(d) *Overcast:* Sky is totally coverd by clouds or obscuring phenomena (e.g., fog, blowing snow, blowing sand, or smoke).

(2) Determine the total cloud amount by considering the sky above you as a celestial dome and mentally dividing it into eight equal parts. For example, you are the observer standing at point X in figure 4-1. There are three different cloud layers in the sky above you. Here you have 7/8 cloud cover, but the cirrus and the altocumulus overlap by about 1/8, so you would report total cloud amount as 6/8, or a broken condition.

(3) Very often, significant features of the sky cover cannot be explained simply by scattered, broken, etc. Explanations for hilly or mountainous stations are included in the code and must be used. These codes, which are extremely important to aircraft operations, are

Code	Description
3- Scattered	(Hills in clouds)
6- Broken	(Hills in clouds)
8- Overcast	(Hills in clouds)

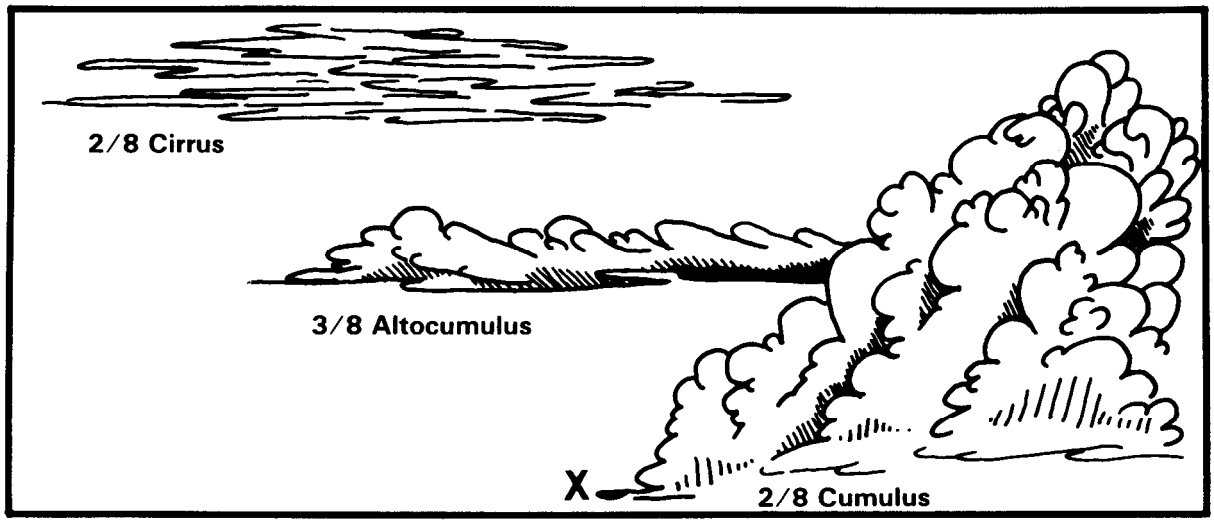


Figure 4–1. *Cloud Cover*

4-8. Wind Direction and Speed

Wind speed and direction are necessary in forecasting weather, especially in locations where weather is often associated with frontal systems. Wind direction and speed can be used to locate these fronts and to determine their movement. Frequently, the combination of wind direction and terrain produces significant variation in wind speed over very short distances. Local variations in wind speed can also produce deviations from the normal in weather conditions.

a. ***Direction*** **(D).** Wind direction is defined as the direction from which the wind is blowing. Wind may be taken from a direct reading of the hand-held anemometer ML-433. Use of the ML-433 is covered in FM 6-15.

b. ***Speed*** **(F).** Wind speed may also be read from a direct reading of the hand-held anemometer ML-433. If no wind equipment is available, the speed may be estimated by using the following:

Number	Description	Specifications	Approximate knots
0	Calm	Smoke rises vertically	Less than 2
2	Light breeze	Wind felt on face and leaves rustle	3-8
4	Moderate breeze	Dust and loose paper flying about; small branches move	9-18
6	Strong breeze	Large branches in motion; whistling in wires	19-29
8	Gale	Twigs broken off trees; progress of person walking generally impeded	30-42

4-9. Visibility(V)

Visibility is an important limiting factor in flying operations. Poor visibility restricts visual surveillance and flying observations.

a. Visibility is the greatest distance an object can be seen and identified by the normal eye, without the aid of optical devices such as binoculars and starlight scopes.

