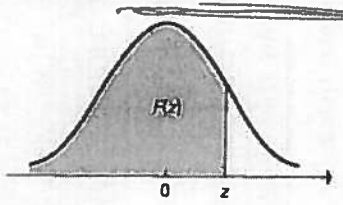
APPENDIX TABLES

Table 1 Cumulative Distribution Function of the Standard Normal Distribution



z	F(z)	z	F(z)	z	F(z)	z	F(z)	z	F(z)	z	F(z)
.00	.5000										
.01	.5040	.31	.6217	.61	.7291	.91	.8186	1.21	.8869	1.51	.9345
.02	.5080	.32	.6255	.62	.7324	.92	.8212	1.22	.8888	1.52	.9357
.03	.5120	.33	.6293	.63	.7357	.93	.8238	1.23	.8907	1.53	.9370
.04	.5160	.34	.6331	.64	.7389	.94	.8264	1.24	.8925	1.54	.9382
.05	.5199	.35	.6368	.65	.7422	.95	.8289	1.25	.8944	1.55	.9394
.06	.5239	.36	.6406	.66	.7454	.96	.8315	1.26	.8962	1.56	.9406
.07	.5279	.37	.6443	.67	.7486	.97	.8340	1.27	.8980	1.57	.9418
.08	.5319	.38	.6480	.68	.7517	.98	.8365	1.28	.8997	1.58	.9429
.09	.5359	.39	.6517	.69	.7549	.99	.8389	1.29	.9015	1.59	.9441
.10	.5398	.40	.6554	.70	.7580	1.00	.8413	1.30	.9032	1.60	.9452
.11	.5438	.41	.6591	.71	.7611	1.01	.8438	1.31	.9049	1.61	.9463
.12	.5478	.42	.6628	.72	.7642	1.02	.8461	1.32	.9066	1.62	.9474
.13	.5517	.43	.6664	.73	.7673	1.03	.8485	1.33	.9082	1.63	.9484
.14	.5557	.44	.6700	.74	.7704	1.04	.8508	1.34	.9099	1.64	.9495
.15	.5596	.45	.6736	.75	.7734	1.05	.8531	1.35	.9115	1.65	.9505
.16	.5636	.46	.6772	.76	.7764	1.06	.8554	1.36	.9131	1.66	.9515
.17	.5675	.47	.6803	.77	.7794	1.07	.8577	1.37	.9147	1.67	.9525
.18	.5714	.48	.6844	.78	.7823	1.08	.8599	1.38	.9162	1.68	.9535
.19	.5753	.49	.6879	.79	.7852	1.09	.8621	1.39	.9177	1.69	.9545
.20	.5793	.50	.6915	.80	.7881	1.10	.8643	1.40	.9192	1.70	.9554
.21	.5832	.51	.6950	.81	.7910	1.11	.8665	1.41	.9207	1.71	.9564
.22	.5871	.52	.6985	.82	.7939	1.12	.8686	1.42	.9222	1.72	.9573
.23	.5910	.53	.7019	.83	.7967	1.13	.8708	1.43	.9236	1.73	.9582
.24	.5948	.54	.7054	.84	.7995	1.14	.8729	1.44	.9251	1.74	.9591
.25	.5987	.55	.7088	.85	.8023	1.15	.8749	1.45	.9265	1.75	.9599
.26	.6026	.56	.7123	.86	.8051	1.16	.8770	1.46	.9279	1.76	.9608
.27	.6064	.57	.7157	.87	.8078	1.17	.8790	1.47	.9292	1.77	.9616
.28	.6103	.58	.7190	.88	.8106	1.18	.8810	1.48	.9306	1.78	.9625
.29	.6141	.59	.7224	.89	.8133	1.19	.8830	1.49	.9319	1.79	.9633
.30	.6179	.60	.7257	.90	.8159	1.20	.8849	1.50	.9332	1.80	.9641

