



Université Paris I *Panthéon-Sorbonne*

APPLIED ECONOMETRIC TIME SERIES

Master 1 MoSEF
Christophe BOUCHER

Academic Year 2009-2010
(First Semester)

Applied Econometric Time Series

Christophe BOUCHER*

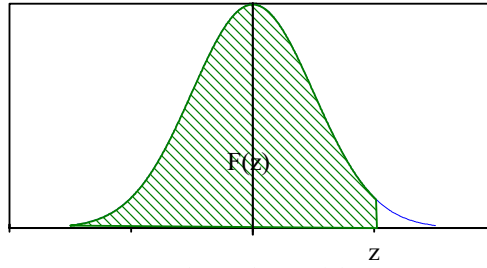
Statistical Tables for Economists

* Quantitative Strategist within A.A.Advisors-QCG (ABN AMRO), Senior Partner at Variances, Lecturer in Financial Economics at the University Paris-1 (*Panthéon-Sorbonne*) and Researcher at the University of Paris-1 (CES/CNRS); e-mail: christophe.boucher@univ-paris1.fr.

Index for Statistical Tables

Table	Contents	Page
1	Normal Distribution	1
2	Student-t Distribution	2
3	Chi-Squared Distribution	3
4	F-Distribution ($\alpha = 0.01$)	4-6
5	F-Distribution ($\alpha = 0.05$)	7-9
6	F-Distribution ($\alpha = 0.10$)	10-12
7	Binomial Distribution	13-27
8	Poisson Distribution	28-30
9	Durbin-Watson Critical Values	31
10	Mackinnon's Critical Values	32
11	Johansen Critical Values	33

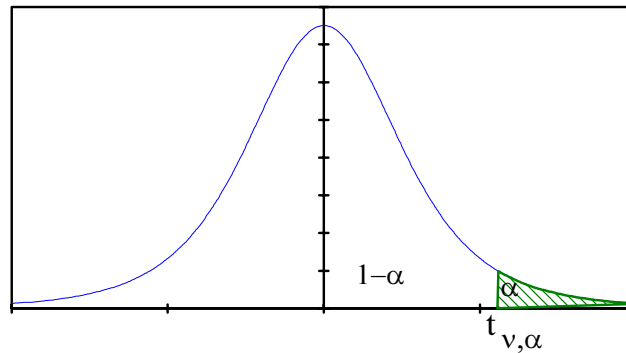
Table 1: Normal Distribution



$$\Pr(Z \leq z) = F(z)$$

z	F(z)	z	F(z)	z	F(z)	z	F(z)	z	F(z)	z	F(z)	z	F(z)
0.00	0.500	0.50	0.691	1.00	0.841	1.50	0.933	2.00	0.977	2.50	0.994	3.00	0.999
0.01	0.504	0.51	0.695	1.01	0.844	1.51	0.934	2.01	0.978	2.51	0.994	3.01	0.999
0.02	0.508	0.52	0.698	1.02	0.846	1.52	0.936	2.02	0.978	2.52	0.994	3.02	0.999
0.03	0.512	0.53	0.702	1.03	0.848	1.53	0.937	2.03	0.979	2.53	0.994	3.03	0.999
0.04	0.516	0.54	0.705	1.04	0.851	1.54	0.938	2.04	0.979	2.54	0.994	3.04	0.999
0.05	0.520	0.55	0.709	1.05	0.853	1.55	0.939	2.05	0.980	2.55	0.995	3.05	0.999
0.06	0.524	0.56	0.712	1.06	0.855	1.56	0.941	2.06	0.980	2.56	0.995	3.06	0.999
0.07	0.528	0.57	0.716	1.07	0.858	1.57	0.942	2.07	0.981	2.57	0.995	3.07	0.999
0.08	0.532	0.58	0.719	1.08	0.860	1.58	0.943	2.08	0.981	2.58	0.995	3.08	0.999
0.09	0.536	0.59	0.722	1.09	0.862	1.59	0.944	2.09	0.982	2.59	0.995	3.09	0.999
0.10	0.540	0.60	0.726	1.10	0.864	1.60	0.945	2.10	0.982	2.60	0.995	3.10	0.999
0.11	0.544	0.61	0.729	1.11	0.867	1.61	0.946	2.11	0.983	2.61	0.995	3.11	0.999
0.12	0.548	0.62	0.732	1.12	0.869	1.62	0.947	2.12	0.983	2.62	0.996	3.12	0.999
0.13	0.552	0.63	0.736	1.13	0.871	1.63	0.948	2.13	0.983	2.63	0.996	3.13	0.999
0.14	0.556	0.64	0.739	1.14	0.873	1.64	0.949	2.14	0.984	2.64	0.996	3.14	0.999
0.15	0.560	0.65	0.742	1.15	0.875	1.65	0.951	2.15	0.984	2.65	0.996	3.15	0.999
0.16	0.564	0.66	0.745	1.16	0.877	1.66	0.952	2.16	0.985	2.66	0.996	3.16	0.999
0.17	0.567	0.67	0.749	1.17	0.879	1.67	0.953	2.17	0.985	2.67	0.996	3.17	0.999
0.18	0.571	0.68	0.752	1.18	0.881	1.68	0.954	2.18	0.985	2.68	0.996	3.18	0.999
0.19	0.575	0.69	0.755	1.19	0.883	1.69	0.954	2.19	0.986	2.69	0.996	3.19	0.999
0.20	0.579	0.70	0.758	1.20	0.885	1.70	0.955	2.20	0.986	2.70	0.997	3.20	0.999
0.21	0.583	0.71	0.761	1.21	0.887	1.71	0.956	2.21	0.986	2.71	0.997	3.21	0.999
0.22	0.587	0.72	0.764	1.22	0.889	1.72	0.957	2.22	0.987	2.72	0.997	3.22	0.999
0.23	0.591	0.73	0.767	1.23	0.891	1.73	0.958	2.23	0.987	2.73	0.997	3.23	0.999
0.24	0.595	0.74	0.770	1.24	0.893	1.74	0.959	2.24	0.987	2.74	0.997	3.24	0.999
0.25	0.599	0.75	0.773	1.25	0.894	1.75	0.960	2.25	0.988	2.75	0.997	3.25	0.999
0.26	0.603	0.76	0.776	1.26	0.896	1.76	0.961	2.26	0.988	2.76	0.997	3.26	0.999
0.27	0.606	0.77	0.779	1.27	0.898	1.77	0.962	2.27	0.988	2.77	0.997	3.27	0.999
0.28	0.610	0.78	0.782	1.28	0.900	1.78	0.962	2.28	0.989	2.78	0.997	3.28	0.999
0.29	0.614	0.79	0.785	1.29	0.901	1.79	0.963	2.29	0.989	2.79	0.997	3.29	0.999
0.30	0.618	0.80	0.788	1.30	0.903	1.80	0.964	2.30	0.989	2.80	0.997	3.30	1.000
0.31	0.622	0.81	0.791	1.31	0.905	1.81	0.965	2.31	0.990	2.81	0.998	3.31	1.000
0.32	0.626	0.82	0.794	1.32	0.907	1.82	0.966	2.32	0.990	2.82	0.998	3.32	1.000
0.33	0.629	0.83	0.797	1.33	0.908	1.83	0.966	2.33	0.990	2.83	0.998	3.33	1.000
0.34	0.633	0.84	0.800	1.34	0.910	1.84	0.967	2.34	0.990	2.84	0.998	3.34	1.000
0.35	0.637	0.85	0.802	1.35	0.911	1.85	0.968	2.35	0.991	2.85	0.998	3.35	1.000
0.36	0.641	0.86	0.805	1.36	0.913	1.86	0.969	2.36	0.991	2.86	0.998	3.36	1.000
0.37	0.644	0.87	0.808	1.37	0.915	1.87	0.969	2.37	0.991	2.87	0.998	3.37	1.000
0.38	0.648	0.88	0.811	1.38	0.916	1.88	0.970	2.38	0.991	2.88	0.998	3.38	1.000
0.39	0.652	0.89	0.813	1.39	0.918	1.89	0.971	2.39	0.992	2.89	0.998	3.39	1.000
0.40	0.655	0.90	0.816	1.40	0.919	1.90	0.971	2.40	0.992	2.90	0.998	3.40	1.000
0.41	0.659	0.91	0.819	1.41	0.921	1.91	0.972	2.41	0.992	2.91	0.998	3.41	1.000
0.42	0.663	0.92	0.821	1.42	0.922	1.92	0.973	2.42	0.992	2.92	0.998	3.42	1.000
0.43	0.666	0.93	0.824	1.43	0.924	1.93	0.973	2.43	0.992	2.93	0.998	3.43	1.000
0.44	0.670	0.94	0.826	1.44	0.925	1.94	0.974	2.44	0.993	2.94	0.998	3.44	1.000
0.45	0.674	0.95	0.829	1.45	0.926	1.95	0.974	2.45	0.993	2.95	0.998	3.45	1.000
0.46	0.677	0.96	0.831	1.46	0.928	1.96	0.975	2.46	0.993	2.96	0.998	3.46	1.000
0.47	0.681	0.97	0.834	1.47	0.929	1.97	0.976	2.47	0.993	2.97	0.999	3.47	1.000
0.48	0.684	0.98	0.836	1.48	0.931	1.98	0.976	2.48	0.993	2.98	0.999	3.48	1.000
0.49	0.688	0.99	0.839	1.49	0.932	1.99	0.977	2.49	0.994	2.99	0.999	3.49	1.000

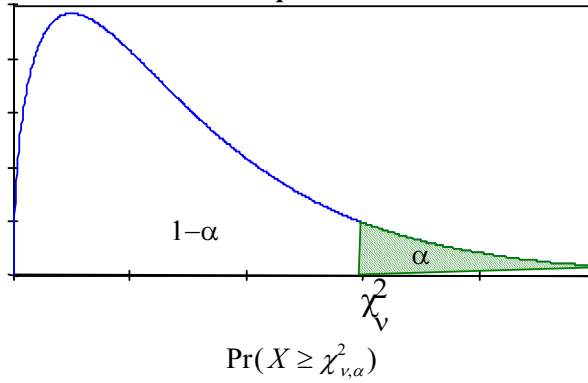
Table 2: Student t-distribution



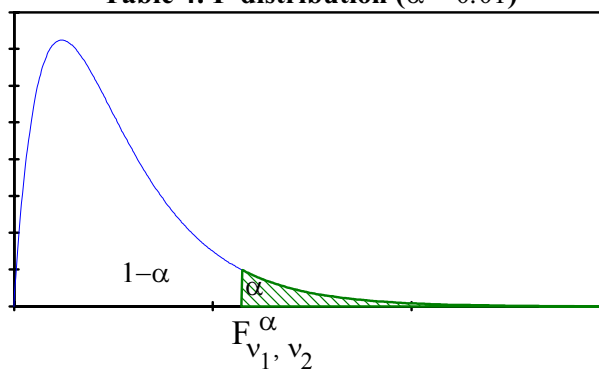
$$\Pr(X > t_{v,\alpha}) = \alpha$$

ν	α				
	0.10	0.05	0.025	0.01	0.005
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
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
∞	1.282	1.645	1.960	2.327	2.576

Table 3: Chi-Squared Distribution



ν	α									
	0.995	0.99	0.975	0.95	0.9	0.1	0.05	0.025	0.01	0.005
1	0.00	0.00	0.00	0.00	0.02	2.71	3.84	5.02	6.63	7.88
2	0.01	0.02	0.05	0.10	0.21	4.61	5.99	7.38	9.21	10.60
3	0.07	0.11	0.22	0.35	0.58	6.25	7.81	9.35	11.34	12.84
4	0.21	0.30	0.48	0.71	1.06	7.78	9.49	11.14	13.28	14.86
5	0.41	0.55	0.83	1.15	1.61	9.24	11.07	12.83	15.09	16.75
6	0.68	0.87	1.24	1.64	2.20	10.64	12.59	14.45	16.81	18.55
7	0.99	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	21.95
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	24.72	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
31	14.46	15.66	17.54	19.28	21.43	41.42	44.99	48.23	52.19	55.00
32	15.13	16.36	18.29	20.07	22.27	42.58	46.19	49.48	53.49	56.33
33	15.82	17.07	19.05	20.87	23.11	43.75	47.40	50.73	54.78	57.65
34	16.50	17.79	19.81	21.66	23.95	44.90	48.60	51.97	56.06	58.96
35	17.19	18.51	20.57	22.47	24.80	46.06	49.80	53.20	57.34	60.27
40	20.71	22.16	24.43	26.51	29.05	51.81	55.76	59.34	63.69	66.77
45	24.31	25.90	28.37	30.61	33.35	57.51	61.66	65.41	69.96	73.17
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	100.43	104.21
80	51.17	53.54	57.15	60.39	64.28	96.58	101.88	106.63	112.33	116.32
90	59.20	61.75	65.65	69.13	73.29	107.57	113.15	118.14	124.12	128.30
100	67.33	70.06	74.22	77.93	82.36	118.50	124.34	129.56	135.81	140.17

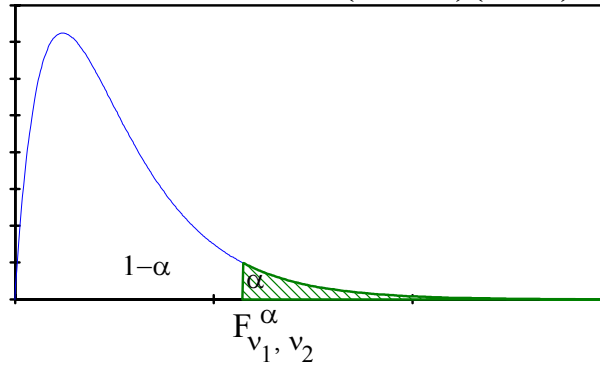
Table 4: F-distribution ($\alpha = 0.01$)