In actual practice, visibility is the greatest distance that prominent objects such as trees, buildings, water towers, or natural landmarks (hills) can be seen clearly enough to be identified.

b. In daytime, any building, water tower, telephone pole, road, hill, clump of trees, etc., that can be seen under ideal conditions may be used as a visibility marker if the distance to the object is known.

c. At night, the above objects can be used if their silhouettes can be identified. However, the best nighttime marker is an unfocused light as a known distance from the observation point. (This *does not* include searchlights, airport rotating beacons, or automobile headlights aimed directly at you.)

d. The visibility that is reported must be representative of at least half of the horizon circle. In making this determination, the horizon circle is normally divided into quadrants as shown in figure 4-2. Any two quadrants (they need not be continuous) may be used to determine the prevailing visibility.

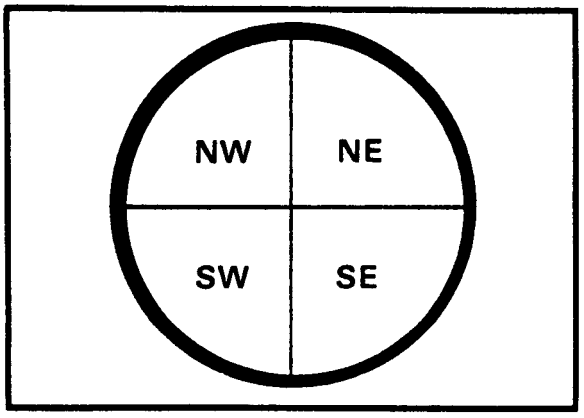


Figure 4–2. *Quadrant Visibility*

Visibility is reported in meters, to the nearest hundred meters, as listed in table 4-4.

e. Quadrant visibility may be reported as a remark at the end of the observation. If you feel that the visibility in one quadrant is significantly different from the prevailing visibility, you should include a remark. For example: Visibility N, meters. Any quadrant or direction may be used for this remark.

4-10. Weather and Obstructions to Vision (w)

We have already mentioned the important effect visibility has on operations. It would not be logical to report a reduction in visibility without describing it in terms of the weather phenomena upon which the visibility depends. These weather phenomena are divided into two main groups: weather and obstructions to vision. They are dicussed separately in detail in the following paragraphs.

a. Obstructions to vision are as follows:

(1) **Smoke:** Fine ash particles suspended in the air. When smoke is present, the disk of the sun appears very red at sunset and sunrise and has a reddish tinge throughout the day. Smoke at a distance, such as from a forest fire, usually has light grayish or bluish color.

(2) **Haze:** Dust and other material too small to be seen individually by the unaided eye. Haze reduces visibility and resembles a uniform veil over the landscape that subdues the colors. Haze appears bluish against a dark background but dirty or orange against a bright background such as the sun. In contrast, fog appears grayish and feels damp on the skin.

(3) **Fog:** Very small drops of water suspended in the air which reduce the visibility.

(4) **Blowing sand or dust:** Dust or sand raised by the wind to such an extent that the visibility is impaired.

(5) **Blowing snow:** No appreciable amount of falling snow, but snow from the ground is carried into the air by the wind and the visibility is reduced.

b. Weather types are as follows:

(1) **Precipitation:** Precipitation includes all forms of moisture that fall to the earth's surface, such as rain, snow, and hail. All forms of precipitation can be classified as liquid, freezing, or frozen. Of special importance are the freezing types of precipitation, which present a great hazard to aviation.

(a) *Liquid precipitation:*

1. Drizzle - very small water droplets which seem almost to float in the air and visibly follow air motion. Drizzle falls from fog or very low clouds.

