Table 2—Binomial Distribution

This table shows the probability of x successes in n independent trials, each with probability of success p.

_		-				1			1			0									
n	x	.01	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95
2	0	.980	.902	.810	.723	.640	.563	.490	.423	.360	.303	.250	.203	.160	.123	.090	.063	.040	.023	.010	.002
	1 2	.020	.095 .002	.180 .010	.255 .023	.320 .040	.375 .063	.420 .090	.455 .123	.480 .160	.495 .203	.500 .250	.495 .303	.480 .360	.455 .423	.420 .490	.375 .563	.320 .640	.255 .723	.180 .810	.095 .902
3	2	.000	.857	.729	.614	.512	.003		.123	.216		.1250	.091	.064	.423	.490	.016	.040	.003	.001	.000
0	1	.029	.135	.243	.325	.384	.422		.444	.432		.375	.334	.288	.239	.189	.141	.096	.057	.027	.007
	2	.000	.007	.027	.057	.096	.141	.189	.239	.288	.334		.408	.432		.441	.422	.384	.325	.243	.135
	3	.000	.000	.001	.003	.008	.016	.027	.043	.064	.091	.125	.166	.216	.275	.343	.422	.512	.614	.729	.857
4	0 1	.961	.815 .171	.656 .292	.522 .368	.410 .410	.316 .422	.240	.179 .384	.130 .346	.092 .300	.062	.041 .200	.026 .154	.015 .112	.008 .076	.004 .047	.002 .026	.001 .011	.000 .004	.000 .000
	2	.001	.014	.049			.211	.265			.368			.346	.311	.265	.211	.154	.098	.004	.000
	3	.000	.000	.004	.011	.026	.047	.076	.112	.154	.200	.250	.300	.346	.384		.422	.410	.368	.292	.171
_	4	.000	.000	.000	.001	.002	.004	.008	.015	.026	.041		.092		.179	.240	.316	.410	.522	.656	.815
5	0	.951	.774 .204	.590 .328	.444 .392	.328 .410	.237 .396	.168 .360	.116 .312	.078 .259	.050 .206	.031 .156	.019 .113	.010 .077	.005 .049	.002 .028	.001 .015	.000 .006	.000 .002	.000 .000	.000 .000
	2	.048	.204	.073	.138	.205	.264	.309	.336		.337		.113	.230	.181	.028	.015	.000	.002	.000	.000
	3	.000	.001	.008	.024	.051	.088	.132		.230		.312	.337	.346	.336	.309	.264	.205	.138	.073	.021
	4	.000	.000	.000	.002	.006	.015						.206	.259	.312		.396	.410	.392		.204
c	5	.000	.000	.000	.000.	.000	.001		.005	.010	.019	.031	.050	.078	.116	.168	.237	.328	.444	.590	.774
6	0 1	.941	.735 .232	.531 .354	.377 .399	.262 .393	.178 .356	.118 .303	.075 .244	.047 .187	.028 .136	.016 .094	.008 .061	.004 .037	.002 .020	.001 .010	.000 .004	.000 .002	.000 .000	.000 .000	.000 .000
	2	.001	.031		.176	.246	.297			.311				.138	.095	.060	.033	.015	.006	.001	.000
	3	.000	.002		.042		.132		.236		.303		.303	.276	.236	.185	.132	.082	.042	.015	.002
	4 5	.000	.000 .000	.001 .000	.006 .000	.015 .002	.033 .004	.060 .010	.095 .020		.186 .061			.311 .187		.324 .303	.297 .356	.246 .393	.176 .399	.098 .354	.031 .232
	6	.000	.000	.000	.000	.002	.004	.001			.001		.028	.047	.244	.303	.178	.262	.399	.531	.735
7	0	.932	.698	.478	.321	.210	.133	.082	.049	.028	.015	.008	.004	.002	.001	.000	.000	.000	.000	.000	.000
	1	.066	.257	.372	.396	.367	.311	.247		.131	.087	.055	.032		.008	.004	.001	.000	.000	.000	.000
	2 3	.002	.041	.124	.210 .062	.275	.311 .173	.318 .227	.299	.261 .290			.117	.077 .194	.047 .144	.025 .097	.012 .058	.004 .029	.001 .011	.000 .003	.000 .000
	3 4	.000	.004 .000	.023 .003	.002	.029	.058	.227			.292 .239		.239 .292		.268	.097	.058	.029	.062	.003	.000
	5	.000	.000	.000	.001	.004	.012		.047							.318	.311	.275	.210	.124	.041
	6	.000	.000	.000	.000	.000	.001			.017		.055	.087			.247	.311	.367	.396		.257
0	7	.000	.000	.000	.000	.000	.000	.000	.001	.002	.004	.008	.015	.028	.049	.082	.133	.210	.321	.478	.698
8	0 1	.923	.663 .279	.430 .383	.272 .385	.168 .336	.100 .267	.058 .198	.032 .137	.017 .090	.008 .055	.004 .031	.002 .016	.001 .008	.000 .003	.000 .001	.000 .000	.000. 000.	.000 .000	.000 .000	.000. .000
	2	.003	.051	.149	.238	.294	.311	.296	.259		.157	.109	.070		.022		.004	.001	.000	.000	.000
	3	.000	.005	.033	.084	.147	.208					.219			.081	.047	.023	.009	.003	.000	.000
	4 5	.000	.000 .000	.005 .000	.018 .003	.046 .009	.087 .023		.188 .081	.232 124		.273	.263 .257		.188 .279		.087 .208	.046 .147	.018 .084	.005 .033	.000 .005
	6			.000	.000		.023								.259		.311			.149	.005
	7	.000	.000	.000		.000	.000	.001	.003	.008	.016	.031	.055	.090	.137	.198	.267	.336	.385		
	8		.000												.032						
9	0		.630	.387			.075	.040	.021	.010		.002		.000	.000	.000	.000	.000	.000	.000	.000
	1		.299 .063	.387 .172	.368 .260	.302	.225			.060 .161	.034 .111	.018	.008 .041	.004 .021	.001 .010	.000 .004	.000 .001	.000 .000	.000. .000	.000 .000	.000 .000
	3	.000	.008	.045	.107	.176						.164			.042		.009	.003	.001	.000	.000
	4	.000	.001	.007	.028	.066	.117	.172	.219	.251	.260	.246	.213	.167	.118	.074	.039	.017	.005	.001	.000
	5	.000	.000	.001		.017	.039 .009	.074				.246			.219		.117 .224	.066	.028	.007 .045	.001
	ю 7	.000	.000. 000.	.000 .000	.001 .000	.003 .000	.009		.042 .010			.164 .070		.251	.272 .216	.267	.234 .300		.107 .260	.045	.008 .063
	8	.000	.000	.000	.000	.000	.000	.000	.001	.004	.008	.018	.034	.060	.100	.156	.225	.302	.368	.387	.299
	9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.002	.005	.010	.021	.040	.075	.134	.232	.387	.630

From Brase/Brase, Understandable Statistics, Sixth Edition.

Table 2—Binomial Distribution (continued)