Table 1 Cumulative Distribution Function of the Standard Normal Distribution Continue

z	F(z)	z	F(z)	z	F(z)	z	F(z)	z	F(z)
1.81	.9649	2.21	.9864	2.61	.9955	3.01	.9987	3.41	.9997
1.82	.9656	2.22	.9868	2.62	.9956	3.02	.9987	3.42	.9997
1.83	.9664	2.23	.9871	2.63	.9957	3.03	.9988	3.43	.9997
1.84	.9671	2.24	.9875	2.64	.9959	3.04	.9988	3.44	.9997
1.85	.9678	2.25	.9878	2.65	.9960	3.05	.9989	3.45	.9997
1.86	.9686	2.26	.9881	2.66	.9961	3.06	.9989	3.46	.9997
1.87	.9693	2.27	.9884	2.67	.9962	3.07	.9989	3.47	.9997
1.88	.9699	2.28	.9887	2.68	.9963	3.08	.9990	3.48	.9997
1.89	.9706	2.29	.9890	2.69	.9964	3.09	.9990	3.49	.9998
1.90	.9713	2.30	.9893	2.70	.9965	3.10	.9990	3.50	.9998
1.91	.9719	2.31	.9896	2.71	.9966	3.11	.9991	3.51	.9998
1.92	.9726	2.32	.9898	2.72	.9967	3.12	.9991	3.52	.9998
1.93	.9732	2.33	.9901	2.73	.9968	3.13	.9991	3.53	.9998
1.94	.9738	2.34	.9904	2.74	.9969	3.14	.9992	3.54	.9998
1.95	.9744	2.35	.9906	2.75	.9970	3.15	.9992	3.55	.9998
1.96	.9750	2.36	.9909	2.76	.9971	3.16	.9992	3.56	.9998
1.97	.9756	2.37	.9911	2.77	.9972	3.17	.9992	3.57	.9998
1.98	.9761	2.38	.9913	2.78	.9973	3.18	.9993	3.58	.9998
1.99	.9767	2.39	.9916	2.79	.9974	3.19	.9993	3.59	.9998
2.00	.9772	2.40	.9918	2.80	.9974	3.20	.9993	3.60	.9998
2.01	.9778	2.41	.9920	2.81	.9975	3.21	.9993	3.61	.9998
2.02	.9783	2.42	.9922	2.82	.9976	3.22	.9994	3.62	.9999
2.03	.9788	2.43	.9925	2.83	.9977	3.23	.9994	3.63	.9999
2.04	.9793	2.44	.9927	2.84	.9977	3.24	.9994	3.64	.9999
2.05	.9798	2.45	.9929	2.85	.9978	3.25	.9994	3.65	.9999
2.06	.9803	2.46	.9931	2.86	.9979	3.26	.9994	3.66	.9999
2.07	.9808	2.47	.9932	2.87	.9979	3.27	.9995	3.67	.9999
2.08	.9812	2.48	.9934	2.88	.9980	3.28	.9995	3.68	.9999
2.09	.9817	2.49	.9936	2.89	.9981	3.29	.9995	3.69	.9999
2.10	.9821	2.50	.9938	2.90	.9981	3.30	.9995	3.70	.9999
2.11	.9826	2.51	.9940	2.91	.9982	3.31	.9995	3.71	.9999
2.12	.9830	2.52	.9941	2.92	.9982	3.32	.9996	3.72	.9999
2.13	.9834	2.53	.9943	2.93	.9983	3.33	.9996	3.73	.9999
2.14	.9838	2.54	.9945	2.94	.9984	3.34	.9996	3.74	.9999
2.15	.9842	2.55	.9946	2.95	.9984	3.35	.9996	3.75	.9999
2.16	.9846	2.56	.9948	2.96	.9985	3.36	.9996	3.76	.9999
2.17	.9850	2.57	.9949	2.97	.9985	3.37	.9996	3.77	.9999
2.18	.9854	2.58	.9951	2.98	.9986	3.38	.9996	3.78	.9999
2.19	.9857	2.59	.9952	2.99	.9986	3.39	.9997	3.79	.9999
2.20	.9861	2.60	.9953	3.00	.9986	3.40	.9997	3.80	.9999