$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.01$$

v_2	v_1									
	1	2	3	4	5	6	7	8	9	10
1	4051.3	4999.5	5403.5	5624.8	5763.9	5859.2	5928.6	5981.3	6022.7	6056.1
2	98.50	99.00	99.22	99.33	99.40	99.44	99.48	99.50	99.52	99.53
3	34.12	30.82	29.46	28.71	28.24	27.91	27.67	27.49	27.35	27.23
4	21.20	18.00	16.69	15.98	15.52	15.21	14.98	14.80	14.66	14.55
5	16.26	13.27	12.06	11.39	10.97	10.67	10.46	10.29	10.16	10.05
6	13.75	10.92	9.78	9.15	8.75	8.47	8.26	8.10	7.98	7.87
7	12.25	9.55	8.45	7.85	7.46	7.19	6.99	6.84	6.72	6.62
8	11.26	8.65	7.59	7.01	6.63	6.37	6.18	6.03	5.91	5.81
9	10.56	8.02	6.99	6.42	6.06	5.80	5.61	5.47	5.35	5.26
10	10.04	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.94	4.85
11	9.65	7.21	6.22	5.67	5.32	5.07	4.89	4.74	4.63	4.54
12	9.33	6.93	5.95	5.41	5.06	4.82	4.64	4.50	4.39	4.30
13	9.07	6.70	5.74	5.21	4.86	4.62	4.44	4.30	4.19	4.10
14	8.86	6.51	5.56	5.04	4.69	4.46	4.28	4.14	4.03	3.94
15	8.68	6.36	5.42	4.89	4.56	4.32	4.14	4.00	3.89	3.80
16	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89	3.78	3.69
17	8.40	6.11	5.18	4.67	4.34	4.10	3.93	3.79	3.68	3.59
18	8.29	6.01	5.09	4.58	4.25	4.01	3.84	3.71	3.60	3.51
19	8.18	5.93	5.01	4.50	4.17	3.94	3.77	3.63	3.52	3.43
20	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.46	3.37
21	8.02	5.78	4.87	4.37	4.04	3.81	3.64	3.51	3.40	3.31
22	7.95	5.72	4.82	4.31	3.99	3.76	3.59	3.45	3.35	3.26
23	7.88	5.66	4.76	4.26	3.94	3.71	3.54	3.41	3.30	3.21
24	7.82	5.61	4.72	4.22	3.90	3.67	3.50	3.36	3.26	3.17
25	7.77	5.57	4.68	4.18	3.85	3.63	3.46	3.32	3.22	3.13
26	7.72	5.53	4.64	4.14	3.82	3.59	3.42	3.29	3.18	3.09
27	7.68	5.49	4.60	4.11	3.78	3.56	3.39	3.26	3.15	3.06
28	7.64	5.45	4.57	4.07	3.75	3.53	3.36	3.23	3.12	3.03
29	7.60	5.42	4.54	4.04	3.73	3.50	3.33	3.20	3.09	3.00
30	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	3.07	2.98
31	7.53	5.36	4.48	3.99	3.67	3.45	3.28	3.15	3.04	2.96
32	7.50	5.34	4.46	3.97	3.65	3.43	3.26	3.13	3.02	2.93
33	7.47	5.31	4.44	3.95	3.63	3.41	3.24	3.11	3.00	2.91
34	7.44	5.29	4.42	3.93	3.61	3.39	3.22	3.09	2.98	2.89
35	7.42	5.27	4.40	3.91	3.59	3.37	3.20	3.07	2.96	2.88
40	7.31	5.18	4.31	3.83	3.51	3.29	3.12	2.99	2.89	2.80
45	7.23	5.11	4.25	3.77	3.45	3.23	3.07	2.94	2.83	2.74
50	7.17	5.06	4.20	3.72	3.41	3.19	3.02	2.89	2.78	2.70
60	7.08	4.98	4.13	3.65	3.34	3.12	2.95	2.82	2.72	2.63
120	6.85	4.79	3.95	3.48	3.17	2.96	2.79	2.66	2.56	2.47
∞	6.63	4.61	3.78	3.32	3.02	2.80	2.64	2.51	2.41	2.32

Table 4: F-distribution ($\alpha = 0.01$) (cont'd)

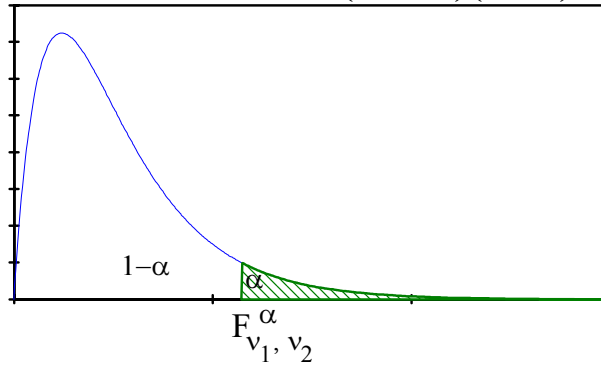


$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.01$$

v_2	v_1									
	11	12	13	14	15	16	17	18	19	20
1	6083.6	6106.6	6126.2	6142.9	6157.6	6170.4	6181.7	6191.8	6200.9	6209.0
2	99.54	99.55	99.56	99.57	99.58	99.58	99.59	99.59	99.60	99.60
3	27.13	27.05	26.98	26.92	26.87	26.83	26.79	26.75	26.72	26.69
4	14.45	14.37	14.31	14.25	14.20	14.15	14.11	14.08	14.05	14.02
5	9.96	9.89	9.82	9.77	9.72	9.68	9.64	9.61	9.58	9.55
6	7.79	7.72	7.66	7.60	7.56	7.52	7.48	7.45	7.42	7.40
7	6.54	6.47	6.41	6.36	6.31	6.27	6.24	6.21	6.18	6.16
8	5.73	5.67	5.61	5.56	5.52	5.48	5.44	5.41	5.38	5.36
9	5.18	5.11	5.05	5.01	4.96	4.92	4.89	4.86	4.83	4.81
10	4.77	4.71	4.65	4.60	4.56	4.52	4.49	4.46	4.43	4.41
11	4.46	4.40	4.34	4.29	4.25	4.21	4.18	4.15	4.12	4.10
12	4.22	4.16	4.10	4.05	4.01	3.97	3.94	3.91	3.88	3.86
13	4.02	3.96	3.91	3.86	3.82	3.78	3.75	3.72	3.69	3.66
14	3.86	3.80	3.75	3.70	3.66	3.62	3.59	3.56	3.53	3.51
15	3.73	3.67	3.61	3.56	3.52	3.49	3.45	3.42	3.40	3.37
16	3.62	3.55	3.50	3.45	3.41	3.37	3.34	3.31	3.28	3.26
17	3.52	3.46	3.40	3.35	3.31	3.27	3.24	3.21	3.19	3.16
18	3.43	3.37	3.32	3.27	3.23	3.19	3.16	3.13	3.10	3.08
19	3.36	3.30	3.24	3.19	3.15	3.12	3.08	3.05	3.03	3.00
20	3.29	3.23	3.18	3.13	3.09	3.05	3.02	2.99	2.96	2.94
21	3.24	3.17	3.12	3.07	3.03	2.99	2.96	2.93	2.90	2.88
22	3.18	3.12	3.07	3.02	2.98	2.94	2.91	2.88	2.85	2.83
23	3.14	3.07	3.02	2.97	2.93	2.89	2.86	2.83	2.80	2.78
24	3.09	3.03	2.98	2.93	2.89	2.85	2.82	2.79	2.76	2.74
25	3.06	2.99	2.94	2.89	2.85	2.81	2.78	2.75	2.72	2.70
26	3.02	2.96	2.90	2.86	2.81	2.78	2.75	2.72	2.69	2.66
27	2.99	2.93	2.87	2.82	2.78	2.75	2.71	2.68	2.66	2.63
28	2.96	2.90	2.84	2.79	2.75	2.72	2.68	2.65	2.63	2.60
29	2.93	2.87	2.81	2.77	2.73	2.69	2.66	2.63	2.60	2.57
30	2.91	2.84	2.79	2.74	2.70	2.66	2.63	2.60	2.57	2.55
31	2.88	2.82	2.77	2.72	2.68	2.64	2.61	2.58	2.55	2.52
32	2.86	2.80	2.74	2.70	2.65	2.62	2.58	2.55	2.53	2.50
33	2.84	2.78	2.72	2.68	2.63	2.60	2.56	2.53	2.51	2.48
34	2.82	2.76	2.70	2.66	2.61	2.58	2.54	2.51	2.49	2.46
35	2.80	2.74	2.69	2.64	2.60	2.56	2.53	2.50	2.47	2.44
40	2.73	2.66	2.61	2.56	2.52	2.48	2.45	2.42	2.39	2.37
45	2.67	2.61	2.55	2.51	2.46	2.43	2.39	2.36	2.34	2.31
50	2.63	2.56	2.51	2.46	2.42	2.38	2.35	2.32	2.29	2.27
60	2.56	2.50	2.44	2.39	2.35	2.31	2.28	2.25	2.22	2.20
120	2.40	2.34	2.28	2.23	2.19	2.15	2.12	2.09	2.06	2.03
∞	2.25	2.18	2.13	2.08	2.04	2.00	1.97	1.93	1.90	1.88

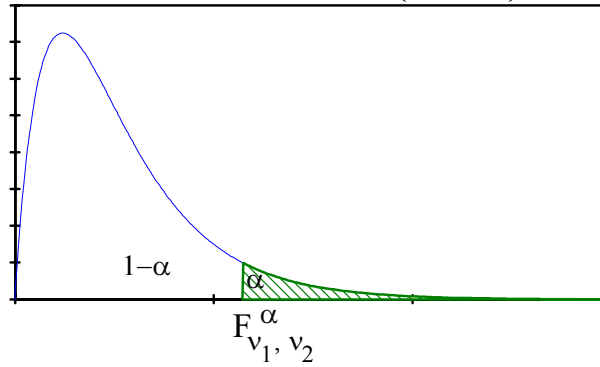
Table 4: F-distribution ($\alpha = 0.01$) (cont'd)



$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.01$$

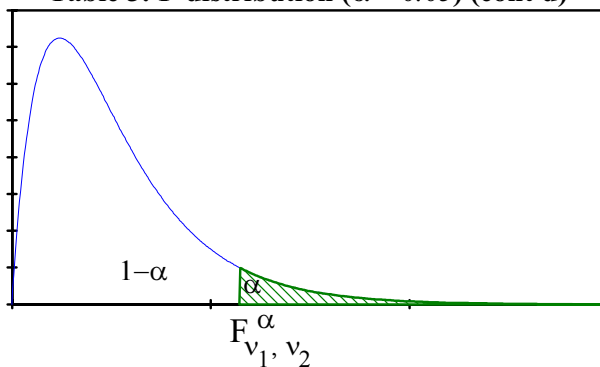
v_2	v_1										
	21	22	23	24	25	30	35	40	60	120	∞
1	6216.4	6223.2	6229.3	6234.9	6240.1	6261.0	6275.9	6287.1	6313.4	6339.7	6365.9
2	99.60	99.61	99.61	99.61	99.61	99.62	99.63	99.63	99.64	99.65	99.50
3	26.66	26.64	26.62	26.60	26.58	26.47	26.42	26.38	26.29	26.19	26.13
4	13.99	13.97	13.95	13.93	13.91	13.84	13.78	13.75	13.65	13.56	13.46
5	9.53	9.51	9.49	9.47	9.45	9.38	9.33	9.29	9.20	9.11	9.02
6	7.37	7.35	7.33	7.31	7.30	7.23	7.18	7.14	7.06	6.97	6.88
7	6.13	6.11	6.09	6.07	6.06	5.99	5.94	5.91	5.82	5.74	5.65
8	5.34	5.32	5.30	5.28	5.26	5.20	5.15	5.12	5.03	4.95	4.86
9	4.79	4.77	4.75	4.73	4.71	4.65	4.60	4.57	4.48	4.40	4.31
10	4.38	4.36	4.34	4.33	4.31	4.25	4.20	4.16	4.08	4.00	3.91
11	4.08	4.06	4.04	4.02	4.01	3.94	3.89	3.86	3.78	3.69	3.60
12	3.84	3.82	3.80	3.78	3.76	3.70	3.65	3.62	3.54	3.45	3.36
13	3.64	3.62	3.60	3.59	3.57	3.51	3.46	3.43	3.34	3.25	3.17
14	3.48	3.46	3.44	3.43	3.41	3.35	3.30	3.27	3.18	3.09	3.00
15	3.35	3.33	3.31	3.29	3.28	3.21	3.17	3.13	3.05	2.96	2.87
16	3.24	3.22	3.20	3.18	3.16	3.10	3.05	3.02	2.93	2.84	2.75
17	3.14	3.12	3.10	3.08	3.07	3.00	2.96	2.92	2.83	2.75	2.65
18	3.05	3.03	3.02	3.00	2.98	2.92	2.87	2.84	2.75	2.66	2.57
19	2.98	2.96	2.94	2.92	2.91	2.84	2.80	2.76	2.67	2.58	2.49
20	2.92	2.90	2.88	2.86	2.84	2.78	2.73	2.69	2.61	2.52	2.42
21	2.86	2.84	2.82	2.80	2.79	2.72	2.67	2.64	2.55	2.46	2.36
22	2.81	2.78	2.77	2.75	2.73	2.67	2.62	2.58	2.50	2.40	2.31
23	2.76	2.74	2.72	2.70	2.69	2.62	2.57	2.54	2.45	2.35	2.26
24	2.72	2.70	2.68	2.66	2.64	2.58	2.53	2.49	2.40	2.31	2.21
25	2.68	2.66	2.64	2.62	2.60	2.54	2.49	2.45	2.36	2.27	2.17
26	2.64	2.62	2.60	2.58	2.57	2.50	2.45	2.42	2.33	2.23	2.13
27	2.61	2.59	2.57	2.55	2.54	2.47	2.42	2.38	2.29	2.20	2.10
28	2.58	2.56	2.54	2.52	2.51	2.44	2.39	2.35	2.26	2.17	2.06
29	2.55	2.53	2.51	2.49	2.48	2.41	2.36	2.33	2.23	2.14	2.03
30	2.53	2.51	2.49	2.47	2.45	2.39	2.34	2.30	2.21	2.11	2.01
31	2.50	2.48	2.46	2.45	2.43	2.36	2.31	2.27	2.18	2.09	1.98
32	2.48	2.46	2.44	2.42	2.41	2.34	2.29	2.25	2.16	2.06	1.96
33	2.46	2.44	2.42	2.40	2.39	2.32	2.27	2.23	2.14	2.04	1.93
34	2.44	2.42	2.40	2.38	2.37	2.30	2.25	2.21	2.12	2.02	1.91
35	2.42	2.40	2.38	2.36	2.35	2.28	2.23	2.19	2.10	2.00	1.89
40	2.35	2.33	2.31	2.29	2.27	2.20	2.15	2.11	2.02	1.92	1.80
45	2.29	2.27	2.25	2.23	2.21	2.14	2.09	2.05	1.96	1.85	1.74
50	2.24	2.22	2.20	2.18	2.17	2.10	2.05	2.01	1.91	1.80	1.68
60	2.17	2.15	2.13	2.12	2.10	2.03	1.98	1.94	1.84	1.73	1.60
120	2.01	1.99	1.97	1.95	1.93	1.86	1.81	1.76	1.66	1.53	1.38
∞	1.85	1.83	1.81	1.79	1.77	1.70	1.64	1.59	1.47	1.32	1.00