												р									
n	x	.01	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95
10	0	.904	.599	.349	.197	.107	.056	.028	.014	.006	.003	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
	1	.091	.315	.387	.347	.268	.188	.121	.072	.040	.021	.010	.004	.002	.000	.000	.000	.000	.000	.000	.000
	2	.004	.075	.194	.276	.302	.282	.233	.176	.121	.076	.044	.023	.011	.004	.001	.000	.000	.000	.000	.000
	3	.000	.010	.057	.130	.201	.250	.267	.252	.215	.166	.117	.075	.042	.021	.009	.003	.001	.000	.000	.000
	4	.000	.001	.011	.040	.088	.146	.200	.238	.251	.238	.205	.160	.111	.069	.037	.016	.006	.001	.000	.000
	5	.000	.000	.001	.008	.026	.058 .016	.103 .037	.154 .069	.201 .111	.234 .160	.246	.234	.201 .251	.154 .238	.103 .200	.058	.026 .088	.008	.001	.000 .001
	6 7	.000	.000 .000	.000 .000	.001 .000	.006 .001	.018	.037	.009		.075	.205 .117	.238 .166	.251	.250	.200	.146 .250	.000	.040 .130	.011 .057	.001
	8	.000	.000	.000	.000	.000	.000	.000	.004	.042	.023	.044	.076	.121		.233	.282	.302	.276	.194	.075
	9	.000	.000	.000	.000	.000	.000	.000	.000		.004	.010	.021	.040	.072		.188	.268	.347	.387	.315
	10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.003	.006	.014	.028	.056	.107	.197	.349	.599
11	0	.895	.569	.314	.167	.086	.042	.020	.009	.004	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	1	.099	.329	.384	.325	.236	.155	.093	.052	.027	.013	.005	.002	.001	.000	.000	.000	.000	.000	.000	.000
	2	.005	.087	.213	.287	.295	.258	.200	.140	.089	.051	.027	.013	.005	.002	.001	.000	.000	.000	.000	.000
	3	.000	.014	.071	.152	.221	.258	.257	.225	.177	.126	.081	.046	.023	.010	.004	.001	.000	.000	.000	.000
	4	.000	.001	.016	.054	.111	.172	.220	.243	.236	.206	.161	.113	.070	.038	.017	.006	.002	.000	.000	.000
	5	.000	.000	.002	.013	.039	.080		.183	.221	.236			.147	.099	.057	.027	.010	.002	.000	.000
	6 7	.000	.000 .000	.000 .000	.002 .000	.010 .002	.027 .006	.057 .017	.099 .038	.147 .070	.193 .113	.226 .161	.236 .206	.221 .236	.183 .243	.132 .220	.080 .172	.039 .111	.013 .054	.002 .016	.000 .001
	8	.000	.000	.000	.000	.002	.000	.007	.030	.023	.046	.081	.126	.230	.245	.220	.258	.221	.152	.071	.001
	9	.000	.000	.000	.000	.000	.000	.001	.002	.005	.013	.027	.051	.089	.140	.200	.258	.295	.287	.213	.087
	10	.000	.000	.000	.000	.000	.000	.000	.000	.001	.002	.005	.013	.027	.052	.093	.155	.236	.325	.384	.329
	11	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.004	.009	.020	.042	.086	.167	.314	.569
12	0	.886	.540	.282	.142	.069	.032	.014	.006	.002	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	1	.107	.341	.377	.301	.206	.127	.071	.037	.017	.008	.003	.001	.000	.000	.000	.000	.000	.000	.000	.000
	2	.006	.099	.230	.292	.283	.232	.168	.109	.064	.034	.016	.007	.002	.001	.000	.000	.000	.000	.000	.000
	3	.000	.017	.085	.172	.236			.195		.092		.028	.012	.005	.001	.000	.000	.000	.000	.000
	4	.000	.002	.021	.068	.133	.194	.231	.237		.170	.121	.076		.020	.008	.002	.001	.000	.000	.000
	5	.000	.000	.004	.019	.053 .016	.103 .040	.158 .079	.204 .128	.227 .177	.223 .212	.193	.149 .212	.101 .177	.059 .128	.029 .079	.011 .040	.003 .016	.001 .004	.000 .000	.000 .000
	6 7	.000	.000 .000	.000 .000	.004 .001	.003	.040	.079	.059	.101		.220	.212		.120		.1040	.010	.004	.000	.000
	8	.000	.000	.000	.000	.000	.002	.008	.020		.076	.121	.170	.213	.237	.231	.194	.133	.068	.021	.002
	9	.000	.000	.000	.000	.000	.000	.001	.005		.028	.054		.142		.240	.258	.236	.172	.085	.017
	10	.000	.000	.000	.000	.000	.000	.000	.001	.002	.007	.016	.034	.064	.109	.168	.232	.283	.292	.230	.099
	11	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.003	.008	.017	.037	.071	.127	.206	.301	.377	.341
	12	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.002	.006	.014	.032	.069	.142	.282	.540
15	0	.860	.463	.206	.087	.035	.013	.005	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	1	.130	.366	.343	.231	.132	.067	.031	.013	.005	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	2	.009	.135	.267	.286	.231	.156	.092	.048		.009	.003	.001	.000	.000	.000	.000	.000	.000	.000	.000
	3 ⊿	.000	.031	.129	.218 .116	.250 .188	.225 .225		.111 .179	.063	.032 .078		.005		.000 .002	.000	.000. 000.	.000	.000 .000	.000 .000	.000 .000
	4	.000	.005	.043														.000			
	6			.002														.000			
	7	.000	.000	.000		.014														.000	.000
	8			.000	.001	.003		.035			.165				.132		.039		.003	.000	.000
	9	.000	.000	.000	.000				.030	.061	.105	.153	.191	.207	.191	.147	.092	.043	.013	.002	.000
	10	.000	.000	.000	.000	.000	.001	.003	.010	.024	.051	.092	.140	.186	.212	.206	.165	.103	.045	.010	.001
	11	.000	.000	.000	.000	.000												.188		.043	.005
	12	.000	.000	.000	.000					.002								.250		.129	.031
	13	.000	.000	.000			.000			.000								.231			
			.000	.000	.000													.132			
	10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.005	.013	.035	.08/	.200	.403

Table 2—Binomial Distribution (continued)

												Ø									
n	x	.01	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95
16	0	.851	.440	.185	.074	.028	.010	.003	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	1	.138	.371	.329	.210	.113	.053	.023	.009	.003	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	2	.010	.146	.275	.277	.211	.134	.073	.035	.015	.006	.002	.001	.000	.000	.000	.000	.000	.000	.000	.000
	3	.000	.036	.142	.229	.246	.208	.146	.089	.047	.022	.009	.003	.001	.000	.000	.000	.000	.000	.000	.000
	4	.000	.006	.051	.131	.200	.225	.204	.155	.101	.057	.028	.011	.004	.001	.000	.000	.000	.000	.000	.000
	5	.000	.001	.014	.056	.120	.180	.210	.201	.162	.112	.067	.034	.014	.005	.001	.000	.000	.000	.000	.000
	6	.000	.000	.003	.018	.055	.110	.165	.198	.198	.168	.122	.075	.039	.017	.006	.001	.000	.000	.000	.000
	7	.000	.000	.000	.005	.020	.052	.101		.189	.197	.175	.132	.084	.044	.019	.006	.001	.000	.000	.000
	8	.000	.000	.000	.001	.006	.020	.049		.142	.181	.196	.181	.142	.092	.049	.020	.006	.001	.000	.000
	9	.000	.000. .000.	.000 .000	.000. .000	.001 .000	.006 .001	.019	.044	.084	.132	.175	.197	.189	.152 .198	.101	.052	.020 .055	.005	.000 .003	.000. .000.
	10	.000.	.000	.000	.000	.000	.001	.006 .001	.017 .005	.039 .014	.075 .034	.122 .067	.168 .112	.198 .162	. 198	.165 .210	.110 .180	.055	.018 .056	.003	.000
	11 12	.000	.000	.000	.000	.000	.000	.000	.005	.014	.034	.007	.057	.102	.155	.204	.225	.200	.131	.014	.001
	12	.000	.000	.000	.000	.000	.000	.000	.000	.004	.003	.028	.022	.047	.089	.146	.225	.200	.229	.142	.000
	14	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003	.003	.0022	.047	.035	.073	.134	.240	.277	.275	.146
	15	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.0002	.000	.003	.009	.023	.053	.113	.210	.329	.371
	16	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.003	.010	.028	.074	.185	.440
20	0	.818	.358	.122	.039	.012	.003	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	1	.165	.377	.270	.137	.058	.021	.007	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	2	.016	.189	.285	.229	.137	.067	.028	.010	.003	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	3	.001	.060	.190	.243	.205	.134	.072	.032	.012	.004	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
	4	.000	.013	.090	.182	.218	.190	.130	.074	.035	.014	.005	.001	.000	.000	.000	.000	.000	.000	.000	.000
	5	.000	.002	.032	.103	.175	.202	.179	.127	.075	.036	.015	.005	.001	.000	.000	.000	.000	.000	.000	.000
	6	.000	.000	.009	.045	.109	.169	.192	.171	.124	.075	.036	.015	.005	.001	.000	.000	.000	.000	.000	.000
	7	.000	.000	.002	.016	.055	.112	.164	.184	.166	.122	.074	.037	.015	.005	.001	.000	.000	.000	.000	.000
	8	.000	.000	.000	.005	.022	.061	.114	.161	.180	.162	.120	.073	.035	.014	.004	.001	.000	.000	.000	.000
	9	.000	.000	.000	.001	.007	.027	.065	.116	.160	.177	.160	.119	.071	.034	.012	.003	.000	.000	.000	.000
	10	.000	.000	.000	.000	.002	.010	.031	.069	.117	.159	.176	.159	.117	.069	.031	.010	.002	.000	.000	.000
	11	.000	.000	.000	.000	.000	.003	.012	.034	.071	.119	.160	.177	.160	.116	.065	.027	.007	.001	.000	.000
	12	.000	.000	.000	.000	.000	.001	.004	.014	.035	.073	.120	.162	.180	.161	.114	.061	.022	.005	.000	.000
	13	.000	.000	.000	.000	.000	.000	.001	.005	.015	.037	.074	.122 .075	.166	.184	.164	.112 .169	.055	.016	.002	.000. .000.
	14	.000	.000. .000	.000. .000	.000. .000	.000. .000	.000. .000	.000 .000	.001 .000	.005 .001	.015 .005	.037 .015	.075	.124 .075	.171 .127	.192 .179	.202	.109 .175	.045 .103	.009	.000
	15 16	.000.	.000	.000	.000	.000	.000	.000	.000	.000	.005	.015	.030	.075	.074	.179	.202	.175	.103	.032 .090	.002
	17	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.014	.035	.074	.072	.130	.205	.162	.190	.060
	18	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.004	.002	.032	.072	.067	.205	.243	.285	.189
	19	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000			.028	.007	.058	.137	.205	.377
	20	.000	.000											.000					.039		

