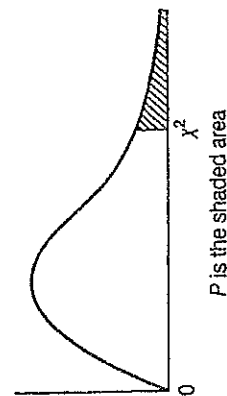


Percentage points of the  $\chi^2$  distribution exceeded with probability  $P$ .

d.f	P									
	0.995	0.975	0.950	0.900	0.850	0.800	0.750	0.700	0.650	0.600
1	3.84	5.02	5.02	6.63	7.88	10.83	10.83	10.83	10.83	10.83
2	0.010	0.051	0.051	0.921	1.060	13.81	13.81	13.81	13.81	13.81
3	0.071	0.22	0.22	1.134	1.284	16.27	16.27	16.27	16.27	16.27
4	0.21	0.48	0.48	1.348	1.486	18.47	18.47	18.47	18.47	18.47
5	0.41	0.83	0.83	1.509	1.675	20.52	20.52	20.52	20.52	20.52
6	0.68	1.24	1.24	1.675	1.855	22.46	22.46	22.46	22.46	22.46
7	0.99	1.69	1.69	1.848	2.038	24.32	24.32	24.32	24.32	24.32
8	1.34	2.18	2.18	2.009	2.239	26.13	26.13	26.13	26.13	26.13
9	1.73	2.70	2.70	2.157	2.399	27.88	27.88	27.88	27.88	27.88
10	2.16	3.25	3.25	2.321	2.599	29.59	29.59	29.59	29.59	29.59
11	2.60	3.82	3.82	2.473	2.766	31.26	31.26	31.26	31.26	31.26
12	3.07	4.40	4.40	2.622	2.930	32.91	32.91	32.91	32.91	32.91
13	3.57	5.01	5.01	2.769	3.092	34.53	34.53	34.53	34.53	34.53
14	4.07	5.63	5.63	2.914	3.252	36.12	36.12	36.12	36.12	36.12
15	4.60	6.26	6.26	3.058	3.409	37.70	37.70	37.70	37.70	37.70
16	5.14	6.91	6.91	3.200	3.572	39.25	39.25	39.25	39.25	39.25
17	5.70	7.56	7.56	3.341	3.736	40.79	40.79	40.79	40.79	40.79
18	6.26	8.23	8.23	3.481	3.901	42.31	42.31	42.31	42.31	42.31
19	6.84	8.91	8.91	3.619	4.068	43.82	43.82	43.82	43.82	43.82
20	7.43	9.59	9.59	3.757	4.236	45.32	45.32	45.32	45.32	45.32
21	8.03	10.28	10.28	3.893	4.404	46.80	46.80	46.80	46.80	46.80
22	8.64	10.98	10.98	4.029	4.572	48.27	48.27	48.27	48.27	48.27
23	9.26	11.69	11.69	4.164	4.741	49.73	49.73	49.73	49.73	49.73
24	9.89	12.40	12.40	4.298	4.910	51.18	51.18	51.18	51.18	51.18
25	10.52	13.12	13.12	4.431	5.079	52.62	52.62	52.62	52.62	52.62
26	11.16	13.84	13.84	4.564	5.248	54.05	54.05	54.05	54.05	54.05
27	11.81	14.57	14.57	4.696	5.417	55.48	55.48	55.48	55.48	55.48
28	12.46	15.31	15.31	4.828	5.586	56.89	56.89	56.89	56.89	56.89
29	13.12	16.05	16.05	4.959	5.755	58.30	58.30	58.30	58.30	58.30
30	13.79	16.79	16.79	5.089	5.924	59.70	59.70	59.70	59.70	59.70
40	20.71	24.43	24.43	6.369	6.777	73.40	73.40	73.40	73.40	73.40
50	27.99	32.36	32.36	7.142	7.949	86.66	86.66	86.66	86.66	86.66
60	35.53	40.48	40.48	8.330	9.195	99.61	99.61	99.61	99.61	99.61
70	43.28	48.76	48.76	9.502	10.422	112.32	112.32	112.32	112.32	112.32
80	51.17	57.15	57.15	10.663	11.632	124.84	124.84	124.84	124.84	124.84
90	59.20	65.65	65.65	11.814	12.830	137.21	137.21	137.21	137.21	137.21
100	67.33	74.22	74.22	12.956	14.017	149.44	149.44	149.44	149.44	149.44

For degrees of freedom  $\nu > 100$ , test  $\sqrt{2\chi^2_\nu}$  as  $N(\sqrt{2\nu} - 1, 1)$ .