Table 5: F-distribution ($\alpha = 0.05$)

$$\Pr(X > F_{v_1, v_2}^\alpha) = \alpha$$

$$\alpha = 0.05$$

v_2	v_1									
	1	2	3	4	5	6	7	8	9	10
1	161.55	199.71	215.95	224.84	230.42	234.25	237.04	239.16	240.82	242.16
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.73
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16
31	4.16	3.30	2.91	2.68	2.52	2.41	2.32	2.25	2.20	2.15
32	4.15	3.29	2.90	2.67	2.51	2.40	2.31	2.24	2.19	2.14
33	4.14	3.28	2.89	2.66	2.50	2.39	2.30	2.23	2.18	2.13
34	4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12
35	4.12	3.27	2.87	2.64	2.49	2.37	2.29	2.22	2.16	2.11
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08
45	4.06	3.20	2.81	2.58	2.42	2.31	2.22	2.15	2.10	2.05
50	4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	2.07	2.03
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99
120	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.96	1.91
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88	1.83

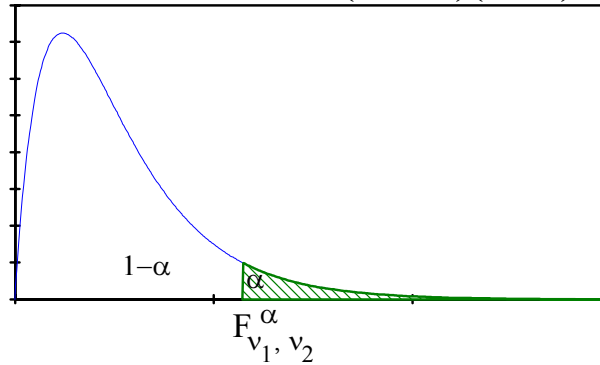
Table 5: F-distribution ($\alpha = 0.05$) (cont'd)

$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.05$$

v_2	v_1									
	11	12	13	14	15	16	17	18	19	20
1	243.26	244.19	244.97	245.65	246.24	246.75	247.20	247.61	247.97	248.30
2	19.40	19.41	19.42	19.44	19.44	19.45	19.45	19.45	19.46	19.46
3	8.76	8.74	8.73	8.71	8.70	8.69	8.68	8.67	8.67	8.66
4	5.94	5.91	5.89	5.87	5.86	5.84	5.83	5.82	5.81	5.80
5	4.70	4.68	4.66	4.64	4.62	4.60	4.59	4.58	4.57	4.56
6	4.03	4.00	3.98	3.96	3.94	3.92	3.91	3.90	3.88	3.87
7	3.60	3.57	3.55	3.53	3.51	3.49	3.48	3.47	3.46	3.44
8	3.31	3.28	3.26	3.24	3.22	3.20	3.19	3.17	3.16	3.15
9	3.10	3.07	3.05	3.03	3.01	2.99	2.97	2.96	2.95	2.94
10	2.94	2.91	2.89	2.86	2.85	2.83	2.81	2.80	2.79	2.77
11	2.82	2.79	2.76	2.74	2.72	2.70	2.69	2.67	2.66	2.65
12	2.72	2.69	2.66	2.64	2.62	2.60	2.58	2.57	2.56	2.54
13	2.63	2.60	2.58	2.55	2.53	2.51	2.50	2.48	2.47	2.46
14	2.57	2.53	2.51	2.48	2.46	2.44	2.43	2.41	2.40	2.39
15	2.51	2.48	2.45	2.42	2.40	2.38	2.37	2.35	2.34	2.33
16	2.46	2.42	2.40	2.37	2.35	2.33	2.32	2.30	2.29	2.28
17	2.41	2.38	2.35	2.33	2.31	2.29	2.27	2.26	2.24	2.23
18	2.37	2.34	2.31	2.29	2.27	2.25	2.23	2.22	2.20	2.19
19	2.34	2.31	2.28	2.26	2.23	2.21	2.20	2.18	2.17	2.16
20	2.31	2.28	2.25	2.22	2.20	2.18	2.17	2.15	2.14	2.12
21	2.28	2.25	2.22	2.20	2.18	2.16	2.14	2.12	2.11	2.10
22	2.26	2.23	2.20	2.17	2.15	2.13	2.11	2.10	2.08	2.07
23	2.24	2.20	2.18	2.15	2.13	2.11	2.09	2.08	2.06	2.05
24	2.22	2.18	2.15	2.13	2.11	2.09	2.07	2.05	2.04	2.03
25	2.20	2.16	2.14	2.11	2.09	2.07	2.05	2.04	2.02	2.01
26	2.18	2.15	2.12	2.09	2.07	2.05	2.03	2.02	2.00	1.99
27	2.17	2.13	2.10	2.08	2.06	2.04	2.02	2.00	1.99	1.97
28	2.15	2.12	2.09	2.06	2.04	2.02	2.00	1.99	1.97	1.96
29	2.14	2.10	2.08	2.05	2.03	2.01	1.99	1.97	1.96	1.94
30	2.13	2.09	2.06	2.04	2.01	1.99	1.98	1.96	1.95	1.93
31	2.11	2.08	2.05	2.03	2.00	1.98	1.96	1.95	1.93	1.92
32	2.10	2.07	2.04	2.01	1.99	1.97	1.95	1.94	1.92	1.91
33	2.09	2.06	2.03	2.00	1.98	1.96	1.94	1.93	1.91	1.90
34	2.08	2.05	2.02	1.99	1.97	1.95	1.93	1.92	1.90	1.89
35	2.07	2.04	2.01	1.99	1.96	1.94	1.92	1.91	1.89	1.88
40	2.04	2.00	1.97	1.95	1.92	1.90	1.89	1.87	1.85	1.84
45	2.01	1.97	1.94	1.92	1.89	1.87	1.86	1.84	1.82	1.81
50	1.99	1.95	1.92	1.89	1.87	1.85	1.83	1.81	1.80	1.78
60	1.95	1.92	1.89	1.86	1.84	1.82	1.80	1.78	1.76	1.75
120	1.87	1.83	1.80	1.78	1.75	1.73	1.71	1.69	1.67	1.66
∞	1.79	1.75	1.72	1.69	1.67	1.64	1.62	1.60	1.59	1.57

Table 5: F-distribution ($\alpha = 0.05$) (cont'd)

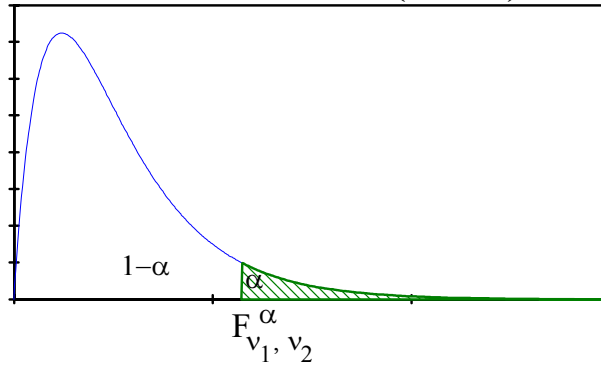


$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.05$$

v_2	v_1										
	21	22	23	24	25	30	35	40	60	120	∞
1	248.60	248.87	249.11	249.34	249.55	250.39	250.98	251.44	270.27	271.40	254.31
2	19.46	19.46	19.47	19.47	19.47	19.48	19.48	19.49	19.49	19.50	19.50
3	8.65	8.65	8.64	8.64	8.63	8.62	8.60	8.59	8.57	8.55	8.53
4	5.79	5.79	5.78	5.77	5.77	5.75	5.73	5.72	5.69	5.66	5.63
5	4.55	4.54	4.53	4.53	4.52	4.50	4.48	4.46	4.43	4.40	4.36
6	3.86	3.86	3.85	3.84	3.83	3.81	3.79	3.77	3.74	3.70	3.67
7	3.43	3.43	3.42	3.41	3.40	3.38	3.36	3.34	3.30	3.27	3.23
8	3.14	3.13	3.12	3.12	3.11	3.08	3.06	3.04	3.01	2.97	2.93
9	2.93	2.92	2.91	2.90	2.89	2.86	2.84	2.83	2.79	2.75	2.71
10	2.76	2.75	2.75	2.74	2.73	2.70	2.68	2.66	2.62	2.58	2.54
11	2.64	2.63	2.62	2.61	2.60	2.57	2.55	2.53	2.49	2.45	2.40
12	2.53	2.52	2.51	2.51	2.50	2.47	2.44	2.43	2.38	2.34	2.30
13	2.45	2.44	2.43	2.42	2.41	2.38	2.36	2.34	2.30	2.25	2.21
14	2.38	2.37	2.36	2.35	2.34	2.31	2.28	2.27	2.22	2.18	2.13
15	2.32	2.31	2.30	2.29	2.28	2.25	2.22	2.20	2.16	2.11	2.07
16	2.26	2.25	2.24	2.24	2.23	2.19	2.17	2.15	2.11	2.06	2.01
17	2.22	2.21	2.20	2.19	2.18	2.15	2.12	2.10	2.06	2.01	1.96
18	2.18	2.17	2.16	2.15	2.14	2.11	2.08	2.06	2.02	1.97	1.92
19	2.14	2.13	2.12	2.11	2.11	2.07	2.05	2.03	1.98	1.93	1.88
20	2.11	2.10	2.09	2.08	2.07	2.04	2.01	1.99	1.95	1.90	1.84
21	2.08	2.07	2.06	2.05	2.05	2.01	1.98	1.96	1.92	1.87	1.81
22	2.06	2.05	2.04	2.03	2.02	1.98	1.96	1.94	1.89	1.84	1.78
23	2.04	2.02	2.01	2.01	2.00	1.96	1.93	1.91	1.86	1.81	1.76
24	2.01	2.00	1.99	1.98	1.97	1.94	1.91	1.89	1.84	1.79	1.73
25	2.00	1.98	1.97	1.96	1.96	1.92	1.89	1.87	1.82	1.77	1.71
26	1.98	1.97	1.96	1.95	1.94	1.90	1.87	1.85	1.80	1.75	1.69
27	1.96	1.95	1.94	1.93	1.92	1.88	1.86	1.84	1.79	1.73	1.67
28	1.95	1.93	1.92	1.91	1.91	1.87	1.84	1.82	1.77	1.71	1.65
29	1.93	1.92	1.91	1.90	1.89	1.85	1.83	1.81	1.75	1.70	1.64
30	1.92	1.91	1.90	1.89	1.88	1.84	1.81	1.79	1.74	1.68	1.62
31	1.91	1.90	1.88	1.88	1.87	1.83	1.80	1.78	1.73	1.67	1.61
32	1.90	1.88	1.87	1.86	1.85	1.82	1.79	1.77	1.71	1.66	1.59
33	1.89	1.87	1.86	1.85	1.84	1.81	1.78	1.76	1.70	1.64	1.58
34	1.88	1.86	1.85	1.84	1.83	1.80	1.77	1.75	1.69	1.63	1.57
35	1.87	1.85	1.84	1.83	1.82	1.79	1.76	1.74	1.68	1.62	1.56
40	1.83	1.81	1.80	1.79	1.78	1.74	1.72	1.69	1.64	1.58	1.51
45	1.80	1.78	1.77	1.76	1.75	1.71	1.68	1.66	1.60	1.54	1.47
50	1.77	1.76	1.75	1.74	1.73	1.69	1.66	1.63	1.58	1.51	1.44
60	1.73	1.72	1.71	1.70	1.69	1.65	1.62	1.59	1.53	1.47	1.39
120	1.64	1.63	1.62	1.61	1.60	1.55	1.52	1.50	1.43	1.35	1.25
∞	1.56	1.54	1.53	1.52	1.51	1.46	1.42	1.39	1.32	1.22	1.00