Table 3—Poisson Distribution

						u				
X	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
0	.9048	.8187	.7408	.6703	.6065	.5488	.4966	.4493	.4066	.3679
1	.0905	.1637	.2222	.2681	.3033	.3293	.3476	.3595	.3659	.3679
2	.0045	.0164	.0333	.0536	.0758	.0988	.1217	.1438	.1647	.1839
3	.0002	.0011	.0033	.0072	.0126	.0198	.0284	.0383	.0494	.0613
4	.0000	.0001	.0003	.0007	.0016	.0030	.0050	.0077	.0111	.0153
5	.0000	.0000	.0000	.0001	.0002	.0004	.0007	.0012	.0020	.0031
6	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0003	.0005
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001
		- 10				<u>u</u>				
<u>x</u>	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
0	.3329	.3012	.2725	.2466	.2231	.2019	.1827	.1653	.1496	.1353
1	.3662	.3614	.3543	.3452	.3347	.3230	.3106	.2975	.2842	.2707
2	.2014	.2169	.2303	.2417	.2510	.2584	.2640	.2678	.2700	.2707
3	.0738	.0867	.0998	.1128	.1255	.1378	.1496	.1607	.1710	.1804
4	.0203	.0260	.0324	.0395	.0471	.0551	.0636	.0723	.0812	.0902
5	.0045	.0062	.0084	.0111	.0141	.0176	.0216	.0260	.0309	.0361
6	.0008	.0012	.0018	.0026	.0035	.0047	.0061	.0078	.0098	.0120
7	.0001	.0002	.0003	.0005	.0008	.0011	.0015	.0020	.0027	.0034
8	.0000	.0000	.0001	.0001	.0001	.0002	.0003	.0005	.0006	.0009
9	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002
Y	2.1	2.2	2.3	2.4	2.5	μ 2.6	2.7	2.8	2.9	3.0
<u>x</u> 0	.1225	.1108	.1003	.0907	.0821	.0743	.0672	.0608	.0550	.0498
1	.2572	.2438	.2306	.2177	.2052	.1931	.1815	.1703	.1596	.1494
2	.2700	.2681	.2652	.2613	.2565	.2510	.2450	.2384	.2314	.2240
3	.1890	.1966	.2032	.2090	.2138	.2176	.2205	.2225	.2237	.2240
4	.0992	.1082	.1169	.1254	.1336	.1414	.1488	.1557	.1622	.1680
5	.0417	.0476	.0538	.0602	.0668	.0735	.0804	.0872	.0940	.1008
6	.0146	.0174	.0206	.0241	.0278	.0319	.0362	.0407	.0455	.0504
7	.0044	.0055	.0068	.0083	.0099	.0118	.0139	.0163	.0188	.0216
8	.0011	.0015	.0019	.0025	.0031	.0038	.0047	.0057	.0068	.0081
9	.0003	.0004	.0005	.0007	.0009	.0011	.0014	.0018	.0022	.0027
10	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0005	.0006	.0008
11	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0002
12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001
						u				
X	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
0	.0450	.0408	.0369	.0334	.0302	.0273	.0247	.0224	.0202	.0183
1	.1397	.1304	.1217	.1135	.1057	.0984	.0915	.0850	.0789	.0733
2	.2165	.2087	.2008	.1929	.1850	.1771	.1692	.1615	.1539	.1465
3	.2237	.2226	.2209	.2186	.2158	.2125	.2087	.2046	.2001	.1954
4	.1734	.1781	.1823	.1858	.1888	.1912	.1931	.1944	.1951	.1954
5	.1075	.1140	.1203	.1264	.1322	.1377	.1429	.1477	.1522	.1563
6	.0555	.0608	.0662	.0716	.0771	.0826	.0881	.0936	.0989	.1042
7	.0246	.0278	.0312	.0348	.0385	.0425	.0466	.0508	.0551	.0595
8	.0095	.0111	.0129	.0148	.0169	.0191	.0215	.0241	.0269	.0298
9	.0033	.0040	.0047	.0056	.0066	.0076	.0089	.0102	.0116	.0132
10	.0010	.0013	.0016	.0019	.0023	.0028	.0033	.0039	.0045	.0053
11	.0003	.0004	.0005	.0006	.0007	.0009	.0011	.0013	.0016	.0019
12	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0005	.0006
13	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0002	.0002
14	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001

