

TABLE A1

STANDARD NORMAL DISTRIBUTION (z) CUMULATIVE PROPORTIONS

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
-3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002
-3.3	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0004	.0003
-3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005
-3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007
-3.0	.0013	.0013	.0013	.0012	.0012	.0011	.0011	.0011	.0010	.0010
-2.9	.0019	.0018	.0018	.0017	.0016	.0016	.0015	.0015	.0014	.0014
-2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020	.0019
-2.7	.0035	.0034	.0033	.0032	.0031	.0030	.0029	.0028	.0027	.0026
-2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037	.0036
-2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049	.0048
-2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066	.0064
-2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087	.0084
-2.2	.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113	.0110
-2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
-2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
-1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239	.0233
-1.8	.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301	.0294
-1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
-1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
-1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
-1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
-1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
-1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
-1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
-1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
-0.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
-0.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
-0.7	.2420	.2389	.2358	.2327	.2297	.2266	.2236	.2206	.2177	.2148
-0.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
-0.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
-0.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
-0.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
-0.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
-0.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
-0.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641

STANDARD NORMAL DISTRIBUTION (z)

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	.7703	.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	.9996	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998

COMMONLY USED z-TABLE VALUES

CONFIDENCE INTERVALS	Confidence Level	90%	95%	99%	99.9%
	z-values	1.65	1.96	2.58	3.29
HYPOTHESIS TESTS	Type I Error Risk α	.10	.05	.01	.001
	Two-tailed Test z =	1.65	1.96	2.58	3.29
	One-Tailed Test z =	1.28	1.65	2.33	3.09

TABLE A2: Binomial Table**BINOMIAL COEFFICIENTS**

	k (Number of successes)										
n	0	1	2	3	4	5	6	7	8	9	10
0	1										
1	1	1									
2	1	2	1								
3	1	3	3	1							
4	1	4	6	4	1						
5	1	5	10	10	5	1					
6	1	6	15	20	15	6	1				
7	1	7	21	35	35	21	7	1			
8	1	8	28	56	70	56	28	8	1		
9	1	9	36	84	126	126	84	36	9	1	
10	1	10	45	120	210	252	210	120	45	10	1
11	1	11	55	165	330	462	462	330	165	55	11
12	1	12	66	220	495	792	924	792	495	220	66
13	1	13	78	286	715	1287	1716	1716	1287	715	286
14	1	14	91	364	1001	2002	3003	3432	3003	2002	1001
15	1	15	105	455	1365	3003	5005	6435	6435	5005	3003
16	1	16	120	560	1820	4368	8008	11440	12870	11440	8008
17	1	17	138	680	2380	6188	12376	19448	24310	24310	19448
18	1	18	153	816	3060	8568	18564	31824	43758	48620	43758
19	1	19	171	969	3876	11628	27132	50386	75582	92378	92378
20	1	20	190	1140	4845	15504	38760	77520	125970	167960	184756

TABLE A3
STUDENT'S *t* DISTRIBUTIONS

		<i>Level of Significance</i>			
		Probability in tail(s)			
Confidence Level →		90%	95%	98%	99%
Two-tailed →		.10	.05	.02	.01
One-tailed →		.05	.025	.01	.005
	df				
	1	6.314	12.706	31.821	63.657
	2	2.920	4.303	6.695	9.925
	3	2.353	3.182	4.541	5.841
	4	2.132	2.776	3.747	4.604
	5	2.015	2.571	3.365	4.032
	6	1.943	2.447	3.143	3.707
	7	1.895	2.365	2.998	3.500
	8	1.860	2.306	2.896	3.355
	9	1.833	2.262	2.821	3.250
	10	1.812	2.228	2.764	3.169
	11	1.796	2.201	2.718	3.106
	12	1.782	2.179	2.681	3.055
	13	1.771	2.160	2.650	3.012
	14	1.761	2.145	2.625	2.977
	15	1.753	2.131	2.602	2.947
	16	1.746	2.120	2.584	2.921
	17	1.740	2.110	2.567	2.898
	18	1.734	2.101	2.552	2.878
	19	1.729	2.093	2.540	2.861
	20	1.725	2.086	2.528	2.845
	21	1.721	2.080	2.518	2.831
	22	1.717	2.074	2.508	2.819
	23	1.714	2.069	2.500	2.807
	24	1.711	2.064	2.492	2.797
	25	1.708	2.060	2.485	2.787
	26	1.706	2.056	2.479	2.779
	27	1.703	2.052	2.473	2.771
	28	1.701	2.048	2.467	2.763
	29	1.699	2.045	2.462	2.756
	30	1.697	2.042	2.457	2.750
	40	1.684	2.021	2.423	2.704
	60	1.671	2.000	2.390	2.660
	120	1.658	1.980	2.358	2.617
z	∞	1.65	1.96	2.33	2.58
Distribution:					

TABLE A4: Chi Square Table

Critical Values for Chi Square Distributions

df	Significance Level (α)	
	.05	.01
1	3.841	6.635
2	5.991	9.210
3	7.815	11.345
4	9.488	13.277
5	11.070	15.086
6	12.592	16.812
7	14.067	18.475
8	15.507	20.090
9	16.919	21.666
10	18.307	23.209
11	19.675	24.725
12	21.026	26.217
13	22.362	27.688
14	23.645	29.141
15	24.996	30.578
16	26.296	32.000
17	27.587	33.409
18	28.896	34.806
19	30.145	36.191
20	31.404	37.568
21	32.671	38.932
22	33.924	40.289
23	35.173	41.638
24	36.415	42.980
25	37.625	44.314
26	38.885	45.642
27	40.113	46.968
28	41.337	48.278
29	42.557	49.588
30	43.773	50.892
40	55.759	63.691
50	67.505	76.154
60	79.082	88.379
70	90.531	100.425
80	101.879	112.329
90	113.145	124.116
100	124.342	135.807