Table 6: F-distribution ($\alpha = 0.10$)

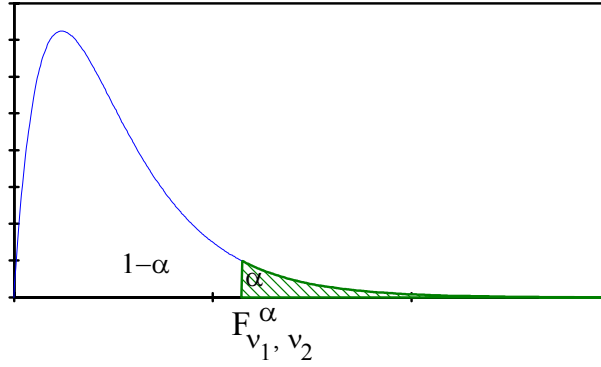


$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.10$$

v_2	v_1									
	1	2	3	4	5	6	7	8	9	10
1	39.87	49.52	53.62	55.87	57.28	58.24	58.95	59.48	59.90	60.24
2	8.53	9.00	9.16	9.24	9.29	9.33	9.35	9.37	9.38	9.39
3	5.54	5.46	5.39	5.34	5.31	5.28	5.27	5.25	5.24	5.23
4	4.54	4.32	4.19	4.11	4.05	4.01	3.98	3.95	3.94	3.92
5	4.06	3.78	3.62	3.52	3.45	3.40	3.37	3.34	3.32	3.30
6	3.78	3.46	3.29	3.18	3.11	3.05	3.01	2.98	2.96	2.94
7	3.59	3.26	3.07	2.96	2.88	2.83	2.78	2.75	2.72	2.70
8	3.46	3.11	2.92	2.81	2.73	2.67	2.62	2.59	2.56	2.54
9	3.36	3.01	2.81	2.69	2.61	2.55	2.51	2.47	2.44	2.42
10	3.29	2.92	2.73	2.61	2.52	2.46	2.41	2.38	2.35	2.32
11	3.23	2.86	2.66	2.54	2.45	2.39	2.34	2.30	2.27	2.25
12	3.18	2.81	2.61	2.48	2.39	2.33	2.28	2.24	2.21	2.19
13	3.14	2.76	2.56	2.43	2.35	2.28	2.23	2.20	2.16	2.14
14	3.10	2.73	2.52	2.39	2.31	2.24	2.19	2.15	2.12	2.10
15	3.07	2.70	2.49	2.36	2.27	2.21	2.16	2.12	2.09	2.06
16	3.05	2.67	2.46	2.33	2.24	2.18	2.13	2.09	2.06	2.03
17	3.03	2.64	2.44	2.31	2.22	2.15	2.10	2.06	2.03	2.00
18	3.01	2.62	2.42	2.29	2.20	2.13	2.08	2.04	2.00	1.98
19	2.99	2.61	2.40	2.27	2.18	2.11	2.06	2.02	1.98	1.96
20	2.97	2.59	2.38	2.25	2.16	2.09	2.04	2.00	1.96	1.94
21	2.96	2.57	2.36	2.23	2.14	2.08	2.02	1.98	1.95	1.92
22	2.95	2.56	2.35	2.22	2.13	2.06	2.01	1.97	1.93	1.90
23	2.94	2.55	2.34	2.21	2.11	2.05	1.99	1.95	1.92	1.89
24	2.93	2.54	2.33	2.19	2.10	2.04	1.98	1.94	1.91	1.88
25	2.92	2.53	2.32	2.18	2.09	2.02	1.97	1.93	1.89	1.87
26	2.91	2.52	2.31	2.17	2.08	2.01	1.96	1.92	1.88	1.86
27	2.90	2.51	2.30	2.17	2.07	2.00	1.95	1.91	1.87	1.85
28	2.89	2.50	2.29	2.16	2.06	2.00	1.94	1.90	1.87	1.84
29	2.89	2.50	2.28	2.15	2.06	1.99	1.93	1.89	1.86	1.83
30	2.88	2.49	2.28	2.14	2.05	1.98	1.93	1.88	1.85	1.82
31	2.87	2.48	2.27	2.14	2.04	1.97	1.92	1.88	1.84	1.81
32	2.87	2.48	2.26	2.13	2.04	1.97	1.91	1.87	1.83	1.81
33	2.86	2.47	2.26	2.12	2.03	1.96	1.91	1.86	1.83	1.80
34	2.86	2.47	2.25	2.12	2.02	1.96	1.90	1.86	1.82	1.79
35	2.85	2.46	2.25	2.11	2.02	1.95	1.90	1.85	1.82	1.79
40	2.84	2.44	2.23	2.09	2.00	1.93	1.87	1.83	1.79	1.76
45	2.82	2.42	2.21	2.07	1.98	1.91	1.85	1.81	1.77	1.74
50	2.81	2.41	2.20	2.06	1.97	1.90	1.84	1.80	1.76	1.73
60	2.79	2.39	2.18	2.04	1.95	1.87	1.82	1.77	1.74	1.71
120	2.75	2.35	2.13	1.99	1.90	1.82	1.77	1.72	1.68	1.65
∞	2.71	2.30	2.08	1.94	1.85	1.77	1.72	1.67	1.63	1.60

Table 6: F-distribution ($\alpha = 0.10$) (cont'd)

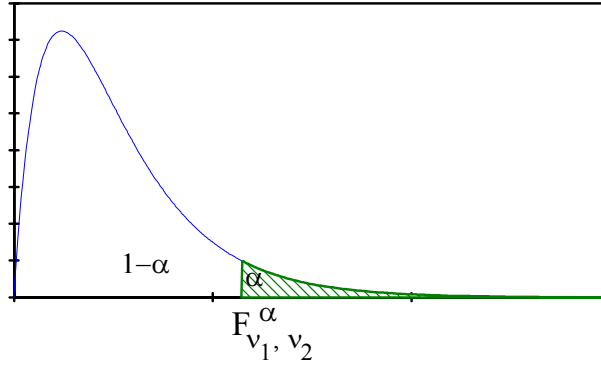


$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.10$$

v_2	v_1									
	11	12	13	14	15	16	17	18	19	20
1	60.51	60.75	60.94	61.11	61.26	61.39	61.51	61.61	61.70	61.78
2	9.40	9.41	9.41	9.42	9.42	9.43	9.43	9.44	9.44	9.44
3	5.22	5.22	5.21	5.20	5.20	5.20	5.19	5.19	5.19	5.18
4	3.91	3.90	3.89	3.88	3.87	3.86	3.86	3.85	3.85	3.84
5	3.28	3.27	3.26	3.25	3.24	3.23	3.22	3.22	3.21	3.21
6	2.92	2.90	2.89	2.88	2.87	2.86	2.85	2.85	2.84	2.84
7	2.68	2.67	2.65	2.64	2.63	2.62	2.61	2.61	2.60	2.59
8	2.52	2.50	2.49	2.48	2.46	2.45	2.45	2.44	2.43	2.42
9	2.40	2.38	2.36	2.35	2.34	2.33	2.32	2.31	2.30	2.30
10	2.30	2.28	2.27	2.26	2.24	2.23	2.22	2.22	2.21	2.20
11	2.23	2.21	2.19	2.18	2.17	2.16	2.15	2.14	2.13	2.12
12	2.17	2.15	2.13	2.12	2.10	2.09	2.08	2.08	2.07	2.06
13	2.12	2.10	2.08	2.07	2.05	2.04	2.03	2.02	2.01	2.01
14	2.07	2.05	2.04	2.02	2.01	2.00	1.99	1.98	1.97	1.96
15	2.04	2.02	2.00	1.99	1.97	1.96	1.95	1.94	1.93	1.92
16	2.01	1.99	1.97	1.95	1.94	1.93	1.92	1.91	1.90	1.89
17	1.98	1.96	1.94	1.93	1.91	1.90	1.89	1.88	1.87	1.86
18	1.95	1.93	1.92	1.90	1.89	1.87	1.86	1.85	1.84	1.84
19	1.93	1.91	1.89	1.88	1.86	1.85	1.84	1.83	1.82	1.81
20	1.91	1.89	1.87	1.86	1.84	1.83	1.82	1.81	1.80	1.79
21	1.90	1.87	1.86	1.84	1.83	1.81	1.80	1.79	1.78	1.78
22	1.88	1.86	1.84	1.83	1.81	1.80	1.79	1.78	1.77	1.76
23	1.87	1.84	1.83	1.81	1.80	1.78	1.77	1.76	1.75	1.74
24	1.85	1.83	1.81	1.80	1.78	1.77	1.76	1.75	1.74	1.73
25	1.84	1.82	1.80	1.79	1.77	1.76	1.75	1.74	1.73	1.72
26	1.83	1.81	1.79	1.77	1.76	1.75	1.73	1.72	1.71	1.71
27	1.82	1.80	1.78	1.76	1.75	1.74	1.72	1.71	1.70	1.70
28	1.81	1.79	1.77	1.75	1.74	1.73	1.71	1.70	1.69	1.69
29	1.80	1.78	1.76	1.75	1.73	1.72	1.71	1.69	1.68	1.68
30	1.79	1.77	1.75	1.74	1.72	1.71	1.70	1.69	1.68	1.67
31	1.79	1.77	1.75	1.73	1.71	1.70	1.69	1.68	1.67	1.66
32	1.78	1.76	1.74	1.72	1.71	1.69	1.68	1.67	1.66	1.65
33	1.77	1.75	1.73	1.72	1.70	1.69	1.67	1.66	1.65	1.64
34	1.77	1.75	1.73	1.71	1.69	1.68	1.67	1.66	1.65	1.64
35	1.76	1.74	1.72	1.70	1.69	1.67	1.66	1.65	1.64	1.63
40	1.74	1.71	1.70	1.68	1.66	1.65	1.64	1.62	1.61	1.61
45	1.72	1.70	1.68	1.66	1.64	1.63	1.62	1.60	1.59	1.58
50	1.70	1.68	1.66	1.64	1.63	1.61	1.60	1.59	1.58	1.57
60	1.68	1.66	1.64	1.62	1.60	1.59	1.58	1.56	1.55	1.54
120	1.63	1.60	1.58	1.56	1.54	1.53	1.52	1.50	1.49	1.48
∞	1.57	1.55	1.52	1.50	1.49	1.47	1.46	1.44	1.43	1.42

Table 6: F-distribution ($\alpha = 0.10$) (cont'd)



$$\Pr(X > F_{v_1, v_2}^{\alpha}) = \alpha$$

$$\alpha = 0.10$$

v_2	v_1										
	21	22	23	24	25	30	35	40	60	120	∞
1	61.86	61.92	61.99	62.04	62.10	62.31	62.46	62.57	62.84	63.10	63.33
2	9.44	9.45	9.45	9.45	9.46	9.46	9.47	9.47	9.48	9.49	9.49
3	5.18	5.18	5.18	5.18	5.17	5.17	5.16	5.16	5.15	5.14	5.13
4	3.84	3.84	3.83	3.83	3.83	3.82	3.81	3.80	3.79	3.78	3.76
5	3.20	3.20	3.19	3.19	3.19	3.17	3.16	3.16	3.14	3.12	3.10
6	2.83	2.83	2.82	2.82	2.81	2.80	2.79	2.78	2.76	2.74	2.72
7	2.59	2.58	2.58	2.58	2.57	2.56	2.54	2.54	2.51	2.49	2.47
8	2.42	2.41	2.41	2.40	2.40	2.38	2.37	2.36	2.34	2.32	2.29
9	2.29	2.29	2.28	2.28	2.27	2.25	2.24	2.23	2.21	2.18	2.16
10	2.19	2.19	2.18	2.18	2.17	2.16	2.14	2.13	2.11	2.08	2.06
11	2.12	2.11	2.11	2.10	2.10	2.08	2.06	2.05	2.03	2.00	1.97
12	2.05	2.05	2.04	2.04	2.03	2.01	2.00	1.99	1.96	1.93	1.90
13	2.00	1.99	1.99	1.98	1.98	1.96	1.94	1.93	1.90	1.88	1.85
14	1.96	1.95	1.94	1.94	1.93	1.91	1.90	1.89	1.86	1.83	1.80
15	1.92	1.91	1.90	1.90	1.89	1.87	1.86	1.85	1.82	1.79	1.76
16	1.88	1.88	1.87	1.87	1.86	1.84	1.82	1.81	1.78	1.75	1.72
17	1.85	1.85	1.84	1.84	1.83	1.81	1.79	1.78	1.75	1.72	1.69
18	1.83	1.82	1.82	1.81	1.80	1.78	1.77	1.75	1.72	1.69	1.66
19	1.81	1.80	1.79	1.79	1.78	1.76	1.74	1.73	1.70	1.67	1.63
20	1.79	1.78	1.77	1.77	1.76	1.74	1.72	1.71	1.68	1.64	1.61
21	1.77	1.76	1.75	1.75	1.74	1.72	1.70	1.69	1.66	1.62	1.59
22	1.75	1.74	1.74	1.73	1.73	1.70	1.68	1.67	1.64	1.60	1.57
23	1.74	1.73	1.72	1.72	1.71	1.69	1.67	1.66	1.62	1.59	1.55
24	1.72	1.71	1.71	1.70	1.70	1.67	1.65	1.64	1.61	1.57	1.53
25	1.71	1.70	1.70	1.69	1.68	1.66	1.64	1.63	1.59	1.56	1.52
26	1.70	1.69	1.68	1.68	1.67	1.65	1.63	1.61	1.58	1.54	1.50
27	1.69	1.68	1.67	1.67	1.66	1.64	1.62	1.60	1.57	1.53	1.49
28	1.68	1.67	1.66	1.66	1.65	1.63	1.61	1.59	1.56	1.52	1.48
29	1.67	1.66	1.65	1.65	1.64	1.62	1.60	1.58	1.55	1.51	1.47
30	1.66	1.65	1.64	1.64	1.63	1.61	1.59	1.57	1.54	1.50	1.46
31	1.65	1.64	1.64	1.63	1.62	1.60	1.58	1.56	1.53	1.49	1.45
32	1.64	1.64	1.63	1.62	1.62	1.59	1.57	1.56	1.52	1.48	1.44
33	1.64	1.63	1.62	1.61	1.61	1.58	1.56	1.55	1.51	1.47	1.43
34	1.63	1.62	1.61	1.61	1.60	1.58	1.56	1.54	1.50	1.46	1.42
35	1.62	1.62	1.61	1.60	1.60	1.57	1.55	1.53	1.50	1.46	1.41
40	1.60	1.59	1.58	1.57	1.57	1.54	1.52	1.51	1.47	1.42	1.38
45	1.58	1.57	1.56	1.55	1.55	1.52	1.50	1.48	1.44	1.40	1.35
50	1.56	1.55	1.54	1.54	1.53	1.50	1.48	1.46	1.42	1.38	1.33
60	1.53	1.53	1.52	1.51	1.50	1.48	1.45	1.44	1.40	1.35	1.29
120	1.47	1.46	1.46	1.45	1.44	1.41	1.39	1.37	1.32	1.26	1.19
∞	1.41	1.40	1.39	1.38	1.38	1.34	1.32	1.30	1.24	1.17	1.00