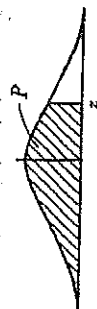
Kolmogorov-Smirnov  
Acceptance Limits

$$D_n = \sup_x [F_n(x) - F_0(x)]$$

$$\alpha = 1 - P(D_n \leq d)$$

n	$\alpha$				
	0.20	0.10	0.05	0.01	0.001
1	0.90	0.95	0.98	0.99	0.99
2	0.88	0.78	0.84	0.93	0.93
3	0.56	0.64	0.71	0.83	0.83
4	0.49	0.56	0.62	0.73	0.73
5	0.45	0.51	0.56	0.67	0.67
6	0.41	0.47	0.52	0.62	0.62
7	0.38	0.44	0.49	0.58	0.58
8	0.36	0.41	0.45	0.54	0.54
9	0.34	0.39	0.43	0.51	0.51
10	0.32	0.37	0.41	0.49	0.49
11	0.31	0.35	0.39	0.47	0.47
12	0.30	0.34	0.38	0.45	0.45
13	0.28	0.32	0.36	0.43	0.43
14	0.27	0.31	0.35	0.42	0.42
15	0.27	0.30	0.34	0.40	0.40
16	0.26	0.30	0.33	0.39	0.39
17	0.25	0.29	0.32	0.38	0.38
18	0.24	0.28	0.31	0.37	0.37
19	0.24	0.27	0.30	0.36	0.36
20	0.23	0.26	0.29	0.35	0.35
25	0.21	0.24	0.26	0.32	0.32
30	0.19	0.22	0.24	0.29	0.29
35	0.18	0.21	0.23	0.27	0.27
40	0.17	0.19	0.21	0.25	0.25
45	0.16	0.18	0.20	0.24	0.24
Large n	$\frac{1.07}{\sqrt{n}}$	$\frac{1.22}{\sqrt{n}}$	$\frac{1.38}{\sqrt{n}}$	$\frac{1.83}{\sqrt{n}}$	$\frac{2.24}{\sqrt{n}}$

# Cumulative Standard Unit Normal Distribution



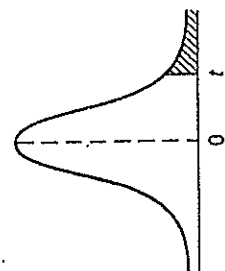
Values of  $P$  corresponding to  $Z$  for the normal curve.  $Z$  is the standard normal variable. The value of  $P$  for  $-Z$  equals one minus the value of  $P$  for  $+Z$ , e.g., the  $P$  for  $-1.62$  equals  $1 - .9474 = .0526$ .

$Z$	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
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

# Percentage points of Student's $t$ -distribution

d.f.	$P=0.05$	0.025	0.01	0.005	0.001	0.0005
1	6.314	12.706	31.821	63.657	318.31	636.62
2	2.920	4.303	6.965	9.925	22.327	31.598
3	2.353	3.182	4.541	5.841	10.214	12.924
4	2.132	2.776	3.747	4.604	7.173	8.610
5	2.015	2.571	3.365	4.032	5.893	6.869
6	1.943	2.447	3.143	3.707	5.208	5.959
7	1.895	2.365	2.998	3.499	4.785	5.408
8	1.860	2.306	2.896	3.355	4.501	5.041
9	1.833	2.262	2.821	3.250	4.297	4.781
10	1.812	2.228	2.764	3.169	4.144	4.587
11	1.796	2.201	2.718	3.106	4.025	4.437
12	1.782	2.179	2.681	3.055	3.930	4.318
13	1.771	2.160	2.650	3.012	3.852	4.221
14	1.761	2.145	2.624	2.977	3.787	4.140
15	1.753	2.131	2.602	2.947	3.733	4.073
16	1.746	2.210	2.583	2.921	3.686	4.015
17	1.740	2.110	2.567	2.898	3.646	3.965
18	1.734	2.101	2.552	2.878	3.610	3.922
19	1.729	2.093	2.539	2.861	3.579	3.883
20	1.725	2.086	2.528	2.845	3.552	3.850
21	1.721	2.080	2.518	2.831	3.527	3.819
22	1.717	2.074	2.508	2.819	3.505	3.792
23	1.714	2.069	2.500	2.807	3.485	3.767
24	1.711	2.064	2.492	2.797	3.467	3.745
25	1.708	2.060	2.485	2.787	3.450	3.725
26	1.706	2.056	2.479	2.779	3.435	3.707
27	1.703	2.052	2.473	2.771	3.421	3.690
28	1.701	2.048	2.467	2.763	3.408	3.674
29	1.699	2.045	2.462	2.756	3.396	3.659
30	1.697	2.042	2.457	2.750	3.385	3.646
40	1.684	2.021	2.423	2.704	3.307	3.551
60	1.671	2.000	2.390	2.660	3.232	3.460
120	1.658	1.980	2.358	2.617	3.160	3.373
$\infty$	1.645	1.960	2.326	2.576	3.090	3.291

The last row of the table ( $\infty$ ) gives values of  $z$ , the standard normal variable.



$P$  is the shaded area