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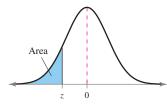
					/	ı				
X	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
0	.0166	.0150	.0136	.0123	.0111	.0101	.0091	.0082	.0074	.0067
1	.0679	.0630	.0583	.0540	.0500	.0462	.0427	.0395	.0365	.0337
2	.1393	.1323	.1254	.1188	.1125	.1063	.1005	.0948	.0894	.0842
3	.1904	.1852	.1798	.1743	.1687	.1631	.1574	.1517	.1460	.1404
4	.1951	.1944	.1933	.1917	.1898	.1875	.1849	.1820	.1789	.1755
5	.1600	.1633	.1662	.1687	.1708	.1725	.1738	.1747	.1753	.1755
6	.1093	.1143	.1191	.1237	.1281	.1323	.1362	.1398	.1432	.1462
7	.0640	.0686	.0732	.0778	.0824	.0869	.0914	.0959	.1002	.1044
8	.0328	.0360	.0393	.0428	.0463	.0500	.0537	.0575	.0614	.0653
9	.0150	.0168	.0188	.0209	.0232	.0255	.0280	.0307	.0334	.0363
10	.0061	.0071	.0081	.0092	.0104	.0118	.0132	.0147	.0164	.0181
11	.0023	.0027	.0032	.0037	.0043	.0049	.0056	.0064	.0073	.0082
12	.0008	.0009	.0011	.0014	.0016	.0019	.0022	.0026	.0030	.0034
13	.0002	.0003	.0004	.0005	.0006	.0007	.0008	.0009	.0011	.0013
14	.0001	.0001	.0001	.0001	.0002	.0002	.0003	.0003	.0004	.0005
15	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0002
					ŀ	ı				
				1						
x	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0
0	.0061	.0055	.0050	.0045	5.5 .0041	5.6 .0037	.0033	.0030	.0027	.0025
0 1	.0061 .0311	.0055 .0287	.0050 .0265	.0045 .0244	5.5 .0041 .0225	5.6 .0037 .0207	.0033 .0191	.0030 .0176	.0027 .0162	.0025 .0149
0 1 2	.0061 .0311 .0793	.0055 .0287 .0746	.0050 .0265 .0701	.0045 .0244 .0659	5.5 .0041 .0225 .0618	5.6 .0037 .0207 .0580	.0033 .0191 .0544	.0030 .0176 .0509	.0027 .0162 .0477	.0025 .0149 .0446
0 1 2 3	.0061 .0311 .0793 .1348	.0055 .0287 .0746 .1293	.0050 .0265 .0701 .1239	.0045 .0244 .0659 .1185	5.5 .0041 .0225 .0618 .1133	5.6 .0037 .0207 .0580 .1082	.0033 .0191 .0544 .1033	.0030 .0176 .0509 .0985	.0027 .0162 .0477 .0938	.0025 .0149 .0446 .0892
0 1 2 3 4	.0061 .0311 .0793 .1348 .1719	.0055 .0287 .0746 .1293 .1681	.0050 .0265 .0701 .1239 .1641	.0045 .0244 .0659 .1185 .1600	5.5 .0041 .0225 .0618 .1133 .1558	5.6 .0037 .0207 .0580 .1082 .1515	.0033 .0191 .0544 .1033 .1472	.0030 .0176 .0509 .0985 .1428	.0027 .0162 .0477 .0938 .1383	.0025 .0149 .0446 .0892 .1339
0 1 2 3 4 5	.0061 .0311 .0793 .1348 .1719 .1753	.0055 .0287 .0746 .1293 .1681 .1748	.0050 .0265 .0701 .1239 .1641 .1740	.0045 .0244 .0659 .1185 .1600 .1728	5.5 .0041 .0225 .0618 .1133 .1558 .1714	5.6 .0037 .0207 .0580 .1082 .1515 .1697	.0033 .0191 .0544 .1033 .1472 .1678	.0030 .0176 .0509 .0985 .1428 .1656	.0027 .0162 .0477 .0938 .1383 .1632	.0025 .0149 .0446 .0892 .1339 .1606
0 1 2 3 4 5 6	.0061 .0311 .0793 .1348 .1719 .1753 .1490	.0055 .0287 .0746 .1293 .1681 .1748 .1515	.0050 .0265 .0701 .1239 .1641 .1740 .1537	.0045 .0244 .0659 .1185 .1600 .1728 .1555	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584	.0033 .0191 .0544 .1033 .1472 .1678 .1594	.0030 .0176 .0509 .0985 .1428 .1656 .1601	.0027 .0162 .0477 .0938 .1383 .1632 .1605	.0025 .0149 .0446 .0892 .1339 .1606 .1606
0 1 2 3 4 5 6 7	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377
0 1 2 3 4 5 6 7 8	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033
0 1 2 3 4 5 6 7 8 9	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688
0 1 2 3 4 5 6 7 8 9 10	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392 .0200	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423 .0220	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454 .0241	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486 .0262	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519 .0285	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552 .0309	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586 .0334	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620 .0359	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654 .0386	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688 .0413
0 1 2 3 4 5 6 7 8 9 10 11	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392 .0200 .0093	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423 .0220 .0104	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454 .0241 .0116	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486 .0262 .0129	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519 .0285 .0143	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552 .0309 .0157	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586 .0334 .0173	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620 .0359 .0190	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654 .0386 .0207	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688 .0413 .0225
0 1 2 3 4 5 6 7 8 9 10 11 12	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392 .0200 .0093 .0039	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423 .0220 .0104 .0045	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454 .0241 .0116 .0051	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486 .0262 .0129 .0058	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519 .0285 .0143 .0065	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552 .0309 .0157 .0073	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586 .0334 .0173 .0082	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620 .0359 .0190 .0092	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654 .0386 .0207 .0102	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688 .0413 .0225 .0113
0 1 2 3 4 5 6 7 8 9 10 11 12 13	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392 .0200 .0093 .0039 .0015	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423 .0220 .0104 .0045 .0018	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454 .0241 .0116 .0051 .0021	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486 .0262 .0129 .0058 .0024	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519 .0285 .0143 .0065 .0028	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552 .0309 .0157 .0073 .0032	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586 .0334 .0173 .0082 .0036	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620 .0359 .0190 .0092 .0041	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654 .0386 .0207 .0102 .0046	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688 .0413 .0225 .0113 .0052
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392 .0200 .0093 .0039 .0015 .0006	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423 .0220 .0104 .0045 .0018 .0007	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454 .0241 .0116 .0051 .0021 .0008	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486 .0262 .0129 .0058 .0024 .0009	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519 .0285 .0143 .0065 .0028 .0011	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552 .0309 .0157 .0073 .0032 .0013	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586 .0334 .0173 .0082 .0036 .0015	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620 .0359 .0190 .0092 .0041 .0017	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654 .0386 .0207 .0102 .0046 .0019	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688 .0413 .0225 .0113 .0052 .0022
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392 .0200 .0093 .0039 .0015 .0006 .0002	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423 .0220 .0104 .0045 .0018 .0007 .0002	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454 .0241 .0116 .0051 .0021 .0008 .0003	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486 .0262 .0129 .0058 .0024 .0009 .0003	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519 .0285 .0143 .0065 .0028 .0011 .0004	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552 .0309 .0157 .0073 .0032 .0013 .0005	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586 .0334 .0173 .0082 .0036 .0015 .0006	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620 .0359 .0190 .0092 .0041 .0017 .0007	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654 .0386 .0207 .0102 .0046 .0019 .0008	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688 .0413 .0225 .0113 .0052 .0022 .0009
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	.0061 .0311 .0793 .1348 .1719 .1753 .1490 .1086 .0692 .0392 .0200 .0093 .0039 .0015 .0006	.0055 .0287 .0746 .1293 .1681 .1748 .1515 .1125 .0731 .0423 .0220 .0104 .0045 .0018 .0007	.0050 .0265 .0701 .1239 .1641 .1740 .1537 .1163 .0771 .0454 .0241 .0116 .0051 .0021 .0008	.0045 .0244 .0659 .1185 .1600 .1728 .1555 .1200 .0810 .0486 .0262 .0129 .0058 .0024 .0009	5.5 .0041 .0225 .0618 .1133 .1558 .1714 .1571 .1234 .0849 .0519 .0285 .0143 .0065 .0028 .0011	5.6 .0037 .0207 .0580 .1082 .1515 .1697 .1584 .1267 .0887 .0552 .0309 .0157 .0073 .0032 .0013	.0033 .0191 .0544 .1033 .1472 .1678 .1594 .1298 .0925 .0586 .0334 .0173 .0082 .0036 .0015	.0030 .0176 .0509 .0985 .1428 .1656 .1601 .1326 .0962 .0620 .0359 .0190 .0092 .0041 .0017	.0027 .0162 .0477 .0938 .1383 .1632 .1605 .1353 .0998 .0654 .0386 .0207 .0102 .0046 .0019	.0025 .0149 .0446 .0892 .1339 .1606 .1606 .1377 .1033 .0688 .0413 .0225 .0113 .0052 .0022