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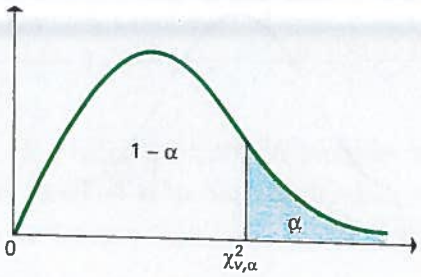
Table 7 Cutoff Points of the Chi-Square Distribution Function



For selected probabilities α, the table shows the values $\chi^2_{\nu,\alpha}$ such that $P(\chi^2_\nu > \chi^2_{\nu,\alpha}) = \alpha$, where χ^2_ν is a chi-square random variable with ν degrees of freedom. For example, the probability is .100 that a chi-square random variable with 10 degrees of freedom is greater than 15.99.

ν	α									
	.995	.990	.975	.950	.900	.100	.050	.025	.010	.005
1	0.0^4393	0.0^3157	0.0^3982	0.0^2393	0.0158	2.71	3.84	5.02	6.63	7.88
2	0.0100	0.0201	0.0506	0.103	0.211	4.61	5.99	7.38	9.21	10.60
3	0.072	0.115	0.216	0.352	0.584	6.25	7.81	9.35	11.34	12.84
4	0.207	0.297	0.484	0.711	1.064	7.78	9.49	11.14	13.28	14.86
5	0.412	0.554	0.831	1.145	1.61	9.24	11.07	12.83	15.09	16.75
6	0.676	0.872	1.24	1.64	2.20	10.64	12.59	14.45	16.81	18.55
7	0.989	1.24	1.69	2.17	2.83	12.02	14.07	16.01	18.48	20.28
8	1.34	1.65	2.18	2.73	3.49	13.36	15.51	17.53	20.09	21.96
9	1.73	2.09	2.70	3.33	4.17	14.68	16.92	19.02	21.67	23.59
10	2.16	2.56	3.25	3.94	4.87	15.99	18.31	20.48	23.21	25.19
11	2.60	3.05	3.82	4.57	5.58	17.28	19.68	21.92	24.73	26.76
12	3.07	3.57	4.40	5.23	6.30	18.55	21.03	23.34	26.22	28.30
13	3.57	4.11	5.01	5.89	7.04	19.81	22.36	24.74	27.69	29.82
14	4.07	4.66	5.63	6.57	7.79	21.06	23.68	26.12	29.14	31.32
15	4.60	5.23	6.26	7.26	8.55	22.31	25.00	27.49	30.58	32.80
16	5.14	5.81	6.91	7.96	9.31	23.54	26.30	28.85	32.00	34.27
17	5.70	6.41	7.56	8.67	10.09	24.77	27.59	30.19	33.41	35.72
18	6.26	7.01	8.23	9.39	10.86	25.99	28.87	31.53	34.81	37.16
19	6.84	7.63	8.91	10.12	11.65	27.20	30.14	32.85	36.19	38.58
20	7.43	8.26	9.59	10.85	12.44	28.41	31.41	34.17	37.57	40.00
21	8.03	8.90	10.28	11.59	13.24	29.62	32.67	35.48	38.93	41.40
22	8.64	9.54	10.98	12.34	14.04	30.81	33.92	36.78	40.29	42.80
23	9.26	10.20	11.69	13.09	14.85	32.01	35.17	38.08	41.64	44.18
24	9.89	10.86	12.40	13.85	15.66	33.20	36.42	39.36	42.98	45.56
25	10.52	11.52	13.12	14.61	16.47	34.38	37.65	40.65	44.31	46.93
26	11.16	12.20	13.84	15.38	17.29	35.56	38.89	41.92	45.64	48.29
27	11.81	12.88	14.57	16.15	18.11	36.74	40.11	43.19	46.96	49.64
28	12.46	13.56	15.31	16.93	18.94	37.92	41.34	44.46	48.28	50.99
29	13.12	14.26	16.05	17.71	19.77	39.09	42.56	45.72	49.59	52.34
30	13.79	14.95	16.79	18.49	20.60	40.26	43.77	46.98	50.89	53.67
40	20.71	22.16	24.43	26.51	29.05	51.81	55.76	59.34	63.69	66.77
50	27.99	29.71	32.36	34.76	37.69	63.17	67.50	71.42	76.15	79.49
60	35.53	37.48	40.48	43.19	46.46	74.40	79.08	83.30	88.38	91.95
70	43.28	45.44	48.76	51.74	55.33	85.53	90.53	95.02	100.4	104.2
80	51.17	53.54	57.15	60.39	64.28	96.58	101.9	106.6	112.3	116.3
90	59.20	61.75	65.65	69.13	73.29	107.6	113.1	118.1	124.1	128.3
100	67.33	70.06	74.22	77.93	82.36	118.5	124.3	129.6	135.8	140.2