Table 7: Binomial Distribution
 $\Pr(X \leq k)$

p	n=2		n=3			n=4				n=5				
	k=0	1	k=0	1	2	k=0	1	2	3	k=0	1	2	3	4
0.01	0.980	1.000	0.970	1.000		0.961	0.999	1.000		0.951	0.999	1.000		
0.02	0.960	1.000	0.941	0.999	1.000	0.922	0.998	1.000		0.904	0.996	1.000		
0.03	0.941	0.999	0.913	0.997	1.000	0.885	0.995	1.000		0.859	0.992	1.000		
0.04	0.922	0.998	0.885	0.995	1.000	0.849	0.991	1.000		0.815	0.985	0.999	1.000	
0.05	0.902	0.997	0.857	0.993	1.000	0.815	0.986	1.000		0.774	0.977	0.999	1.000	
0.06	0.884	0.996	0.831	0.990	1.000	0.781	0.980	0.999	1.000	0.734	0.968	0.998	1.000	
0.07	0.865	0.995	0.804	0.986	1.000	0.748	0.973	0.999	1.000	0.696	0.958	0.997	1.000	
0.08	0.846	0.994	0.779	0.982	0.999	0.716	0.966	0.998	1.000	0.659	0.946	0.995	1.000	
0.09	0.828	0.992	0.754	0.977	0.999	0.686	0.957	0.997	1.000	0.624	0.933	0.994	1.000	
0.10	0.810	0.990	0.729	0.972	0.999	0.656	0.948	0.996	1.000	0.590	0.919	0.991	1.000	
0.11	0.792	0.988	0.705	0.966	0.999	0.627	0.938	0.995	1.000	0.558	0.903	0.989	0.999	1.000
0.12	0.774	0.986	0.681	0.960	0.998	0.600	0.927	0.994	1.000	0.528	0.888	0.986	0.999	1.000
0.13	0.757	0.983	0.659	0.954	0.998	0.573	0.915	0.992	1.000	0.498	0.871	0.982	0.999	1.000
0.14	0.740	0.980	0.636	0.947	0.997	0.547	0.903	0.990	1.000	0.470	0.853	0.978	0.998	1.000
0.15	0.722	0.977	0.614	0.939	0.997	0.522	0.890	0.988	0.999	0.444	0.835	0.973	0.998	1.000
0.16	0.706	0.974	0.593	0.931	0.996	0.498	0.877	0.986	0.999	0.418	0.817	0.968	0.997	1.000
0.17	0.689	0.971	0.572	0.923	0.995	0.475	0.863	0.983	0.999	0.394	0.797	0.963	0.996	1.000
0.18	0.672	0.968	0.551	0.914	0.994	0.452	0.849	0.980	0.999	0.371	0.778	0.956	0.996	1.000
0.19	0.656	0.964	0.531	0.905	0.993	0.430	0.834	0.976	0.999	0.349	0.758	0.949	0.994	1.000
0.20	0.640	0.960	0.512	0.896	0.992	0.410	0.819	0.973	0.998	0.328	0.737	0.942	0.993	1.000
0.21	0.624	0.956	0.493	0.886	0.991	0.390	0.804	0.969	0.998	0.308	0.717	0.934	0.992	1.000
0.22	0.608	0.952	0.475	0.876	0.989	0.370	0.788	0.964	0.998	0.289	0.696	0.926	0.990	0.999
0.23	0.593	0.947	0.457	0.866	0.988	0.352	0.772	0.960	0.997	0.271	0.675	0.916	0.989	0.999
0.24	0.578	0.942	0.439	0.855	0.986	0.334	0.755	0.955	0.997	0.254	0.654	0.907	0.987	0.999
0.25	0.562	0.937	0.422	0.844	0.984	0.316	0.738	0.949	0.996	0.237	0.633	0.896	0.984	0.999
0.26	0.548	0.932	0.405	0.832	0.982	0.300	0.721	0.943	0.995	0.222	0.612	0.886	0.982	0.999
0.27	0.533	0.927	0.389	0.821	0.980	0.284	0.704	0.937	0.995	0.207	0.591	0.874	0.979	0.999
0.28	0.518	0.922	0.373	0.809	0.978	0.269	0.687	0.931	0.994	0.193	0.570	0.862	0.976	0.998
0.29	0.504	0.916	0.358	0.796	0.976	0.254	0.669	0.924	0.993	0.180	0.549	0.850	0.973	0.998
0.30	0.490	0.910	0.343	0.784	0.973	0.240	0.652	0.916	0.992	0.168	0.528	0.837	0.969	0.998
0.31	0.476	0.904	0.329	0.771	0.970	0.227	0.634	0.909	0.991	0.156	0.508	0.823	0.965	0.997
0.32	0.462	0.898	0.314	0.758	0.967	0.214	0.616	0.900	0.990	0.145	0.487	0.809	0.961	0.997
0.33	0.449	0.891	0.301	0.745	0.964	0.202	0.599	0.892	0.988	0.135	0.468	0.795	0.956	0.996
0.34	0.436	0.884	0.287	0.732	0.961	0.190	0.581	0.883	0.987	0.125	0.448	0.780	0.951	0.995
0.35	0.423	0.878	0.275	0.718	0.957	0.179	0.563	0.874	0.985	0.116	0.428	0.765	0.946	0.995
0.36	0.410	0.870	0.262	0.705	0.953	0.168	0.545	0.864	0.983	0.107	0.409	0.749	0.940	0.994
0.37	0.397	0.863	0.250	0.691	0.949	0.158	0.528	0.854	0.981	0.099	0.391	0.733	0.934	0.993
0.38	0.384	0.856	0.238	0.677	0.945	0.148	0.510	0.843	0.979	0.092	0.372	0.717	0.927	0.992
0.39	0.372	0.848	0.227	0.662	0.941	0.138	0.493	0.832	0.977	0.084	0.354	0.700	0.920	0.991
0.40	0.360	0.840	0.216	0.648	0.936	0.130	0.475	0.821	0.974	0.078	0.337	0.683	0.913	0.990
0.41	0.348	0.832	0.205	0.634	0.931	0.121	0.458	0.809	0.972	0.071	0.320	0.665	0.905	0.988
0.42	0.336	0.824	0.195	0.619	0.926	0.113	0.441	0.797	0.969	0.066	0.303	0.647	0.897	0.987
0.43	0.325	0.815	0.185	0.604	0.920	0.106	0.424	0.785	0.966	0.060	0.287	0.630	0.888	0.985
0.44	0.314	0.806	0.176	0.590	0.915	0.098	0.407	0.772	0.963	0.055	0.271	0.611	0.879	0.984
0.45	0.303	0.798	0.166	0.575	0.909	0.092	0.391	0.759	0.959	0.050	0.256	0.593	0.869	0.982
0.46	0.292	0.788	0.157	0.560	0.903	0.085	0.375	0.745	0.955	0.046	0.241	0.575	0.859	0.979
0.47	0.281	0.779	0.149	0.545	0.896	0.079	0.359	0.731	0.951	0.042	0.227	0.556	0.848	0.977
0.48	0.270	0.770	0.141	0.530	0.889	0.073	0.343	0.717	0.947	0.038	0.213	0.537	0.837	0.975
0.49	0.260	0.760	0.133	0.515	0.882	0.068	0.328	0.702	0.942	0.035	0.200	0.519	0.825	0.972
0.50	0.250	0.750	0.125	0.500	0.875	0.062	0.312	0.688	0.938	0.031	0.187	0.500	0.813	0.969

Table 7: Binomial Distribution (cont'd)

$$\Pr(X \leq k)$$

n=6							n=7						
p	k=0	1	2	3	4	5	k=0	1	2	3	4	5	6
0.01	0.941	0.999	1.000				0.932	0.998	1.000				
0.02	0.886	0.994	1.000				0.868	0.992	1.000				
0.03	0.833	0.988	0.999	1.000			0.808	0.983	0.999	1.000			
0.04	0.783	0.978	0.999	1.000			0.751	0.971	0.998	1.000			
0.05	0.735	0.967	0.998	1.000			0.698	0.956	0.996	1.000			
0.06	0.690	0.954	0.996	1.000			0.648	0.938	0.994	1.000			
0.07	0.647	0.939	0.994	1.000			0.602	0.919	0.990	0.999	1.000		
0.08	0.606	0.923	0.991	0.999	1.000		0.558	0.897	0.986	0.999	1.000		
0.09	0.568	0.905	0.988	0.999	1.000		0.517	0.875	0.981	0.998	1.000		
0.10	0.531	0.886	0.984	0.999	1.000		0.478	0.850	0.974	0.997	1.000		
0.11	0.497	0.866	0.979	0.998	1.000		0.442	0.825	0.967	0.996	1.000		
0.12	0.464	0.844	0.974	0.997	1.000		0.409	0.799	0.958	0.995	1.000		
0.13	0.434	0.822	0.968	0.997	1.000		0.377	0.772	0.949	0.993	0.999	1.000	
0.14	0.405	0.800	0.961	0.995	1.000		0.348	0.744	0.938	0.991	0.999	1.000	
0.15	0.377	0.776	0.953	0.994	1.000		0.321	0.717	0.926	0.988	0.999	1.000	
0.16	0.351	0.753	0.944	0.993	0.999	1.000	0.295	0.689	0.913	0.985	0.998	1.000	
0.17	0.327	0.729	0.934	0.991	0.999	1.000	0.271	0.660	0.899	0.981	0.998	1.000	
0.18	0.304	0.704	0.924	0.988	0.999	1.000	0.249	0.632	0.885	0.977	0.997	1.000	
0.19	0.282	0.680	0.913	0.986	0.999	1.000	0.229	0.604	0.869	0.972	0.996	1.000	
0.20	0.262	0.655	0.901	0.983	0.998	1.000	0.210	0.577	0.852	0.967	0.995	1.000	
0.21	0.243	0.631	0.888	0.980	0.998	1.000	0.192	0.549	0.834	0.961	0.994	1.000	
0.22	0.225	0.606	0.875	0.976	0.997	1.000	0.176	0.522	0.816	0.954	0.993	0.999	1.000
0.23	0.208	0.582	0.861	0.972	0.997	1.000	0.160	0.496	0.797	0.946	0.991	0.999	1.000
0.24	0.193	0.558	0.846	0.967	0.996	1.000	0.146	0.470	0.777	0.938	0.989	0.999	1.000
0.25	0.178	0.534	0.831	0.962	0.995	1.000	0.133	0.445	0.756	0.929	0.987	0.999	1.000
0.26	0.164	0.510	0.814	0.957	0.994	1.000	0.122	0.420	0.735	0.920	0.985	0.998	1.000
0.27	0.151	0.487	0.798	0.951	0.993	1.000	0.110	0.396	0.714	0.909	0.982	0.998	1.000
0.28	0.139	0.464	0.780	0.944	0.992	1.000	0.100	0.373	0.692	0.898	0.979	0.997	1.000
0.29	0.128	0.442	0.763	0.937	0.991	0.999	0.091	0.351	0.670	0.887	0.975	0.997	1.000
0.30	0.118	0.420	0.744	0.930	0.989	0.999	0.082	0.329	0.647	0.874	0.971	0.996	1.000
0.31	0.108	0.399	0.726	0.921	0.987	0.999	0.074	0.309	0.624	0.861	0.967	0.995	1.000
0.32	0.099	0.378	0.706	0.913	0.985	0.999	0.067	0.289	0.601	0.847	0.962	0.995	1.000
0.33	0.090	0.358	0.687	0.903	0.983	0.999	0.061	0.270	0.578	0.832	0.957	0.994	1.000
0.34	0.083	0.338	0.667	0.893	0.980	0.998	0.055	0.251	0.555	0.816	0.951	0.992	0.999
0.35	0.075	0.319	0.647	0.883	0.978	0.998	0.049	0.234	0.532	0.800	0.944	0.991	0.999
0.36	0.069	0.301	0.627	0.871	0.975	0.998	0.044	0.217	0.509	0.783	0.937	0.989	0.999
0.37	0.063	0.283	0.606	0.860	0.971	0.997	0.039	0.201	0.487	0.766	0.930	0.988	0.999
0.38	0.057	0.266	0.586	0.847	0.968	0.997	0.035	0.186	0.464	0.748	0.922	0.986	0.999
0.39	0.052	0.249	0.565	0.834	0.963	0.996	0.031	0.172	0.442	0.729	0.913	0.984	0.999
0.40	0.047	0.233	0.544	0.821	0.959	0.996	0.028	0.159	0.420	0.710	0.904	0.981	0.998
0.41	0.042	0.218	0.524	0.807	0.954	0.995	0.025	0.146	0.398	0.691	0.894	0.978	0.998
0.42	0.038	0.203	0.503	0.792	0.949	0.995	0.022	0.134	0.377	0.671	0.883	0.975	0.998
0.43	0.034	0.190	0.482	0.777	0.943	0.994	0.020	0.123	0.356	0.650	0.872	0.972	0.997
0.44	0.031	0.176	0.462	0.761	0.937	0.993	0.017	0.112	0.336	0.629	0.860	0.968	0.997
0.45	0.028	0.164	0.442	0.745	0.931	0.992	0.015	0.102	0.316	0.608	0.847	0.964	0.996
0.46	0.025	0.152	0.421	0.728	0.924	0.991	0.013	0.093	0.297	0.587	0.834	0.960	0.996
0.47	0.022	0.140	0.402	0.711	0.916	0.989	0.012	0.085	0.279	0.565	0.820	0.955	0.995
0.48	0.020	0.129	0.382	0.693	0.908	0.988	0.010	0.077	0.261	0.544	0.805	0.950	0.994
0.49	0.018	0.119	0.363	0.675	0.900	0.986	0.009	0.069	0.243	0.522	0.790	0.944	0.993
0.50	0.016	0.109	0.344	0.656	0.891	0.984	0.008	0.062	0.227	0.500	0.773	0.938	0.992