					μ	ı				
x	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0
0	.0022	.0020	.0018	.0017	.0015	.0014	.0012	.0011	.0010	.0009
1	.0137	.0126	.0116	.0106	.0098	.0090	.0082	.0076	.0070	.0064
2	.0417	.0390	.0364	.0340	.0318	.0296	.0276	.0258	.0240	.0223
3	.0848	.0806	.0765	.0726	.0688	.0652	.0617	.0584	.0552	.0521
4	.1294	.1249	.1205	.1162	.1118	.1076	.1034	.0992	.0952	.0912
5	.1579	.1549	.1519	.1487	.1454	.1420	.1385	.1349	.1314	.1277
6	.1605	.1601	.1595	.1586	.1575	.1562	.1546	.1529	.1511	.1490
7	.1399	.1418	.1435	.1450	.1462	.1472	.1480	.1486	.1489	.1490
8	.1066	.1099	.1130	.1160	.1188	.1215	.1240	.1263	.1284	.1304
9	.0723	.0757	.0791	.0825	.0858	.0891	.0923	.0954	.0985	.1014
10	.0441	.0469	.0498	.0528	.0558	.0588	.0618	.0649	.0679	.0710
11	.0245	.0265	.0285	.0307	.0330	.0353	.0377	.0401	.0426	.0452
12	.0124	.0137	.0150	.0164	.0179	.0194	.0210	.0227	.0245	.0264
13	.0058	.0065	.0073	.0081	.0089	.0098	.0108	.0119	.0130	.0142
14	.0025	.0029	.0033	.0037	.0041	.0046	.0052	.0058	.0064	.0071
15	.0010	.0012	.0014	.0016	.0018	.0020	.0023	.0026	.0029	.0033
16	.0004	.0005	.0005	.0006	.0007	.0008	.0010	.0011	.0013	.0014
17	.0001	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0006
18	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002
19	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001
x	7.1	7.2	7.3	7.4	<u>ہ</u> 7.5	7.6	7.7	7.8	7.9	8.0
0	.0008	.0007	.0007	.0006	.0006	.0005	.0005	.0004	.0004	.0003
1	.0059	.0054	.0049	.0045	.0041	.0038	.0035	.0032	.0029	.0027
2	.0208	.0194	.0180	.0167	.0156	.0145	.0134	.0125	.0116	.0107
3	.0492	.0464	.0438	.0413	.0389	.0366	.0345	.0324	.0305	.0286
4	.0874	.0836	.0799	.0764	.0729	.0696	.0663	.0632	.0602	.0573
5	.1241	.1204	.1167	.1130	.1094	.1057				
6	.1468	.1445				.1037	.1021	.0980	.0951	.0910
7		.1440	.1420	.1394			.1021 .1311	.0986 .1282	.0951 .1252	.0916 .1221
	.1489		.1420 .1481	.1394 .1474	.1367	.1339	.1311	.1282	.1252	.1221
	.1489	.1486	.1481	.1474		.1339 .1454	.1311 .1442	.1282 .1428	.1252 .1413	.1221 .1396
8	.1321	.1486 .1337	.1481 .1351	.1474 .1363	.1367 .1465 .1373	.1339 .1454 .1382	.1311 .1442 .1388	.1282 .1428 .1392	.1252 .1413 .1395	.1221 .1396 .1396
8 9		.1486 .1337 .1070	.1481 .1351 .1096	.1474 .1363 .1121	.1367 .1465 .1373 .1144	.1339 .1454 .1382 .1167	.1311 .1442 .1388 .1187	.1282 .1428 .1392 .1207	.1252 .1413 .1395 .1224	.1221 .1396 .1396 .1241
8 9 10	.1321 .1042 .0740	.1486 .1337 .1070 .0770	.1481 .1351 .1096 .0800	.1474 .1363 .1121 .0829	.1367 .1465 .1373 .1144 .0858	.1339 .1454 .1382 .1167 .0887	.1311 .1442 .1388 .1187 .0914	.1282 .1428 .1392 .1207 .0941	.1252 .1413 .1395 .1224 .0967	.1221 .1396 .1396 .1241 .0993
8 9 10 11	.1321 .1042 .0740 .0478	.1486 .1337 .1070 .0770 .0504	.1481 .1351 .1096 .0800 .0531	.1474 .1363 .1121 .0829 .0558	.1367 .1465 .1373 .1144 .0858 .0585	.1339 .1454 .1382 .1167 .0887 .0613	.1311 .1442 .1388 .1187	.1282 .1428 .1392 .1207 .0941 .0667	.1252 .1413 .1395 .1224 .0967 .0695	.1221 .1396 .1396 .1241
8 9 10	.1321 .1042 .0740	.1486 .1337 .1070 .0770	.1481 .1351 .1096 .0800	.1474 .1363 .1121 .0829	.1367 .1465 .1373 .1144 .0858	.1339 .1454 .1382 .1167 .0887	.1311 .1442 .1388 .1187 .0914 .0640	.1282 .1428 .1392 .1207 .0941	.1252 .1413 .1395 .1224 .0967	.1221 .1396 .1396 .1241 .0993 .0722
8 9 10 11 12	.1321 .1042 .0740 .0478 .0283	.1486 .1337 .1070 .0770 .0504 .0303	.1481 .1351 .1096 .0800 .0531 .0323	.1474 .1363 .1121 .0829 .0558 .0344	.1367 .1465 .1373 .1144 .0858 .0585 .0366	.1339 .1454 .1382 .1167 .0887 .0613 .0388	.1311 .1442 .1388 .1187 .0914 .0640 .0411	.1282 .1428 .1392 .1207 .0941 .0667 .0434	.1252 .1413 .1395 .1224 .0967 .0695 .0457	.1221 .1396 .1396 .1241 .0993 .0722 .0481
8 9 10 11 12 13	.1321 .1042 .0740 .0478 .0283 .0154	.1486 .1337 .1070 .0770 .0504 .0303 .0168	.1481 .1351 .1096 .0800 .0531 .0323 .0181	.1474 .1363 .1121 .0829 .0558 .0344 .0196	.1367 .1465 .1373 .1144 .0858 .0585 .0366 .0211	.1339 .1454 .1382 .1167 .0887 .0613 .0388 .0227	.1311 .1442 .1388 .1187 .0914 .0640 .0411 .0243	.1282 .1428 .1392 .1207 .0941 .0667 .0434 .0260	.1252 .1413 .1395 .1224 .0967 .0695 .0457 .0278	.1221 .1396 .1396 .1241 .0993 .0722 .0481 .0296
8 9 10 11 12 13 14	.1321 .1042 .0740 .0478 .0283 .0154 .0078	.1486 .1337 .1070 .0770 .0504 .0303 .0168 .0086	.1481 .1351 .1096 .0800 .0531 .0323 .0181 .0095	.1474 .1363 .1121 .0829 .0558 .0344 .0196 .0104	.1367 .1465 .1373 .1144 .0858 .0585 .0366 .0211 .0113	.1339 .1454 .1382 .1167 .0887 .0613 .0388 .0227 .0123	.1311 .1442 .1388 .1187 .0914 .0640 .0411 .0243 .0134	.1282 .1428 .1392 .1207 .0941 .0667 .0434 .0260 .0145	.1252 .1413 .1395 .1224 .0967 .0695 .0457 .0278 .0157	.1221 .1396 .1396 .1241 .0993 .0722 .0481 .0296 .0169
8 9 10 11 12 13 14 15	.1321 .1042 .0740 .0478 .0283 .0154 .0078 .0037	.1486 .1337 .1070 .0770 .0504 .0303 .0168 .0086 .0041	.1481 .1351 .1096 .0800 .0531 .0323 .0181 .0095 .0046	.1474 .1363 .1121 .0829 .0558 .0344 .0196 .0104 .0051	.1367 .1465 .1373 .1144 .0858 .0585 .0366 .0211 .0113 .0057	.1339 .1454 .1382 .1167 .0887 .0613 .0388 .0227 .0123 .0062	.1311 .1442 .1388 .1187 .0914 .0640 .0411 .0243 .0134 .0069	.1282 .1428 .1392 .1207 .0941 .0667 .0434 .0260 .0145 .0075	.1252 .1413 .1395 .1224 .0967 .0695 .0457 .0278 .0157 .0083	.1221 .1396 .1396 .1241 .0993 .0722 .0481 .0296 .0169 .0090
8 9 10 11 12 13 14 15 16	.1321 .1042 .0740 .0478 .0283 .0154 .0078 .0037 .0016	.1486 .1337 .1070 .0770 .0504 .0303 .0168 .0086 .0041 .0019	.1481 .1351 .1096 .0800 .0531 .0323 .0181 .0095 .0046 .0021	.1474 .1363 .1121 .0829 .0558 .0344 .0196 .0104 .0051 .0024	.1367 .1465 .1373 .1144 .0858 .0585 .0366 .0211 .0113 .0057 .0026	.1339 .1454 .1382 .1167 .0887 .0613 .0388 .0227 .0123 .0062 .0030	.1311 .1442 .1388 .1187 .0914 .0640 .0411 .0243 .0134 .0069 .0033	.1282 .1428 .1392 .1207 .0941 .0667 .0434 .0260 .0145 .0075 .0037	.1252 .1413 .1395 .1224 .0967 .0695 .0457 .0278 .0157 .0083 .0041	.1221 .1396 .1396 .1241 .0993 .0722 .0481 .0296 .0169 .0090 .0045
8 9 10 11 12 13 14 15 16 17	.1321 .1042 .0740 .0478 .0283 .0154 .0078 .0037 .0016 .0007	.1486 .1337 .1070 .0770 .0504 .0303 .0168 .0086 .0041 .0019 .0008	.1481 .1351 .1096 .0800 .0531 .0323 .0181 .0095 .0046 .0021 .0009	.1474 .1363 .1121 .0829 .0558 .0344 .0196 .0104 .0051 .0024 .0010	.1367 .1465 .1373 .1144 .0858 .0585 .0366 .0211 .0113 .0057 .0026 .0012	.1339 .1454 .1382 .1167 .0887 .0613 .0388 .0227 .0123 .0062 .0030 .0013	.1311 .1442 .1388 .1187 .0914 .0640 .0411 .0243 .0134 .0069 .0033 .0015	.1282 .1428 .1392 .1207 .0941 .0667 .0434 .0260 .0145 .0075 .0037 .0017	.1252 .1413 .1395 .1224 .0967 .0695 .0457 .0278 .0157 .0083 .0041 .0019	.1221 .1396 .1396 .1241 .0993 .0722 .0481 .0296 .0169 .0090 .0045 .0021
8 9 10 11 12 13 14 15 16 17 18	.1321 .1042 .0740 .0478 .0283 .0154 .0078 .0037 .0016 .0007 .0003	.1486 .1337 .1070 .0770 .0504 .0303 .0168 .0086 .0041 .0019 .0008 .0003	.1481 .1351 .1096 .0800 .0531 .0323 .0181 .0095 .0046 .0021 .0009 .0004	.1474 .1363 .1121 .0829 .0558 .0344 .0196 .0104 .0051 .0024 .0010 .0004	.1367 .1465 .1373 .1144 .0858 .0585 .0366 .0211 .0113 .0057 .0026 .0012 .0005	.1339 .1454 .1382 .1167 .0887 .0613 .0388 .0227 .0123 .0062 .0030 .0013 .0006	.1311 .1442 .1388 .1187 .0914 .0640 .0411 .0243 .0134 .0069 .0033 .0015 .0006	.1282 .1428 .1392 .1207 .0941 .0667 .0434 .0260 .0145 .0075 .0037 .0017 .0007	.1252 .1413 .1395 .1224 .0967 .0695 .0457 .0278 .0157 .0083 .0041 .0019 .0008	.1221 .1396 .1396 .1241 .0993 .0722 .0481 .0296 .0169 .0090 .0045 .0021 .0009