TABLE A5: F Table
.01 Critical Values for F Distributions

df Error	df Due to Independent Variable(s)										
	1	2	3	4	5	6	7	8	9	10	11
1	4052	4999	5403	5625	5764	5859	5928	5981	6022	6056	6082
2	98.49	99.01	99.17	99.25	99.30	99.33	99.34	99.36	99.38	99.40	99.41
3	34.12	30.81	29.46	28.71	28.24	27.91	27.67	27.49	27.34	27.23	27.13
4	21.20	18.00	16.69	15.98	15.52	15.21	14.98	14.80	14.66	14.54	14.45
5	16.26	13.27	12.06	11.39	10.97	10.67	10.45	10.27	10.15	10.05	9.96
6	13.74	10.92	9.78	9.15	8.75	8.47	8.26	8.10	7.98	7.87	7.79
7	12.25	9.55	8.45	7.85	7.46	7.19	7.00	6.84	6.71	6.62	6.54
8	11.26	8.65	7.59	7.01	6.63	6.37	6.19	6.03	5.91	5.82	5.74
9	10.56	8.02	6.99	6.42	6.06	5.80	5.62	5.47	5.35	5.26	5.18
10	10.04	7.56	6.55	5.99	5.64	5.39	5.21	5.06	4.95	4.85	4.78
11	9.65	7.20	6.22	5.67	5.32	5.07	4.88	4.74	4.63	4.54	4.46
12	9.33	6.93	5.95	5.41	5.06	4.82	4.65	4.50	4.39	4.30	4.22
14	8.86	6.51	5.56	5.03	4.69	4.46	4.28	4.14	4.03	3.94	3.86
16	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89	3.78	3.69	3.61
20	8.10	5.85	4.94	4.43	4.10	3.87	3.71	3.56	3.45	3.37	3.30
24	7.82	5.61	4.72	4.22	3.90	3.67	3.50	3.36	3.25	3.17	3.09
30	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	3.06	2.98	2.90
40	7.31	5.18	4.31	3.83	3.51	3.29	3.12	2.99	2.88	2.80	2.73
50	7.17	5.06	4.20	3.72	3.41	3.18	3.02	2.88	2.78	2.70	2.62
100	6.90	4.82	3.98	3.51	3.20	2.99	2.82	2.69	2.59	2.51	2.43
200	6.76	4.71	3.38	3.41	3.11	2.90	2.73	2.60	2.50	2.41	2.34
∞	6.64	4.60	3.78	3.32	3.02	2.80	2.64	2.51	2.41	2.32	2.24

df Error	df Due to Independent Variable(s)										
	12	14	16	20	24	30	40	50	100	200	∞
1	6106	6142	6169	6208	6234	6258	6286	6302	6334	6352	6366
2	99.42	99.43	99.44	99.45	99.46	99.47	99.48	99.48	99.49	99.49	99.50
3	27.05	26.92	26.83	26.69	26.60	26.50	26.41	26.30	26.23	26.18	26.12
4	14.37	14.24	14.15	14.02	13.93	13.83	13.74	13.69	13.57	13.52	13.44
5	9.89	9.77	9.68	9.55	9.47	9.38	9.29	9.24	9.13	9.07	9.02
6	7.72	7.60	7.52	7.39	7.31	7.23	7.14	7.09	6.99	6.94	6.88
7	6.47	6.35	6.27	6.15	6.07	5.98	5.90	5.85	5.75	5.70	5.65
8	5.67	5.56	5.48	5.36	5.28	5.20	5.11	5.06	4.96	4.91	4.86
9	5.11	5.00	4.92	4.80	4.73	4.64	4.56	4.51	4.41	4.36	4.31
10	4.71	4.60	4.52	4.41	4.33	4.25	4.17	4.12	4.01	3.96	3.91
11	4.40	4.29	4.21	4.10	4.02	3.94	3.86	3.80	3.70	3.66	3.60
12	4.16	4.05	3.98	3.86	3.78	3.70	3.61	3.56	3.46	3.41	3.36
14	3.80	3.70	3.62	3.51	3.43	3.34	3.26	3.21	3.11	3.06	3.00
16	3.55	3.45	3.37	3.25	3.18	3.10	3.01	2.96	2.86	2.80	2.75
20	3.23	3.13	3.05	2.94	2.86	2.77	2.69	2.63	2.53	2.47	2.42
24	3.03	2.93	2.85	2.74	2.66	2.58	2.49	2.44	2.33	2.27	2.21
30	2.84	2.74	2.66	2.55	2.47	2.38	2.29	2.24	2.13	2.07	2.01
40	2.66	2.56	2.49	2.37	2.29	2.20	2.11	2.05	1.94	1.88	1.81
50	2.56	2.46	2.39	2.26	2.18	2.10	2.00	1.94	1.82	1.76	1.68
100	2.36	2.26	2.19	2.06	1.98	1.89	1.79	1.73	1.59	1.51	1.43
200	2.28	2.17	2.09	1.97	1.88	1.79	1.69	1.62	1.48	1.39	1.28
∞	2.18	2.07	1.99	1.87	1.79	1.69	1.59	1.51	1.36	1.25	1.00