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=8								n=9					
	k=0	1	2	3	4	5	6	7	k=0	1	2	3	4	5
0.01	0.923	0.997	1.000						0.914	0.997	1.000			
0.02	0.851	0.990	1.000						0.834	0.987	0.999	1.000		
0.03	0.784	0.978	0.999	1.000					0.760	0.972	0.998	1.000		
0.04	0.721	0.962	0.997	1.000					0.693	0.952	0.996	1.000		
0.05	0.663	0.943	0.994	1.000					0.630	0.929	0.992	0.999	1.000	
0.06	0.610	0.921	0.990	0.999	1.000				0.573	0.902	0.986	0.999	1.000	
0.07	0.560	0.897	0.985	0.999	1.000				0.520	0.873	0.979	0.998	1.000	
0.08	0.513	0.870	0.979	0.998	1.000				0.472	0.842	0.970	0.996	1.000	
0.09	0.470	0.842	0.971	0.997	1.000				0.428	0.809	0.960	0.994	0.999	1.000
0.10	0.430	0.813	0.962	0.995	1.000				0.387	0.775	0.947	0.992	0.999	1.000
0.11	0.394	0.783	0.951	0.993	0.999	1.000			0.350	0.740	0.933	0.988	0.999	1.000
0.12	0.360	0.752	0.939	0.990	0.999	1.000			0.316	0.705	0.917	0.984	0.998	1.000
0.13	0.328	0.721	0.926	0.987	0.999	1.000			0.286	0.670	0.899	0.979	0.997	1.000
0.14	0.299	0.689	0.911	0.983	0.998	1.000			0.257	0.634	0.880	0.973	0.996	1.000
0.15	0.272	0.657	0.895	0.979	0.997	1.000			0.232	0.599	0.859	0.966	0.994	0.999
0.16	0.248	0.626	0.877	0.973	0.996	1.000			0.208	0.565	0.837	0.958	0.993	0.999
0.17	0.225	0.594	0.859	0.967	0.995	1.000			0.187	0.532	0.814	0.949	0.990	0.999
0.18	0.204	0.563	0.839	0.960	0.993	0.999	1.000		0.168	0.499	0.790	0.938	0.988	0.998
0.19	0.185	0.533	0.819	0.952	0.992	0.999	1.000		0.150	0.467	0.764	0.927	0.984	0.998
0.20	0.168	0.503	0.797	0.944	0.990	0.999	1.000		0.134	0.436	0.738	0.914	0.980	0.997
0.21	0.152	0.474	0.775	0.934	0.987	0.998	1.000		0.120	0.407	0.711	0.901	0.976	0.996
0.22	0.137	0.446	0.751	0.924	0.984	0.998	1.000		0.107	0.378	0.684	0.886	0.971	0.995
0.23	0.124	0.419	0.728	0.912	0.981	0.997	1.000		0.095	0.351	0.657	0.870	0.965	0.994
0.24	0.111	0.392	0.703	0.900	0.977	0.997	1.000		0.085	0.325	0.629	0.852	0.958	0.992
0.25	0.100	0.367	0.679	0.886	0.973	0.996	1.000		0.075	0.300	0.601	0.834	0.951	0.990
0.26	0.090	0.343	0.653	0.872	0.968	0.995	1.000		0.067	0.277	0.573	0.815	0.943	0.988
0.27	0.081	0.319	0.628	0.857	0.962	0.994	0.999	1.000	0.059	0.255	0.545	0.795	0.934	0.985
0.28	0.072	0.297	0.603	0.841	0.956	0.992	0.999	1.000	0.052	0.234	0.517	0.774	0.924	0.982
0.29	0.065	0.276	0.577	0.824	0.949	0.991	0.999	1.000	0.046	0.214	0.490	0.752	0.913	0.979
0.30	0.058	0.255	0.552	0.806	0.942	0.989	0.999	1.000	0.040	0.196	0.463	0.730	0.901	0.975
0.31	0.051	0.236	0.526	0.787	0.934	0.987	0.998	1.000	0.035	0.179	0.436	0.706	0.888	0.970
0.32	0.046	0.218	0.501	0.768	0.925	0.984	0.998	1.000	0.031	0.163	0.411	0.683	0.875	0.965
0.33	0.041	0.201	0.476	0.748	0.915	0.981	0.998	1.000	0.027	0.148	0.385	0.658	0.860	0.960
0.34	0.036	0.184	0.452	0.728	0.905	0.978	0.997	1.000	0.024	0.134	0.361	0.634	0.845	0.953
0.35	0.032	0.169	0.428	0.706	0.894	0.975	0.996	1.000	0.021	0.121	0.337	0.609	0.828	0.946
0.36	0.028	0.155	0.404	0.685	0.882	0.971	0.996	1.000	0.018	0.109	0.314	0.584	0.811	0.939
0.37	0.025	0.141	0.381	0.663	0.869	0.966	0.995	1.000	0.016	0.098	0.292	0.558	0.793	0.930
0.38	0.022	0.129	0.359	0.640	0.856	0.961	0.994	1.000	0.014	0.088	0.271	0.533	0.774	0.921
0.39	0.019	0.117	0.337	0.617	0.841	0.956	0.993	0.999	0.012	0.079	0.251	0.508	0.754	0.911
0.40	0.017	0.106	0.315	0.594	0.826	0.950	0.991	0.999	0.010	0.071	0.232	0.483	0.733	0.901
0.41	0.015	0.096	0.295	0.571	0.810	0.944	0.990	0.999	0.009	0.063	0.213	0.458	0.712	0.889
0.42	0.013	0.087	0.275	0.547	0.794	0.937	0.988	0.999	0.007	0.056	0.196	0.433	0.690	0.877
0.43	0.011	0.078	0.256	0.524	0.776	0.929	0.986	0.999	0.006	0.049	0.180	0.409	0.668	0.863
0.44	0.010	0.070	0.238	0.500	0.758	0.921	0.984	0.999	0.005	0.044	0.164	0.385	0.645	0.849
0.45	0.008	0.063	0.220	0.477	0.740	0.912	0.982	0.998	0.005	0.039	0.150	0.361	0.621	0.834
0.46	0.007	0.057	0.203	0.454	0.720	0.902	0.979	0.998	0.004	0.034	0.136	0.339	0.598	0.818
0.47	0.006	0.050	0.187	0.431	0.700	0.891	0.976	0.998	0.003	0.030	0.123	0.316	0.573	0.801
0.48	0.005	0.045	0.172	0.408	0.680	0.880	0.973	0.997	0.003	0.026	0.111	0.295	0.549	0.784
0.49	0.005	0.040	0.158	0.385	0.658	0.868	0.969	0.997	0.002	0.023	0.100	0.274	0.525	0.765
0.50	0.004	0.035	0.145	0.363	0.637	0.855	0.965	0.996	0.002	0.020	0.090	0.254	0.500	0.746

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=9			n=10									
	k=6	7	8	k=0	1	2	3	4	5	6	7	8	9
0.01				0.904	0.996	1.000							
0.02				0.817	0.984	0.999	1.000						
0.03				0.737	0.965	0.997	1.000						
0.04				0.665	0.942	0.994	1.000						
0.05				0.599	0.914	0.988	0.999	1.000					
0.06				0.539	0.882	0.981	0.998	1.000					
0.07				0.484	0.848	0.972	0.996	1.000					
0.08				0.434	0.812	0.960	0.994	0.999	1.000				
0.09				0.389	0.775	0.946	0.991	0.999	1.000				
0.10				0.349	0.736	0.930	0.987	0.998	1.000				
0.11				0.312	0.697	0.912	0.982	0.997	1.000				
0.12				0.279	0.658	0.891	0.976	0.996	1.000				
0.13				0.248	0.620	0.869	0.969	0.995	0.999	1.000			
0.14				0.221	0.582	0.845	0.960	0.993	0.999	1.000			
0.15	1.000			0.197	0.544	0.820	0.950	0.990	0.999	1.000			
0.16	1.000			0.175	0.508	0.794	0.939	0.987	0.998	1.000			
0.17	1.000			0.155	0.473	0.766	0.926	0.983	0.997	1.000			
0.18	1.000			0.137	0.439	0.737	0.912	0.979	0.996	1.000			
0.19	1.000			0.122	0.407	0.708	0.896	0.973	0.995	0.999	1.000		
0.20	1.000			0.107	0.376	0.678	0.879	0.967	0.994	0.999	1.000		
0.21	1.000			0.095	0.346	0.647	0.861	0.960	0.992	0.999	1.000		
0.22	0.999	1.000		0.083	0.318	0.617	0.841	0.952	0.990	0.998	1.000		
0.23	0.999	1.000		0.073	0.292	0.586	0.821	0.943	0.987	0.998	1.000		
0.24	0.999	1.000		0.064	0.267	0.556	0.799	0.933	0.984	0.997	1.000		
0.25	0.999	1.000		0.056	0.244	0.526	0.776	0.922	0.980	0.996	1.000		
0.26	0.998	1.000		0.049	0.222	0.496	0.752	0.910	0.976	0.996	0.999	1.000	
0.27	0.998	1.000		0.043	0.202	0.466	0.727	0.896	0.971	0.994	0.999	1.000	
0.28	0.997	1.000		0.037	0.183	0.438	0.702	0.882	0.966	0.993	0.999	1.000	
0.29	0.997	1.000		0.033	0.166	0.410	0.676	0.866	0.960	0.991	0.999	1.000	
0.30	0.996	1.000		0.028	0.149	0.383	0.650	0.850	0.953	0.989	0.998	1.000	
0.31	0.995	0.999	1.000	0.024	0.134	0.357	0.623	0.832	0.945	0.987	0.998	1.000	
0.32	0.994	0.999	1.000	0.021	0.121	0.331	0.596	0.813	0.936	0.984	0.997	1.000	
0.33	0.992	0.999	1.000	0.018	0.108	0.307	0.568	0.794	0.927	0.981	0.997	1.000	
0.34	0.991	0.999	1.000	0.016	0.096	0.284	0.541	0.773	0.916	0.978	0.996	1.000	
0.35	0.989	0.999	1.000	0.013	0.086	0.262	0.514	0.751	0.905	0.974	0.995	0.999	1.000
0.36	0.987	0.998	1.000	0.012	0.076	0.241	0.487	0.729	0.893	0.969	0.994	0.999	1.000
0.37	0.984	0.998	1.000	0.010	0.068	0.221	0.460	0.706	0.879	0.964	0.993	0.999	1.000
0.38	0.982	0.997	1.000	0.008	0.060	0.202	0.434	0.682	0.865	0.959	0.991	0.999	1.000
0.39	0.978	0.997	1.000	0.007	0.053	0.184	0.408	0.658	0.850	0.952	0.990	0.999	1.000
0.40	0.975	0.996	1.000	0.006	0.046	0.167	0.382	0.633	0.834	0.945	0.988	0.998	1.000
0.41	0.971	0.995	1.000	0.005	0.041	0.152	0.358	0.608	0.817	0.937	0.985	0.998	1.000
0.42	0.967	0.995	1.000	0.004	0.036	0.137	0.333	0.582	0.798	0.929	0.983	0.997	1.000
0.43	0.962	0.994	0.999	0.004	0.031	0.124	0.310	0.556	0.779	0.919	0.980	0.997	1.000
0.44	0.956	0.992	0.999	0.003	0.027	0.111	0.288	0.530	0.759	0.909	0.976	0.996	1.000
0.45	0.950	0.991	0.999	0.003	0.023	0.100	0.266	0.504	0.738	0.898	0.973	0.995	1.000
0.46	0.944	0.989	0.999	0.002	0.020	0.089	0.245	0.478	0.717	0.886	0.968	0.995	1.000
0.47	0.936	0.988	0.999	0.002	0.017	0.079	0.226	0.453	0.694	0.873	0.963	0.994	0.999
0.48	0.928	0.985	0.999	0.001	0.015	0.070	0.207	0.427	0.671	0.859	0.958	0.992	0.999
0.49	0.920	0.983	0.998	0.001	0.013	0.062	0.189	0.402	0.647	0.844	0.952	0.991	0.999
0.50	0.910	0.980	0.998	0.001	0.011	0.055	0.172	0.377	0.623	0.828	0.945	0.989	0.999