					Ļ	ι				
X	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0
0	.0003	.0003	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0001
1	.0025	.0023	.0021	.0019	.0017	.0016	.0014	.0013	.0012	.0011
2	.0100	.0092	.0086	.0079	.0074	.0068	.0063	.0058	.0054	.0050
3	.0269	.0252	.0237	.0222	.0208	.0195	.0183	.0171	.0160	.0150
4	.0544	.0517	.0491	.0466	.0443	.0420	.0398	.0377	.0357	.0337
5	.0882	.0849	.0816	.0784	.0752	.0722	.0692	.0663	.0635	.0607
6	.1191	.1160	.1128	.1097	.1066	.1034	.1003	.0972	.0941	.0911
7	.1378	.1358	.1338	.1317	.1294	.1271	.1247	.1222	.1197	.1171
8	.1395	.1392	.1388	.1382	.1375	.1366	.1356	.1344	.1332	.1318
9	.1256	.1269	.1280	.1290	.1299	.1306	.1311	.1315	.1317	.1318
10	.1017	.1040	.1063	.1084	.1104	.1123	.1140	.1157	.1172	.1186
11	.0749	.0776	.0802	.0828	.0853	.0878	.0902	.0925	.0948	.0970
12	.0505	.0530	.0555	.0579	.0604	.0629	.0654	.0679	.0703	.0728
13	.0315	.0334	.0354	.0374	.0395	.0416	.0438	.0459	.0481	.0504
14	.0182	.0196	.0210	.0225	.0240	.0256	.0272	.0289	.0306	.0324
15	.0098	.0107	.0116	.0126	.0136	.0147	.0158	.0169	.0182	.0194
16	.0050	.0055	.0060	.0066	.0072	.0079	.0086	.0093	.0101	.0109
17	.0024	.0026	.0029	.0033	.0036	.0040	.0044	.0048	.0053	.0058
18	.0011	.0012	.0014	.0015	.0017	.0019	.0021	.0024	.0026	.0029
19	.0005	.0005	.0006	.0007	.0008	.0009	.0010	.0011	.0012	.0014
20	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0005	.0006
21	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003
22	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001
	9.1	9.2	9.3	9.4	<u> </u>	ι 9.6	9.7	9.8	9.9	10.0
<u>x</u>	9.1	J.Z	9.3	3.4	3.5			J.O		10.0
0	0001	0001	0001							
0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0000
1	.0010	.0009	.0009	.0001 .0008	.0001 .0007	.0001 .0007	.0001 .0006	.0001 .0005	.0001 .0005	.0000 .0005
1 2	.0010 .0046	.0009 .0043	.0009 .0040	.0001 .0008 .0037	.0001 .0007 .0034	.0001 .0007 .0031	.0001 .0006 .0029	.0001 .0005 .0027	.0001 .0005 .0025	.0000 .0005 .0023
1 2 3	.0010 .0046 .0140	.0009 .0043 .0131	.0009 .0040 .0123	.0001 .0008 .0037 .0115	.0001 .0007 .0034 .0107	.0001 .0007 .0031 .0100	.0001 .0006 .0029 .0093	.0001 .0005 .0027 .0087	.0001 .0005 .0025 .0081	.0000 .0005 .0023 .0076
1 2 3 4	.0010 .0046 .0140 .0319	.0009 .0043 .0131 .0302	.0009 .0040 .0123 .0285	.0001 .0008 .0037 .0115 .0269	.0001 .0007 .0034 .0107 .0254	.0001 .0007 .0031 .0100 .0240	.0001 .0006 .0029 .0093 .0226	.0001 .0005 .0027 .0087 .0213	.0001 .0005 .0025 .0081 .0201	.0000 .0005 .0023 .0076 .0189
1 2 3 4 5	.0010 .0046 .0140 .0319 .0581	.0009 .0043 .0131 .0302 .0555	.0009 .0040 .0123 .0285 .0530	.0001 .0008 .0037 .0115 .0269 .0506	.0001 .0007 .0034 .0107 .0254 .0483	.0001 .0007 .0031 .0100 .0240 .0460	.0001 .0006 .0029 .0093 .0226 .0439	.0001 .0005 .0027 .0087 .0213 .0418	.0001 .0005 .0025 .0081 .0201 .0398	.0000 .0005 .0023 .0076 .0189 .0378
1 2 3 4 5 6	.0010 .0046 .0140 .0319 .0581 .0881	.0009 .0043 .0131 .0302 .0555 .0851	.0009 .0040 .0123 .0285 .0530 .0822	.0001 .0008 .0037 .0115 .0269 .0506 .0793	.0001 .0007 .0034 .0107 .0254 .0483 .0764	.0001 .0007 .0031 .0100 .0240 .0460 .0736	.0001 .0006 .0029 .0093 .0226 .0439 .0709	.0001 .0005 .0027 .0087 .0213 .0418 .0682	.0001 .0005 .0025 .0081 .0201 .0398 .0656	.0000 .0005 .0023 .0076 .0189 .0378 .0631
1 2 3 4 5 6 7	.0010 .0046 .0140 .0319 .0581 .0881 .1145	.0009 .0043 .0131 .0302 .0555	.0009 .0040 .0123 .0285 .0530 .0822 .1091	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901
1 2 3 4 5 6 7 8	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191	.0001 .0005 .0027 .0087 .0213 .0418 .0682	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126
1 2 3 4 5 6 7	.0010 .0046 .0140 .0319 .0581 .0881 .1145	.0009 .0043 .0131 .0302 .0555 .0851 .1118	.0009 .0040 .0123 .0285 .0530 .0822 .1091	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251
1 2 3 4 5 6 7 8 9	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126
1 2 3 4 5 6 7 8 9 10	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251
1 2 3 4 5 6 7 8 9 10 11	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1137 .0948
1 2 3 4 5 6 7 8 9 10 11 12	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1137
1 2 3 4 5 6 7 8 9 10 11 12 13	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1137 .0948 .0729
1 2 3 4 5 6 7 8 9 10 11 12 13 14	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1251 .1137 .0948 .0729 .0521
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	.0010 .0046 .0140 .0319 .0581 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342 .0208	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361 .0221	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380 .0235	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399 .0250	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419 .0265	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439 .0281	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459 .0297	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479 .0313	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500 .0330	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1137 .0948 .0729 .0521 .0347
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342 .0208 .0118	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361 .0221 .0127	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380 .0235 .0137	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399 .0250 .0147	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419 .0265 .0157	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439 .0281 .0168	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459 .0297 .0180	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479 .0313 .0192	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500 .0330 .0204	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1137 .0948 .0729 .0521 .0347 .0217
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342 .0208 .0118 .0063	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361 .0221 .0127 .0069	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380 .0235 .0137 .0075	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399 .0250 .0147 .0081	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419 .0265 .0157 .0088	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439 .0281 .0168 .0095	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459 .0297 .0180 .0103	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479 .0313 .0192 .0111	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500 .0330 .0204 .0119	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1251 .1137 .0948 .0729 .0521 .0347 .0217 .0217 .0128
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342 .0208 .0118 .0063 .0032	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361 .0221 .0127 .0069 .0035	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380 .0235 .0137 .0075 .0039	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399 .0250 .0147 .0081 .0042	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419 .0265 .0157 .0088 .0046	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439 .0281 .0168 .0095 .0051	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459 .0297 .0180 .0103 .0055	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479 .0313 .0192 .0111 .0060	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500 .0330 .0204 .0119 .0065	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1137 .0948 .0729 .0521 .0347 .0217 .0128 .0071
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342 .0208 .0118 .0063 .0032 .0015	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361 .0221 .0127 .0069 .0035 .0017 .0008 .0003	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380 .0235 .0137 .0075 .0039 .0019	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399 .0250 .0147 .0081 .0042 .0021	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419 .0265 .0157 .0088 .0046 .0023 .0011 .0005	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439 .0281 .0168 .0095 .0051 .0026	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459 .0297 .0180 .0103 .0055 .0028	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479 .0313 .0192 .0111 .0060 .0031	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500 .0330 .0204 .0119 .0065 .0034	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1251 .1251 .1251 .1251 .0948 .0729 .0521 .0347 .0217 .0128 .0071 .0037
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342 .0208 .0118 .0063 .0032 .0015 .0007	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361 .0221 .0127 .0069 .0035 .0017 .0008	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380 .0235 .0137 .0075 .0039 .0019 .0009 .0004 .0002	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399 .0250 .0147 .0081 .0042 .0021 .0010	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419 .0265 .0157 .0088 .0046 .0023 .0011	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439 .0281 .0168 .0095 .0051 .0026 .0012 .0006 .0002	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459 .0297 .0180 .0103 .0055 .0028 .0014	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479 .0313 .0192 .0111 .0060 .0031 .0015	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500 .0330 .0204 .0119 .0065 .0034 .0017 .0008 .0004	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1251 .1251 .1251 .1251 .1251 .0948 .0729 .0521 .0347 .0217 .0128 .0071 .0037 .0019
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	.0010 .0046 .0140 .0319 .0581 .0881 .1145 .1302 .1317 .1198 .0991 .0752 .0526 .0342 .0208 .0118 .0063 .0032 .0015 .0007 .0003	.0009 .0043 .0131 .0302 .0555 .0851 .1118 .1286 .1315 .1210 .1012 .0776 .0549 .0361 .0221 .0127 .0069 .0035 .0017 .0008 .0003	.0009 .0040 .0123 .0285 .0530 .0822 .1091 .1269 .1311 .1219 .1031 .0799 .0572 .0380 .0235 .0137 .0075 .0039 .0019 .0009 .0004	.0001 .0008 .0037 .0115 .0269 .0506 .0793 .1064 .1251 .1306 .1228 .1049 .0822 .0594 .0399 .0250 .0147 .0081 .0042 .0021 .0010 .0004	.0001 .0007 .0034 .0107 .0254 .0483 .0764 .1037 .1232 .1300 .1235 .1067 .0844 .0617 .0419 .0265 .0157 .0088 .0046 .0023 .0011 .0005	.0001 .0007 .0031 .0100 .0240 .0460 .0736 .1010 .1212 .1293 .1241 .1083 .0866 .0640 .0439 .0281 .0168 .0095 .0051 .0026 .0012 .0006	.0001 .0006 .0029 .0093 .0226 .0439 .0709 .0982 .1191 .1284 .1245 .1098 .0888 .0662 .0459 .0297 .0180 .0103 .0055 .0028 .0014 .0006	.0001 .0005 .0027 .0087 .0213 .0418 .0682 .0955 .1170 .1274 .1249 .1112 .0908 .0685 .0479 .0313 .0192 .0111 .0060 .0031 .0015 .0007	.0001 .0005 .0025 .0081 .0201 .0398 .0656 .0928 .1148 .1263 .1250 .1125 .0928 .0707 .0500 .0330 .0204 .0119 .0065 .0034 .0017 .0008	.0000 .0005 .0023 .0076 .0189 .0378 .0631 .0901 .1126 .1251 .1251 .1251 .1251 .1251 .1251 .1251 .1251 .0948 .0729 .0521 .0347 .0217 .0128 .0071 .0037 .0019 .0009