2. Rain - precipitation which reaches the earth's surface as relatively large drops. Rain can be classed as light, moderate, or heavy, depending upon the rate of fall.

(b) *Freezing precipitation:*

1. Freezing rain - precipitation in the form of very cold raindrops, a portion of which freezes and forms a smooth coating of ice upon striking an exposed surface.

2. Freezing drizzle - precipitation in the form of very cold drizzle which freezes in the same manner as freezing rain.

(c) Frozen precipitation.

1. Ice pellets - frozen raindrops formed by rain falling through a layer of cold air. Ice pellets may adhere to any exposed surface, forming an uneven layer of ice.

2. Hail - precipation in the form of balls or irregular lumps of ice. Hail results when water drops are repeatedly carried aloft to the colder air by the violent air currents usually associated with thunderstorms.

3. Snow - precipitation composed of ice crystals.

4. Snow grains - small grains of snow which are soft and opaque and lack the six-sided appearance of the ordinary snowflake.

(2) **Thunderstorms:** Thunder is heard at your location. A thunderstorm mayor may not be accompanied by rain or hail.

(3) **Tornado**: A circular whirl, or wind of great velocity and small horizontal diameter. The horizontal diameter of a tornado varies from a few feet up to a mile, and the wind speeds often exceed 200 mph. Tornadoes are short lived, usually not lasting more than an hour or two. If a tornado is sighted, call your reporting station immediately and give its location and direction of movement. Speed in reporting your sighting is of the utmost importance to all concerned. Tornadoes are extremely rare in western Germany.

c. Amplification of phenomena reported by the code w, as represented in table 4-6, (A'), is self-explanatory.

d. Height of observation point/station above mean sea level (HHH) is given in decimeters.

4-11. State of Road in Vicinity of Observation Point (R)

Extract the appropriate figure from table 4-7.

4-12. State of Terrain in Vicinity of Observation Point (T)

Extract the appropriate figure from table 4-8.

4-13. Temperature (TT)

Enter in whole degrees Celsius. Negative temperatures are encoded by adding to the absolute value of the temperature; e.g., -20° is coded as 70.

4-14. Pressure (PPPP)

The surface pressure to the nearest tenth of a millibar is encoded. When pressure is over 1000 millibars, the thousand digit is dropped.

4-15. Wind Direction (dd)

In this portion of the code, the wind direction (in tens of degrees) is reported in two digits. This data is used to further amplify wind information reported in the fourth six-digit group (i.e., D and F). These two digits will be encoded as 99 when the wind speed is less than 5 knots.

4-16. Wind Speed (ff)

The wind speed is reported in knots and in two digits.

4-17. Amount of Low Cloud (Nh)

The lowest cloud is determined for the amount of cover in eighths. For encoding, see table 4-10.

4-18. Height of Low Cloud (ha)

The height of the lowest cloud above the observing point is estimated. For encoding see table 4-11.

4-19. Indicator for Surf Data (99)

a. When the unit is located at a seacoast area, it is important to give surf conditions. The 99 group indicates that surf data will follow. The surf data includes average height of breakers, time breakers last, direction of waves' approach to beach, and the width of the surf zone. For estimation and encoding of these variables, see tables 4-12, 4-13, 4-14, and 4-15.

b. When surf data is not available, the message will end with height of low cloud plus any remarks on weather elements that might seem appropriate. Thus, the message includes seven six-digit groups when surf data is not included. Any data or weather element that is missing is represesented by a slash (/).

4-20. Plain Language Remarks

a. Any remark that the observer considers beneficial or explanatory may be listed at the bottom of the message. Examples:

(1) *The direction of a thunderstorm from your location and the approximate direction it is moving toward; e.g., Thunderstorms E moving NE.*

(2) *The direction of lightning from your location; e.g., Lightning overhead and SW through NW.*

(3) *Obscuring phenomena at a distance from your location but not occurring at your location; e.g., Fog bank NE through SE.*

b. These are just a few examples. In other words, any remark that you feel might be helpful to a military operation may be included as long as that remark pertains to current weather.

