

FIGURE 9.2 Normal curve: percent areas from the mean to specified z distances.

*The formula for the normal curve is fairly complicated:

$$f(X) = \frac{1}{\sigma\sqrt{2\pi}} e^{-(X - \mu)^2/2\sigma^2}$$

TABLE C.2 (continued)

z	α	z	α	z	α	z	α	z	α
1.65	.0495	1.98	.0239	2.31	.0104	2.64	.0041	2.97	.0015
1.66	.0485	1.99	.0233	2.32	.0102	2.65	.0040	2.98	.0014
1.67	.0475	2.00	.0228	2.33	.0099	2.66	.0039	2.99	.0014
1.68	.0465	2.01	.0222	2.34	.0096	2.67	.0038	3.00	.0013
1.69	.0455	2.02	.0217	2.35	.0094	2.68	.0037	3.01	.0013
1.70	.0446	2.03	.0212	2.36	.0091	2.69	.0036	3.02	.0013
1.71	.0436	2.04	.0207	2.37	.0089	2.70	.0035	3.03	.0012
1.72	.0427	2.05	.0202	2.38	.0087	2.71	.0034	3.04	.0012
1.73	.0418	2.06	.0197	2.39	.0084	2.72	.0033	3.05	.0011
1.74	.0409	2.07	.0192	2.40	.0082	2.73	.0032	3.06	.0011
1.75	.0401	2.08	.0188	2.41	.0080	2.74	.0031	3.07	.0011
1.76	.0392	2.09	.0183	2.42	.0078	2.75	.0030	3.08	.0010
1.77	.0384	2.10	.0179	2.43	.0075	2.76	.0029	3.09	.0010
1.78	.0375	2.11	.0174	2.44	.0073	2.77	.0028	3.10	.0010
1.79	.0367	2.12	.0170	2.45	.0071	2.78	.0027	3.11	.0009
1.80	.0359	2.13	.0166	2.46	.0069	2.79	.0026	3.12	.0009
1.81	.0351	2.14	.0162	2.47	.0068	2.80	.0026	3.13	.0009
1.82	.0344	2.15	.0158	2.48	.0066	2.81	.0025	3.14	.0008
1.83	.0336	2.16	.0154	2.49	.0064	2.82	.0024	3.15	.0008
1.84	.0329	2.17	.0150	2.50	.0062	2.83	.0023	3.16	.0008
1.85	.0322	2.18	.0146	2.51	.0060	2.84	.0023	3.17	.0008
1.86	.0314	2.19	.0143	2.52	.0059	2.85	.0022	3.18	.0007
1.87	.0307	2.20	.0139	2.53	.0057	2.86	.0021	3.19	.0007
1.88	.0301	2.21	.0136	2.54	.0055	2.87	.0021	3.20	.0007
1.89	.0294	2.22	.0132	2.55	.0054	2.88	.0020	3.21	.0007
1.90	.0287	2.23	.0129	2.56	.0052	2.89	.0019	3.22	.0006
1.91	.0281	2.24	.0125	2.57	.0051	2.90	.0019	3.23	.0006
1.92	.0274	2.25	.0122	2.58	.0049	2.91	.0018	3.24	.0006
1.93	.0268	2.26	.0119	2.59	.0048	2.92	.0018	3.25	.0006
1.94	.0262	2.27	.0116	2.60	.0047	2.93	.0017		
1.95	.0256	2.28	.0113	2.61	.0045	2.94	.0016		
1.96	.0250	2.29	.0110	2.62	.0044	2.95	.0016		
1.97	.0244	2.30	.0107	2.63	.0043	2.96	.0015		

Source: Adapted from Table 1 in Pearson, E. S. and Hartley, H. O. (1958). *Biometrika Tables for Statisticians*, Vol. 1, 2nd ed. Cambridge University Press: Cambridge, with the kind permission of the trustees of *Biometrika*.

FIGURE 10.5 Comparison between the normal curve and the *t* distribution for $df = 9$.

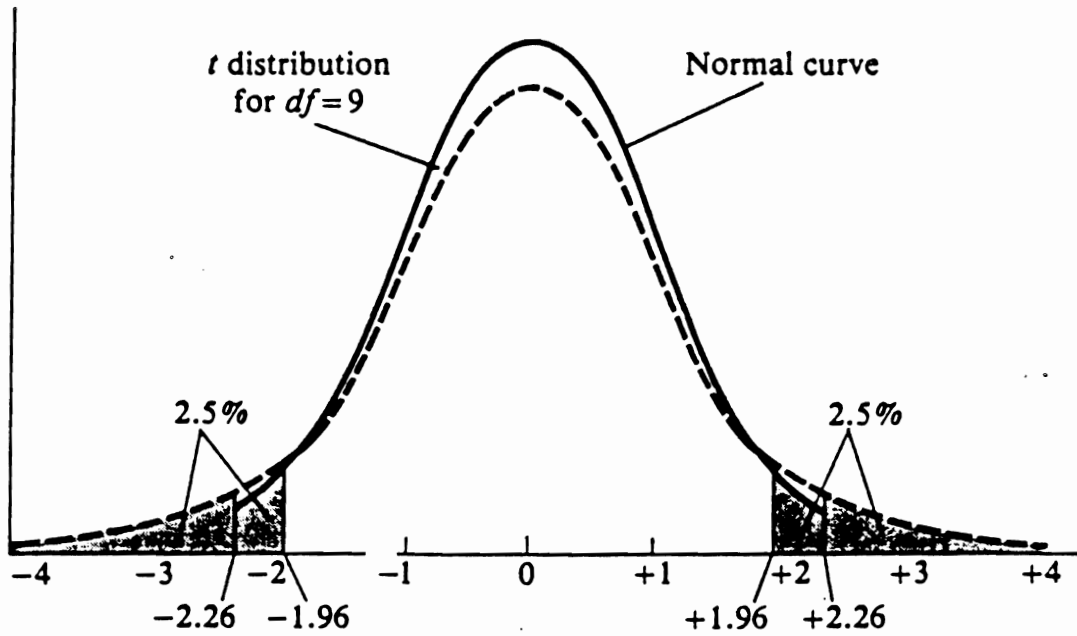
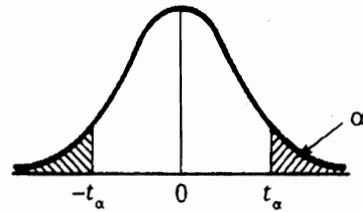