					ļ	ι				
X	11	12	13	14	15	16	17	18	19	20
0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1	.0002	.0001	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
2	.0010	.0004	.0002	.0001	.0000	.0000	.0000	.0000	.0000	.0000
3	.0037	.0018	.0008	.0004	.0002	.0001	.0000	.0000	.0000	.0000
4	.0102	.0053	.0027	.0013	.0006	.0003	.0001	.0001	.0000	.0000
5	.0224	.0127	.0070	.0037	.0019	.0010	.0005	.0002	.0001	.0001
6	.0411	.0255	.0152	.0087	.0048	.0026	.0014	.0007	.0004	.0002
7	.0646	.0437	.0281	.0174	.0104	.0060	.0034	.0018	.0010	.0005
8	.0888	.0655	.0457	.0304	.0194	.0120	.0072	.0042	.0024	.0013
9	.1085	.0874	.0661	.0473	.0324	.0213	.0135	.0083	.0050	.0029
10	.1194	.1048	.0859	.0663	.0486	.0341	.0230	.0150	.0095	.0058
11	.1194	.1144	.1015	.0844	.0663	.0496	.0355	.0245	.0164	.0106
12	.1094	.1144	.1099	.0984	.0829	.0661	.0504	.0368	.0259	.0176
13	.0926	.1056	.1099	.1060	.0956	.0814	.0658	.0509	.0378	.0271
14	.0728	.0905	.1021	.1060	.1024	.0930	.0800	.0655	.0514	.0387
15	.0534	.0724	.0885	.0989	.1024	.0992	.0906	.0786	.0650	.0516
16	.0367	.0543	.0719	.0866	.0960	.0992	.0963	.0884	.0772	.0646
17	.0237	.0383	.0550	.0713	.0847	.0934	.0963	.0936	.0863	.0760
18	.0145	.0256	.0397	.0554	.0706	.0830	.0909	.0936	.0911	.0844
19	.0084	.0161	.0272	.0409	.0557	.0699	.0814	.0887	.0911	.0888
20	.0046	.0097	.0177	.0286	.0418	.0559	.0692	.0798	.0866	.0888
					<u> </u>					
<u>X</u>	11	12	13	14	15	16	17	18	19	20
21	.0024	.0055	.0109	.0191	.0299	.0426	.0560	.0684	.0783	.0846
22	.0012	.0030	.0065	.0121	.0204	.0310	.0433	.0560	.0676	.0769
23	.0006	.0016	.0037	.0074	.0133	.0216	.0320	.0438	.0559	.0669
24	.0003	.0008	.0020	.0043	.0083	.0144	.0226	.0328	.0442	.0557
25	.0001	.0004	.0010	.0024	.0050	.0092	.0154	.0237	.0336	.0446
26	.0000	.0002	.0005	.0013	.0029	.0057	.0101	.0164	.0246	.0343
27	.0000	.0001	.0002	.0007	.0016	.0034	.0063	.0109	.0173	.0254
28	.0000	.0000	.0001	.0003	.0009	.0019	.0038	.0070	.0117	.0181
29	.0000	.0000	.0001	.0002	.0004	.0011	.0023	.0044	.0077	.0125
30	.0000	.0000	.0000	.0001	.0002	.0006	.0013	.0026	.0049	.0083
31	.0000	.0000	.0000	.0000	.0001	.0003	.0007	.0015	.0030	.0054
32	.0000	.0000	.0000	.0000	.0001	.0001	.0004	.0009	.0018	.0034
33	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0005	.0010	.0020
34	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0006	.0012
35	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0003	.0007
36	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0004
37	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002
38	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001
39	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001

Table 4—Standard Normal Distribution



Z	.09	.08	.07	.06	.05	.04	.03	.02	.01	.00
- 3.4	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003
- 3.3	.0003	.0004	.0004	.0004	.0004	.0004	.0004	.0005	.0005	.0005
- 3.2	.0005	.0005	.0005	.0006	.0006	.0006	.0006	.0006	.0007	.0007
- 3.1	.0007	.0007	.0008	.0008	.0008	.0008	.0009	.0009	.0009	.0010
- 3.0	.0010	.0010	.0011	.0011	.0011	.0012	.0012	.0013	.0013	.0013
- 2.9	.0014	.0014	.0015	.0015	.0016	.0016	.0017	.0018	.0018	.0019
-2.8	.0019	.0020	.0021	.0021	.0022	.0023	.0023	.0024	.0025	.0026
- 2.7	.0026	.0027	.0028	.0029	.0030	.0031	.0032	.0033	.0034	.0035
-2.6	.0036	.0037	.0038	.0039	.0040	.0041	.0043	.0044	.0045	.0047
- 2.5	.0048	.0049	.0051	.0052	.0054	.0055	.0057	.0059	.0060	.0062
-2.4	.0064	.0066	.0068	.0069	.0071	.0073	.0075	.0078	.0080	.0082
- 2.3	.0084	.0087	.0089	.0091	.0094	.0096	.0099	.0102	.0104	.0107
-2.2	.0110	.0113	.0116	.0119	.0122	.0125	.0129	.0132	.0136	.0139
- 2.1	.0143	.0146	.0150	.0154	.0158	.0162	.0166	.0170	.0174	.0179
-2.0	.0183	.0188	.0192	.0197	.0202	.0207	.0212	.0217	.0222	.0228
- 1.9	.0233	.0239	.0244	.0250	.0256	.0262	.0268	.0274	.0281	.0287
- 1.8	.0294	.0301	.0307	.0314	.0322	.0329	.0336	.0344	.0351	.0359
- 1.7	.0367	.0375	.0384	.0392	.0401	.0409	.0418	.0427	.0436	.0446
- 1.6	.0455	.0465	.0475	.0485	.0495	.0505	.0516	.0526	.0537	.0548
- 1.5	.0559	.0571	.0582	.0594	.0606	.0618	.0630	.0643	.0655	.0668
- 1.4	.0681	.0694	.0708	.0721	.0735	.0749	.0764	.0778	.0793	.0808
- 1.3	.0823	.0838	.0853	.0869	.0885	.0901	.0918	.0934	.0951	.0968
- 1.2	.0985	.1003	.1020	.1038	.1056	.1075	.1093	.1112	.1131	.1151
- 1.1	.1170	.1190	.1210	.1230	.1251	.1271	.1292	.1314	.1335	.1357
- 1.0	.1379	.1401	.1423	.1446	.1469	.1492	.1515	.1539	.1562	.1587
- 0.9	.1611	.1635	.1660	.1685	.1711	.1736	.1762	.1788	.1814	.1841
- 0.8	.1867	.1894	.1922	.1949	.1977	.2005	.2033	.2061	.2090	.2119
- 0.7	.2148	.2177	.2206	.2236	.2266	.2296	.2327	.2358	.2389	.2420
- 0.6	.2451	.2483	.2514	.2546	.2578	.2611	.2643	.2676	.2709	.2743
- 0.5	.2776	.2810	.2843	.2877	.2912	.2946	.2981	.3015	.3050	.3085
-0.4	.3121	.3156	.3192	.3228	.3264	.3300	.3336	.3372	.3409	.3446
- 0.3	.3483	.3520	.3557	.3594	.3632	.3669	.3707	.3745	.3783	.3821
-0.2	.3859	.3897	.3936	.3974	.4013	.4052	.4090	.4129	.4168	.4207
- 0.1	.4247	.4286	.4325	.4364	.4404	.4443	.4483	.4522	.4562	.4602
- 0.0	.4641	.4681	.4721	.4761	.4801	.4840	.4880	.4920	.4960	.5000

Critical Values

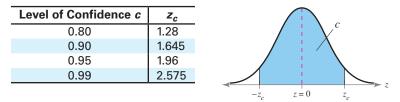
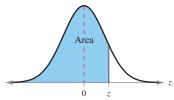


Table A-3, pp. 681–682 from *Probability and Statistics for Engineers and Scientists*, 6e by Walpole, Myers, and Myers. Copyright 1997. Pearson Prentice Hall, Upper Saddle River, N.J.