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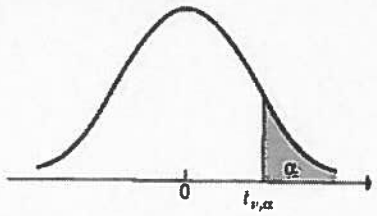
Table 8 Upper Critical Values of Student's t Distribution with ν Degrees of Freedom



For selected probabilities, α, the table shows the values $t_{\nu,\alpha}$ such that $P(t_\nu > t_{\nu,\alpha}) = \alpha$, where t_ν is a Student's t random variable with ν degress of freedom. For example, the probability is .10 that a Student's t random variable with 10 degrees of freedom exceeds 1.372.

	Probability of Exceeding the Critical Value					
ν	0.10	0.05	0.025	0.01	0.005	0.001
1	3.078	6.314	12.706	31.821	63.657	318.313
2	1.886	2.920	4.303	6.965	9.925	22.327
3	1.638	2.353	3.182	4.541	5.841	10.215
4	1.533	2.132	2.776	3.747	4.604	7.173
5	1.476	2.015	2.571	3.365	4.032	5.893
6	1.440	1.943	2.447	3.143	3.707	5.208
7	1.415	1.895	2.365	2.998	3.499	4.782
8	1.397	1.860	2.306	2.896	3.355	4.499
9	1.383	1.833	2.262	2.821	3.250	4.296
10	1.372	1.812	2.228	2.764	3.169	4.143
11	1.363	1.796	2.201	2.718	3.106	4.024
12	1.356	1.782	2.179	2.681	3.055	3.929
13	1.350	1.771	2.160	2.650	3.012	3.852
14	1.345	1.761	2.145	2.624	2.977	3.787
15	1.341	1.753	2.131	2.602	2.947	3.733
16	1.337	1.746	2.120	2.583	2.921	3.686
17	1.333	1.740	2.110	2.567	2.898	3.646
18	1.330	1.734	2.101	2.552	2.878	3.610
19	1.328	1.729	2.093	2.539	2.861	3.579
20	1.325	1.725	2.086	2.528	2.845	3.552
21	1.323	1.721	2.080	2.518	2.831	3.527
22	1.321	1.717	2.074	2.508	2.819	3.505
23	1.319	1.714	2.069	2.500	2.807	3.485
24	1.318	1.711	2.064	2.492	2.797	3.467
25	1.316	1.708	2.060	2.485	2.787	3.450
26	1.315	1.706	2.056	2.479	2.779	3.435
27	1.314	1.703	2.052	2.473	2.771	3.421
28	1.313	1.701	2.048	2.467	2.763	3.408
29	1.311	1.699	2.045	2.462	2.756	3.396
30	1.310	1.697	2.042	2.457	2.750	3.385
40	1.303	1.684	2.021	2.423	2.704	3.307
60	1.296	1.671	2.000	2.390	2.660	3.232
100	1.290	1.660	1.984	2.364	2.626	3.174
∞	1.282	1.645	1.960	2.326	2.576	3.090

NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/, September 2011.