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=11										n=12			
	k=0	1	2	3	4	5	6	7	8	9	10	k=0	1	2
0.01	0.895	0.995	1.000									0.886	0.994	1.000
0.02	0.801	0.980	0.999	1.000								0.785	0.977	0.998
0.03	0.715	0.959	0.996	1.000								0.694	0.951	0.995
0.04	0.638	0.931	0.992	0.999	1.000							0.613	0.919	0.989
0.05	0.569	0.898	0.985	0.998	1.000							0.540	0.882	0.980
0.06	0.506	0.862	0.975	0.997	1.000							0.476	0.840	0.968
0.07	0.450	0.823	0.963	0.995	0.999	1.000						0.419	0.797	0.953
0.08	0.400	0.782	0.948	0.991	0.999	1.000						0.368	0.751	0.935
0.09	0.354	0.740	0.931	0.987	0.998	1.000						0.322	0.705	0.913
0.10	0.314	0.697	0.910	0.981	0.997	1.000						0.282	0.659	0.889
0.11	0.278	0.655	0.888	0.974	0.996	1.000						0.247	0.613	0.862
0.12	0.245	0.613	0.863	0.966	0.994	0.999	1.000					0.216	0.569	0.833
0.13	0.216	0.571	0.837	0.956	0.991	0.999	1.000					0.188	0.525	0.802
0.14	0.190	0.531	0.809	0.944	0.988	0.998	1.000					0.164	0.483	0.770
0.15	0.167	0.492	0.779	0.931	0.984	0.997	1.000					0.142	0.443	0.736
0.16	0.147	0.455	0.748	0.915	0.979	0.996	1.000					0.123	0.405	0.701
0.17	0.129	0.419	0.716	0.899	0.973	0.995	0.999	1.000				0.107	0.370	0.666
0.18	0.113	0.385	0.684	0.880	0.967	0.993	0.999	1.000				0.092	0.336	0.630
0.19	0.098	0.353	0.651	0.860	0.959	0.991	0.999	1.000				0.080	0.304	0.594
0.20	0.086	0.322	0.617	0.839	0.950	0.988	0.998	1.000				0.069	0.275	0.558
0.21	0.075	0.294	0.584	0.816	0.939	0.985	0.997	1.000				0.059	0.248	0.523
0.22	0.065	0.267	0.551	0.792	0.928	0.981	0.996	1.000				0.051	0.222	0.489
0.23	0.056	0.242	0.519	0.767	0.915	0.977	0.995	0.999	1.000			0.043	0.199	0.455
0.24	0.049	0.219	0.487	0.740	0.901	0.972	0.994	0.999	1.000			0.037	0.178	0.422
0.25	0.042	0.197	0.455	0.713	0.885	0.966	0.992	0.999	1.000			0.032	0.158	0.391
0.26	0.036	0.177	0.425	0.685	0.869	0.959	0.990	0.998	1.000			0.027	0.141	0.360
0.27	0.031	0.159	0.395	0.657	0.851	0.951	0.988	0.998	1.000			0.023	0.125	0.331
0.28	0.027	0.142	0.366	0.628	0.832	0.942	0.985	0.997	1.000			0.019	0.110	0.304
0.29	0.023	0.127	0.339	0.599	0.811	0.933	0.982	0.997	1.000			0.016	0.097	0.278
0.30	0.020	0.113	0.313	0.570	0.790	0.922	0.978	0.996	0.999	1.000		0.014	0.085	0.253
0.31	0.017	0.100	0.288	0.540	0.767	0.910	0.974	0.995	0.999	1.000		0.012	0.074	0.230
0.32	0.014	0.089	0.264	0.511	0.744	0.897	0.969	0.993	0.999	1.000		0.010	0.065	0.208
0.33	0.012	0.078	0.241	0.482	0.719	0.883	0.963	0.992	0.999	1.000		0.008	0.057	0.188
0.34	0.010	0.069	0.220	0.454	0.694	0.868	0.957	0.990	0.998	1.000		0.007	0.049	0.169
0.35	0.009	0.061	0.200	0.426	0.668	0.851	0.950	0.988	0.998	1.000		0.006	0.042	0.151
0.36	0.007	0.053	0.181	0.398	0.642	0.834	0.942	0.985	0.997	1.000		0.005	0.037	0.135
0.37	0.006	0.046	0.164	0.371	0.615	0.815	0.933	0.982	0.997	1.000		0.004	0.031	0.120
0.38	0.005	0.040	0.148	0.345	0.588	0.796	0.923	0.979	0.996	1.000		0.003	0.027	0.107
0.39	0.004	0.035	0.133	0.320	0.560	0.775	0.912	0.975	0.995	0.999	1.000	0.003	0.023	0.095
0.40	0.004	0.030	0.119	0.296	0.533	0.753	0.901	0.971	0.994	0.999	1.000	0.002	0.020	0.083
0.41	0.003	0.026	0.106	0.273	0.505	0.731	0.888	0.966	0.993	0.999	1.000	0.002	0.017	0.073
0.42	0.002	0.022	0.094	0.251	0.478	0.708	0.874	0.960	0.991	0.999	1.000	0.001	0.014	0.064
0.43	0.002	0.019	0.084	0.230	0.451	0.683	0.859	0.954	0.990	0.999	1.000	0.001	0.012	0.056
0.44	0.002	0.016	0.074	0.210	0.424	0.659	0.843	0.947	0.988	0.998	1.000	0.001	0.010	0.049
0.45	0.001	0.014	0.065	0.191	0.397	0.633	0.826	0.939	0.985	0.998	1.000	0.001	0.008	0.042
0.46	0.001	0.012	0.057	0.173	0.371	0.607	0.808	0.930	0.982	0.997	1.000	0.001	0.007	0.036
0.47	0.001	0.010	0.050	0.157	0.346	0.581	0.789	0.921	0.979	0.997	1.000	0.000	0.006	0.031
0.48	0.001	0.008	0.044	0.141	0.321	0.554	0.769	0.910	0.976	0.996	1.000	0.000	0.005	0.027
0.49	0.001	0.007	0.038	0.127	0.297	0.527	0.748	0.899	0.972	0.995	1.000	0.000	0.004	0.023
0.50	0.000	0.006	0.033	0.113	0.274	0.500	0.726	0.887	0.967	0.994	1.000	0.000	0.003	0.019

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=12										n=13				
	k=3	4	5	6	7	8	9	10	11		k=0	1	2	3	4
0.01											0.878	0.993	1.000		
0.02	1.000										0.769	0.973	0.998	1.000	
0.03	1.000										0.673	0.944	0.994	1.000	
0.04	0.999	1.000									0.588	0.907	0.986	0.999	1.000
0.05	0.998	1.000									0.513	0.865	0.975	0.997	1.000
0.06	0.996	1.000									0.447	0.819	0.961	0.994	0.999
0.07	0.992	0.999	1.000								0.389	0.770	0.942	0.990	0.999
0.08	0.988	0.998	1.000								0.338	0.721	0.920	0.984	0.998
0.09	0.982	0.997	1.000								0.293	0.671	0.895	0.976	0.996
0.10	0.974	0.996	0.999	1.000							0.254	0.621	0.866	0.966	0.994
0.11	0.965	0.993	0.999	1.000							0.220	0.573	0.835	0.954	0.990
0.12	0.954	0.991	0.999	1.000							0.190	0.526	0.802	0.939	0.986
0.13	0.940	0.987	0.998	1.000							0.164	0.481	0.766	0.922	0.981
0.14	0.925	0.982	0.997	1.000							0.141	0.439	0.730	0.903	0.974
0.15	0.908	0.976	0.995	0.999	1.000						0.121	0.398	0.692	0.882	0.966
0.16	0.889	0.969	0.994	0.999	1.000						0.104	0.360	0.654	0.859	0.956
0.17	0.868	0.961	0.991	0.999	1.000						0.089	0.325	0.615	0.833	0.945
0.18	0.845	0.951	0.988	0.998	1.000						0.076	0.292	0.577	0.806	0.932
0.19	0.820	0.940	0.985	0.997	1.000						0.065	0.262	0.539	0.777	0.917
0.20	0.795	0.927	0.981	0.996	0.999	1.000					0.055	0.234	0.502	0.747	0.901
0.21	0.767	0.913	0.976	0.995	0.999	1.000					0.047	0.208	0.465	0.716	0.883
0.22	0.739	0.898	0.970	0.993	0.999	1.000					0.040	0.185	0.430	0.684	0.863
0.23	0.710	0.881	0.963	0.991	0.998	1.000					0.033	0.163	0.396	0.651	0.841
0.24	0.680	0.862	0.955	0.989	0.998	1.000					0.028	0.144	0.364	0.618	0.818
0.25	0.649	0.842	0.946	0.986	0.997	1.000					0.024	0.127	0.333	0.584	0.794
0.26	0.618	0.821	0.935	0.982	0.996	0.999	1.000				0.020	0.111	0.303	0.551	0.768
0.27	0.586	0.798	0.924	0.978	0.995	0.999	1.000				0.017	0.097	0.275	0.517	0.741
0.28	0.555	0.775	0.911	0.973	0.994	0.999	1.000				0.014	0.085	0.249	0.485	0.713
0.29	0.524	0.750	0.897	0.968	0.992	0.999	1.000				0.012	0.074	0.225	0.452	0.684
0.30	0.493	0.724	0.882	0.961	0.991	0.998	1.000				0.010	0.064	0.202	0.421	0.654
0.31	0.462	0.697	0.866	0.954	0.988	0.998	1.000				0.008	0.055	0.181	0.390	0.624
0.32	0.432	0.669	0.848	0.946	0.986	0.997	1.000				0.007	0.047	0.162	0.360	0.593
0.33	0.403	0.641	0.829	0.937	0.982	0.996	1.000				0.005	0.041	0.144	0.332	0.562
0.34	0.374	0.612	0.809	0.927	0.979	0.996	0.999	1.000			0.005	0.035	0.128	0.304	0.531
0.35	0.347	0.583	0.787	0.915	0.974	0.994	0.999	1.000			0.004	0.030	0.113	0.278	0.501
0.36	0.320	0.554	0.765	0.903	0.970	0.993	0.999	1.000			0.003	0.025	0.100	0.254	0.470
0.37	0.295	0.525	0.741	0.889	0.964	0.991	0.999	1.000			0.002	0.021	0.088	0.230	0.440
0.38	0.270	0.496	0.717	0.875	0.958	0.990	0.998	1.000			0.002	0.018	0.077	0.208	0.410
0.39	0.247	0.467	0.691	0.859	0.951	0.987	0.998	1.000			0.002	0.015	0.067	0.188	0.381
0.40	0.225	0.438	0.665	0.842	0.943	0.985	0.997	1.000			0.001	0.013	0.058	0.169	0.353
0.41	0.205	0.410	0.638	0.824	0.934	0.982	0.997	1.000			0.001	0.011	0.050	0.151	0.326
0.42	0.185	0.383	0.611	0.804	0.924	0.978	0.996	0.999	1.000		0.001	0.009	0.043	0.134	0.300
0.43	0.167	0.356	0.583	0.784	0.913	0.974	0.995	0.999	1.000		0.001	0.007	0.037	0.119	0.275
0.44	0.150	0.330	0.555	0.762	0.901	0.970	0.994	0.999	1.000		0.001	0.006	0.032	0.106	0.251
0.45	0.134	0.304	0.527	0.739	0.888	0.964	0.992	0.999	1.000		0.000	0.005	0.027	0.093	0.228
0.46	0.120	0.280	0.499	0.716	0.874	0.959	0.990	0.999	1.000		0.000	0.004	0.023	0.081	0.206
0.47	0.107	0.257	0.470	0.691	0.859	0.952	0.989	0.998	1.000		0.000	0.003	0.019	0.071	0.186
0.48	0.094	0.235	0.442	0.666	0.842	0.944	0.986	0.998	1.000		0.000	0.003	0.016	0.062	0.167
0.49	0.083	0.214	0.415	0.640	0.825	0.936	0.984	0.997	1.000		0.000	0.002	0.014	0.054	0.150
0.50	0.073	0.194	0.387	0.613	0.806	0.927	0.981	0.997	1.000		0.000	0.002	0.011	0.046	0.133