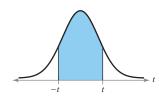
Table 4—Standard Normal Distribution (continued)



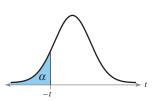
z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
0.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
0.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
0.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
0.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
0.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
0.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
0.7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
0.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
0.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.0	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
3.1	.9990	.9991	.9991	.9991	.9992	.9992	.9992	.9992	.9993	.9993
3.2	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
3.3	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998

Table 5—*t*-Distribution

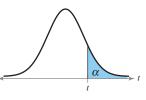
	Level of					
	confidence, <i>c</i>	0.80	0.90	0.95	0.98	0.99
	One tail, α	0.10	0.05	0.025	0.01	0.005
d.f.	Two tails, α	0.20	0.10	0.05	0.02	0.01
1		3.078	6.314	12.706	31.821	63.657
2		1.886	2.920	4.303	6.965	9.925
3		1.638	2.353	3.182	4.541	5.841
4		1.533	2.132	2.776	3.747	4.604
5		1.476	2.015	2.571	3.365	4.032
6		1.440	1.943	2.447	3.143	3.707
7		1.415	1.895	2.365	2.998	3.499
8		1.397	1.860	2.306	2.896	3.355
9		1.383	1.833	2.262	2.821	3.250
10		1.372	1.812	2.228	2.764	3.169
11		1.363	1.796	2.201	2.718	3.106
12		1.356	1.782	2.179	2.681	3.055
13		1.350	1.771	2.160	2.650	3.012
14		1.345	1.761	2.145	2.624	2.977
15		1.341	1.753	2.131	2.602	2.947
16		1.337	1.746	2.120	2.583	2.921
17		1.333	1.740	2.110	2.567	2.898
18		1.330	1.734	2.101	2.552	2.878
19		1.328	1.729	2.093	2.539	2.861
20		1.325	1.725	2.086	2.528	2.845
21		1.323	1.721	2.080	2.518	2.831
22		1.321	1.717	2.074	2.508	2.819
23		1.319	1.714	2.069	2.500	2.807
24		1.318	1.711	2.064	2.492	2.797
25		1.316	1.708	2.060	2.485	2.787
26		1.315	1.706	2.056	2.479	2.779
27		1.314	1.703	2.052	2.473	2.771
28		1.313	1.701	2.048	2.467	2.763
29		1.311	1.699	2.045	2.462	2.756
30		1.310	1.697	2.042	2.457	2.750
31		1.309	1.696	2.040	2.453	2.744
32		1.309	1.694	2.037	2.449	2.738
33		1.308	1.692	2.035	2.445	2.733
34		1.307	1.691	2.032	2.441	2.728
35		1.306	1.690	2.030	2.438	2.724
36		1.306	1.688	2.028	2.434	2.719
37		1.305	1.687	2.026	2.431	2.715
38		1.304	1.686	2.024	2.429	2.712
39		1.304	1.685	2.023	2.426	2.708
40		1.303	1.684	2.021	2.423	2.704
45		1.301	1.679	2.014	2.412	2.690
50		1.299	1.676	2.009	2.403	2.678
60		1.296	1.671	2.000	2.390	2.660
70		1.294	1.667	1.994	2.381	2.648
80		1.292	1.664	1.990	2.374	2.639
90		1.291	1.662	1.987	2.368	2.632
100		1.290	1.660	1.984	2.364	2.626
500		1.283	1.648	1.965	2.334	2.586
1000		1.282	1.646	1.962	2.330	2.581
∞		1.282	1.645	1.960	2.326	2.576



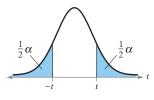
c-confidence interval



Left-tailed test



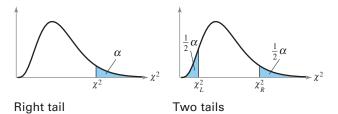
Right-tailed test



Two-tailed test

The critical values in Table 5 were generated using Excel.

Table 6—Chi-Square Distribution



Degrees of						α				
freedom	0.995	0.99	0.975	0.95	0.90	0.10	0.05	0.025	0.01	0.005
1	_	_	0.001	0.004	0.016	2.706	3.841	5.024	6.635	7.879
2	0.010	0.020	0.051	0.103	0.211	4.605	5.991	7.378	9.210	10.597
3	0.072	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345	12.838
4	0.207	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277	14.860
5	0.412	0.554	0.831	1.145	1.610	9.236	11.071	12.833	15.086	16.750
6	0.676	0.872	1.237	1.635	2.204	10.645	12.592	14.449	16.812	18.548
7	0.989	1.239	1.690	2.167	2.833	12.017	14.067	16.013	18.475	20.278
8	1.344	1.646	2.180	2.733	3.490	13.362	15.507	17.535	20.090	21.955
9	1.735	2.088	2.700	3.325	4.168	14.684	16.919	19.023	21.666	23.589
10	2.156	2.558	3.247	3.940	4.865	15.987	18.307	20.483	23.209	25.188
11	2.603	3.053	3.816	4.575	5.578	17.275	19.675	21.920	24.725	26.757
12	3.074	3.571	4.404	5.226	6.304	18.549	21.026	23.337	26.217	28.299
13	3.565	4.107	5.009	5.892	7.042	19.812	22.362	24.736	27.688	29.819
14	4.075	4.660	5.629	6.571	7.790	21.064	23.685	26.119	29.141	31.319
15	4.601	5.229	6.262	7.261	8.547	22.307	24.996	27.488	30.578	32.801
16	5.142	5.812	6.908	7.962	9.312	23.542	26.296	28.845	32.000	34.267
17	5.697	6.408	7.564	8.672	10.085	24.769	27.587	30.191	33.409	35.718
18	6.265	7.015	8.231	9.390	10.865	25.989	28.869	31.526	34.805	37.156
19	6.844	7.633	8.907	10.117	11.651	27.204	30.144	32.852	36.191	38.582
20	7.434	8.260	9.591	10.851	12.443	28.412	31.410	34.170	37.566	39.997
21	8.034	8.897	10.283	11.591	13.240	29.615	32.671	35.479	38.932	41.401
22	8.643	9.542	10.982	12.338	14.042	30.813	33.924	36.781	40.289	42.796
23	9.260	10.196	11.689	13.091	14.848	32.007	35.172	38.076	41.638	44.181
24	9.886	10.856	12.401	13.848	15.659	33.196	36.415	39.364	42.980	45.559
25	10.520	11.524	13.120	14.611	16.473	34.382	37.652	40.646	44.314	46.928
26	11.160	12.198	13.844	15.379	17.292	35.563	38.885	41.923	45.642	48.290
27	11.808	12.879	14.573	16.151	18.114	36.741	40.113	43.194	46.963	49.645
28	12.461	13.565	15.308	16.928	18.939	37.916	41.337	44.461	48.278	50.993
29	13.121	14.257	16.047	17.708	19.768	39.087	42.557	45.722	49.588	52.336
30	13.787	14.954	16.791	18.493	20.599	40.256	43.773	46.979	50.892	53.672
40	20.707	22.164	24.433	26.509	29.051	51.805	55.758	59.342	63.691	66.766
50	27.991	29.707	32.357	34.764	37.689	63.167	67.505	71.420	76.154	79.490
60	35.534	37.485	40.482	43.188	46.459	74.397	79.082	83.298	88.379	91.952
70	43.275	45.442	48.758	51.739	55.329	85.527	90.531	95.023	100.425	104.215
80	51.172	53.540	57.153	60.391	64.278	96.578	101.879	106.629	112.329	116.321
90	59.196	61.754	65.647	69.126	73.291	107.565	113.145	118.136	124.116	128.299
100	67.328	70.065	74.222	77.929	82.358	118.498	124.342	129.561	135.807	140.169

D. B. Owen, HANDBOOK OF STATISTICAL TABLES, A.5, Published by Addison Wesley Longman, Inc.