4-21. DA Form 5033-R Limited Surface Observation

Figure 4-3 is a DA Form to be completed for each limited surface observation. Local reproduction of this form is authorized.

LIMITED SURFACE OBSERVATION

For use of this form, see FM 6-16-2; the proponent agency is TRADOC.

DATE:

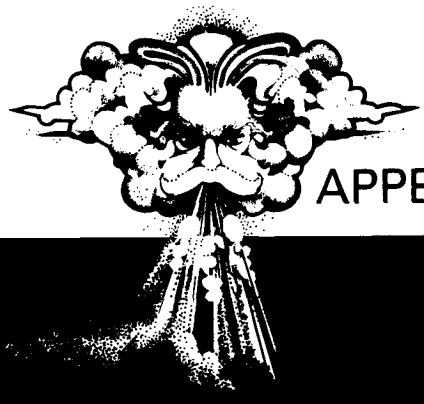
	IDENTIFIER	OCTANT Q *a*	LATITUDE LaLaLa *b*	LONGITUDE LoLoLo *c*	DATE (GMT) YY *d*	TIME (GMT) GGgg *e*	TOTAL AMOUNT OF CLOUD COVER Na (Table 4-1) *f*	WIND DIRECTION D (Table 4-2) *g*	WIND SPEED F (Table 4-3) *h*	VISIBILITY V (Table 4-4) *i*
1	ACTUAL CONDITIONS									
2	SUPRP									
	IDENTIFIER	PRESENT WEATHER w (Table 4-5) *j*	AMPLIFICATION OF PRESENT WEATHER A' (Table 4-6) *k*	STATION HEIGHT HHH *l*	ROAD CONDITIONS R (Table 4-7) *m*	TERRAIN CONDITIONS T (Table 4-8) *n*	STATE OF WATER SURFACE A (Table 4-9) *o*	AIR TEMPERATURE TT *p*	PRESSURE PPPP *q*	WIND DIRECTION dd *r*
3	ACTUAL CONDITIONS									
4	SUPRP									
	IDENTIFIER	WIND SPEED ff *s*	AMOUNT OF LOWEST CLOUD Nh (Table 4-10) *t*	HEIGHT OF LOWEST CLOUD ha (Table 4-11) *u*	INDICATION FOR SURF DATA 99 *v*	AVERAGE HEIGHT OF BREAKERS (Meters) Hs (Table 4-12) *w*	PERIOD OF BREAKERS (Seconds) Ps (Table 4-13) *x*	DIRECTION OF WAVES Dw (Table 4-14) *y*	WIDTH OF SURF ZONE Ws (Table 4-15) *z*	
5	ACTUAL CONDITIONS				99					
6	SUPRP				99					

REMARKS:

DA Form 5033-R, Dec 81

DA FORM 1 DEC 81 **5033-R**

Figure 4-3. DA Form 5033-R, Limited Surface Observation



APPENDIX

REFERENCES

A-1. Field Manuals (FM)

6-15	Field Artillery Meteorology
6-16	Tables for Artillery Meteorology (Electronic) Ballistic Type 3 and Computer Messages
6-16-1	Tables for Artillery Meteorology (Sound Ranging) Messages
*6–16-3	Tables for Artillery Meteorology (Electronic and Visual) Type 2 Messages

A-2. Department of the Army Forms

5033-R	Limited Surface Observation
2028	Recommended Changes to Publications

A-3. NATO Standardization Agreements (STANAG)/ ABCA (Quadripartite) Standardization Agreements (QSTAG)

4061/332	Adoption of a Standard Ballistic Meteorological Message
4082/252	Adoption of a Standard Artillery Computer Meteorological Message

Note: *STANAGs and QSTAGs can be obtained from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120. DD Form 1425 may be used to requisition documents.*

*To be published

CHANGE 1, FM 6-16-2

27 JANUARY 1984

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General United States Army
The Adjutant General

DISTRIBUTION:

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