TABLE C.3 PERCENTAGE POINTS OF THE *t* DISTRIBUTION



		Level of Significance for a One-Tailed Test									
		0.4	0.25	0.1	0.05	0.025	0.01	0.005	0.0025	0.001	0.0005
		Level of Significance for a Two-Tailed Test									
df		0.8	0.5	0.2	0.1	0.05	0.02	0.01	0.005	0.002	0.001
1		0.325	1.000	3.078	6.314	12.706	31.821	63.657	127.32	318.31	636.62
2		.289	0.816	1.886	2.920	4.303	6.965	9.925	14.089	22.326	31.598
3		.277	.765	1.638	2.353	3.182	4.541	5.841	7.453	10.213	12.924
4		.271	.741	1.533	2.132	2.776	3.747	4.604	5.598	7.173	8.610
5		0.267	0.727	1.476	2.015	2.571	3.365	4.032	4.773	5.893	6.869
6		.265	.718	1.440	1.943	2.447	3.143	3.707	4.317	5.208	5.959
7		.263	.711	1.415	1.895	2.365	2.998	3.499	4.029	4.785	5.408
8		.262	.706	1.397	1.860	2.306	2.896	3.355	3.833	4.501	5.041
9		.261	.703	1.383	1.833	2.262	2.821	3.250	3.690	4.297	4.781
10		0.260	0.700	1.372	1.812	2.228	2.764	3.169	3.581	4.144	4.587
11		.260	.697	1.363	1.796	2.201	2.718	3.106	3.497	4.025	4.437
12		.259	.695	1.356	1.782	2.179	2.681	3.055	3.428	3.930	4.318
13		.259	.694	1.350	1.771	2.160	2.650	3.012	3.372	3.852	4.221
14		.258	.692	1.345	1.761	2.145	2.624	2.977	3.326	3.787	4.140
15		0.258	0.691	1.341	1.753	2.131	2.602	2.947	3.286	3.733	4.073
16		.258	.690	1.337	1.746	2.120	2.583	2.921	3.252	3.686	4.015
17		.257	.689	1.333	1.740	2.110	2.567	2.898	3.222	3.646	3.965
18		.257	.688	1.330	1.734	2.101	2.552	2.878	3.197	3.610	3.922
19		.257	.688	1.328	1.729	2.093	2.539	2.861	3.174	3.579	3.883
20		0.257	0.687	1.325	1.725	2.086	2.528	2.845	3.153	3.552	3.850
21		.257	.686	1.323	1.721	2.080	2.518	2.831	3.135	3.527	3.819
22		.256	.686	1.321	1.717	2.074	2.508	2.819	3.119	3.505	3.792
23		.256	.685	1.319	1.714	2.069	2.500	2.807	3.104	3.485	3.767
24		.256	.685	1.318	1.711	2.064	2.492	2.797	3.091	3.467	3.745
25		0.256	0.684	1.316	1.708	2.060	2.485	2.787	3.078	3.450	3.725
26		.256	.684	1.315	1.706	2.056	2.479	2.779	3.067	3.435	3.707
27		.256	.684	1.314	1.703	2.052	2.473	2.771	3.057	3.421	3.690
28		.256	.683	1.313	1.701	2.048	2.467	2.763	3.047	3.408	3.674
29		.256	.683	1.311	1.699	2.045	2.462	2.756	3.038	3.396	3.659
30		0.256	0.683	1.310	1.697	2.042	2.457	2.750	3.030	3.385	3.646
40		.255	.681	1.303	1.684	2.021	2.423	2.704	2.971	3.307	3.551
60		.254	.679	1.296	1.671	2.000	2.390	2.660	2.915	3.232	3.460
120		.254	.677	1.289	1.658	1.980	2.358	2.617	2.860	3.160	3.373
∞		.253	.674	1.282	1.645	1.960	2.326	2.576	2.807	3.090	3.291

Source: Adapted from Table 12 in Pearson, E. S. and Hartley, H. O. (1958). *Biometrika Tables for Statisticians*, Vol. 1, 2nd ed. Cambridge University Press: Cambridge, with the kind permission of the trustees of *Biometrika*.