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=13								n=14					
	k=5	6	7	8	9	10	11	12	k=0	1	2	3	4	5
0.01									0.869	0.992	1.000			
0.02									0.754	0.969	0.998	1.000		
0.03									0.653	0.936	0.992	0.999	1.000	
0.04									0.565	0.894	0.983	0.998	1.000	
0.05									0.488	0.847	0.970	0.996	1.000	
0.06	1.000								0.421	0.796	0.952	0.992	0.999	1.000
0.07	1.000								0.362	0.744	0.930	0.986	0.998	1.000
0.08	1.000								0.311	0.690	0.904	0.979	0.996	1.000
0.09	0.999	1.000							0.267	0.637	0.874	0.969	0.994	0.999
0.10	0.999	1.000							0.229	0.585	0.842	0.956	0.991	0.999
0.11	0.998	1.000							0.196	0.534	0.806	0.941	0.986	0.998
0.12	0.998	1.000							0.167	0.486	0.768	0.923	0.980	0.996
0.13	0.996	0.999	1.000						0.142	0.440	0.729	0.902	0.973	0.994
0.14	0.995	0.999	1.000						0.121	0.397	0.689	0.879	0.964	0.992
0.15	0.992	0.999	1.000						0.103	0.357	0.648	0.853	0.953	0.988
0.16	0.990	0.998	1.000						0.087	0.319	0.607	0.826	0.941	0.984
0.17	0.986	0.997	1.000						0.074	0.285	0.566	0.796	0.926	0.979
0.18	0.982	0.996	0.999	1.000					0.062	0.253	0.526	0.765	0.909	0.973
0.19	0.976	0.995	0.999	1.000					0.052	0.224	0.486	0.732	0.891	0.965
0.20	0.970	0.993	0.999	1.000					0.044	0.198	0.448	0.698	0.870	0.956
0.21	0.962	0.991	0.998	1.000					0.037	0.174	0.411	0.663	0.848	0.946
0.22	0.954	0.988	0.998	1.000					0.031	0.153	0.376	0.628	0.824	0.934
0.23	0.944	0.985	0.997	0.999	1.000				0.026	0.133	0.343	0.592	0.798	0.920
0.24	0.932	0.981	0.996	0.999	1.000				0.021	0.116	0.311	0.557	0.770	0.905
0.25	0.920	0.976	0.994	0.999	1.000				0.018	0.101	0.281	0.521	0.742	0.888
0.26	0.906	0.970	0.993	0.999	1.000				0.015	0.087	0.253	0.486	0.712	0.870
0.27	0.890	0.963	0.991	0.998	1.000				0.012	0.075	0.227	0.452	0.681	0.850
0.28	0.873	0.956	0.988	0.998	1.000				0.010	0.065	0.203	0.419	0.649	0.828
0.29	0.855	0.947	0.985	0.997	1.000				0.008	0.056	0.181	0.386	0.617	0.805
0.30	0.835	0.938	0.982	0.996	0.999	1.000			0.007	0.047	0.161	0.355	0.584	0.781
0.31	0.813	0.927	0.978	0.995	0.999	1.000			0.006	0.040	0.142	0.325	0.551	0.755
0.32	0.791	0.915	0.973	0.993	0.999	1.000			0.005	0.034	0.125	0.297	0.519	0.728
0.33	0.767	0.901	0.967	0.992	0.998	1.000			0.004	0.029	0.110	0.270	0.486	0.699
0.34	0.742	0.887	0.961	0.990	0.998	1.000			0.003	0.024	0.096	0.244	0.454	0.670
0.35	0.716	0.871	0.954	0.987	0.997	1.000			0.002	0.021	0.084	0.220	0.423	0.641
0.36	0.689	0.853	0.946	0.985	0.997	1.000			0.002	0.017	0.073	0.198	0.392	0.610
0.37	0.661	0.835	0.936	0.981	0.996	0.999	1.000		0.002	0.014	0.063	0.177	0.362	0.579
0.38	0.633	0.815	0.926	0.977	0.995	0.999	1.000		0.001	0.012	0.054	0.158	0.333	0.548
0.39	0.604	0.794	0.915	0.973	0.994	0.999	1.000		0.001	0.010	0.047	0.141	0.306	0.517
0.40	0.574	0.771	0.902	0.968	0.992	0.999	1.000		0.001	0.008	0.040	0.124	0.279	0.486
0.41	0.545	0.748	0.889	0.962	0.990	0.998	1.000		0.001	0.007	0.034	0.110	0.254	0.455
0.42	0.515	0.723	0.874	0.955	0.988	0.998	1.000		0.000	0.005	0.029	0.096	0.230	0.425
0.43	0.485	0.697	0.857	0.948	0.986	0.997	1.000		0.000	0.004	0.024	0.084	0.208	0.395
0.44	0.456	0.671	0.840	0.940	0.983	0.997	1.000		0.000	0.004	0.020	0.073	0.187	0.366
0.45	0.427	0.644	0.821	0.930	0.980	0.996	0.999	1.000	0.000	0.003	0.017	0.063	0.167	0.337
0.46	0.398	0.616	0.801	0.920	0.976	0.995	0.999	1.000	0.000	0.002	0.014	0.054	0.149	0.310
0.47	0.370	0.587	0.780	0.908	0.971	0.994	0.999	1.000	0.000	0.002	0.012	0.047	0.132	0.284
0.48	0.343	0.558	0.758	0.896	0.966	0.992	0.999	1.000	0.000	0.001	0.010	0.040	0.117	0.259
0.49	0.316	0.529	0.734	0.882	0.960	0.991	0.999	1.000	0.000	0.001	0.008	0.034	0.103	0.235
0.50	0.291	0.500	0.709	0.867	0.954	0.989	0.998	1.000	0.000	0.001	0.006	0.029	0.090	0.212

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=14								n=15					
	k=6	7	8	9	10	11	12	13	k=0	1	2	3	4	5
0.01									0.860	0.990	1.000			
0.02									0.739	0.965	0.997	1.000		
0.03									0.633	0.927	0.991	0.999	1.000	
0.04									0.542	0.881	0.980	0.998	1.000	
0.05									0.463	0.829	0.964	0.995	0.999	1.000
0.06									0.395	0.774	0.943	0.990	0.999	1.000
0.07									0.337	0.717	0.917	0.982	0.997	1.000
0.08									0.286	0.660	0.887	0.973	0.995	0.999
0.09	1.000								0.243	0.604	0.853	0.960	0.992	0.999
0.10	1.000								0.206	0.549	0.816	0.944	0.987	0.998
0.11	1.000								0.174	0.497	0.776	0.926	0.981	0.996
0.12	0.999	1.000							0.147	0.448	0.735	0.904	0.974	0.994
0.13	0.999	1.000							0.124	0.401	0.692	0.880	0.964	0.992
0.14	0.999	1.000							0.104	0.358	0.648	0.852	0.952	0.988
0.15	0.998	1.000							0.087	0.319	0.604	0.823	0.938	0.983
0.16	0.997	0.999	1.000						0.073	0.282	0.561	0.791	0.922	0.977
0.17	0.995	0.999	1.000						0.061	0.249	0.518	0.757	0.904	0.970
0.18	0.994	0.999	1.000						0.051	0.219	0.477	0.722	0.883	0.961
0.19	0.991	0.998	1.000						0.042	0.192	0.436	0.685	0.861	0.951
0.20	0.988	0.998	1.000						0.035	0.167	0.398	0.648	0.836	0.939
0.21	0.985	0.997	0.999	1.000					0.029	0.145	0.361	0.610	0.809	0.925
0.22	0.980	0.995	0.999	1.000					0.024	0.126	0.327	0.573	0.781	0.910
0.23	0.975	0.994	0.999	1.000					0.020	0.109	0.294	0.535	0.750	0.892
0.24	0.969	0.992	0.998	1.000					0.016	0.094	0.264	0.498	0.719	0.873
0.25	0.962	0.990	0.998	1.000					0.013	0.080	0.236	0.461	0.686	0.852
0.26	0.953	0.987	0.997	1.000					0.011	0.069	0.210	0.426	0.653	0.829
0.27	0.944	0.983	0.996	0.999	1.000				0.009	0.058	0.186	0.391	0.619	0.804
0.28	0.933	0.979	0.995	0.999	1.000				0.007	0.050	0.165	0.358	0.585	0.778
0.29	0.920	0.974	0.994	0.999	1.000				0.006	0.042	0.145	0.327	0.550	0.750
0.30	0.907	0.969	0.992	0.998	1.000				0.005	0.035	0.127	0.297	0.515	0.722
0.31	0.892	0.962	0.990	0.998	1.000				0.004	0.030	0.111	0.269	0.481	0.692
0.32	0.875	0.954	0.987	0.997	1.000				0.003	0.025	0.096	0.242	0.448	0.661
0.33	0.857	0.946	0.984	0.996	0.999	1.000			0.002	0.021	0.083	0.217	0.415	0.629
0.34	0.837	0.936	0.980	0.995	0.999	1.000			0.002	0.017	0.072	0.194	0.383	0.597
0.35	0.816	0.925	0.976	0.994	0.999	1.000			0.002	0.014	0.062	0.173	0.352	0.564
0.36	0.794	0.912	0.971	0.992	0.999	1.000			0.001	0.012	0.053	0.153	0.322	0.532
0.37	0.770	0.899	0.965	0.991	0.998	1.000			0.001	0.010	0.045	0.135	0.294	0.499
0.38	0.746	0.884	0.958	0.988	0.998	1.000			0.001	0.008	0.038	0.119	0.267	0.467
0.39	0.720	0.868	0.950	0.986	0.997	1.000			0.001	0.006	0.032	0.104	0.241	0.435
0.40	0.692	0.850	0.942	0.982	0.996	0.999	1.000		0.000	0.005	0.027	0.091	0.217	0.403
0.41	0.664	0.831	0.932	0.979	0.995	0.999	1.000		0.000	0.004	0.023	0.078	0.195	0.373
0.42	0.636	0.810	0.921	0.975	0.994	0.999	1.000		0.000	0.003	0.019	0.068	0.174	0.343
0.43	0.606	0.789	0.909	0.970	0.992	0.999	1.000		0.000	0.003	0.016	0.058	0.155	0.314
0.44	0.576	0.766	0.896	0.964	0.991	0.998	1.000		0.000	0.002	0.013	0.050	0.137	0.287
0.45	0.546	0.741	0.881	0.957	0.989	0.998	1.000		0.000	0.002	0.011	0.042	0.120	0.261
0.46	0.516	0.716	0.865	0.950	0.986	0.997	1.000		0.000	0.001	0.009	0.036	0.106	0.236
0.47	0.485	0.689	0.848	0.942	0.983	0.997	1.000		0.000	0.001	0.007	0.030	0.092	0.212
0.48	0.455	0.662	0.829	0.932	0.980	0.996	0.999	1.000	0.000	0.001	0.006	0.025	0.080	0.190
0.49	0.425	0.634	0.809	0.922	0.976	0.995	0.999	1.000	0.000	0.001	0.005	0.021	0.069	0.170
0.50	0.395	0.605	0.788	0.910	0.971	0.994	0.999	1.000	0.000	0.000	0.004	0.018	0.059	0.151

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=15								n=16					
	k=6	7	8	9	10	11	12	13	k=0	1	2	3	4	5
0.01									0.851	0.989	0.999	1.000		
0.02									0.724	0.960	0.996	1.000		
0.03									0.614	0.918	0.989	0.999	1.000	
0.04									0.520	0.867	0.976	0.997	1.000	
0.05									0.440	0.811	0.957	0.993	0.999	1.000
0.06									0.372	0.751	0.933	0.987	0.998	1.000
0.07									0.313	0.690	0.903	0.978	0.996	0.999
0.08	1.000								0.263	0.630	0.869	0.966	0.993	0.999
0.09	1.000								0.221	0.571	0.831	0.950	0.989	0.998
0.10	1.000								0.185	0.515	0.789	0.932	0.983	0.997
0.11	0.999	1.000							0.155	0.461	0.745	0.909	0.975	0.995
0.12	0.999	1.000							0.129	0.412	0.700	0.884	0.965	0.992
0.13	0.998	1.000							0.108	0.365	0.654	0.855	0.953	0.988
0.14	0.998	1.000							0.090	0.323	0.607	0.824	0.938	0.983
0.15	0.996	0.999	1.000						0.074	0.284	0.561	0.790	0.921	0.976
0.16	0.995	0.999	1.000						0.061	0.249	0.516	0.754	0.901	0.968
0.17	0.993	0.999	1.000						0.051	0.217	0.472	0.716	0.879	0.959
0.18	0.990	0.998	1.000						0.042	0.189	0.430	0.678	0.854	0.947
0.19	0.986	0.997	0.999	1.000					0.034	0.163	0.390	0.638	0.827	0.934
0.20	0.982	0.996	0.999	1.000					0.028	0.141	0.352	0.598	0.798	0.918
0.21	0.977	0.994	0.999	1.000					0.023	0.121	0.316	0.558	0.767	0.901
0.22	0.970	0.992	0.998	1.000					0.019	0.103	0.283	0.519	0.735	0.881
0.23	0.963	0.990	0.998	1.000					0.015	0.088	0.252	0.480	0.701	0.860
0.24	0.954	0.987	0.997	0.999	1.000				0.012	0.075	0.223	0.442	0.666	0.836
0.25	0.943	0.983	0.996	0.999	1.000				0.010	0.063	0.197	0.405	0.630	0.810
0.26	0.932	0.978	0.994	0.999	1.000				0.008	0.054	0.173	0.370	0.594	0.783
0.27	0.918	0.973	0.993	0.998	1.000				0.007	0.045	0.152	0.336	0.558	0.754
0.28	0.903	0.966	0.991	0.998	1.000				0.005	0.038	0.132	0.304	0.521	0.724
0.29	0.887	0.959	0.988	0.997	1.000				0.004	0.031	0.115	0.274	0.485	0.692
0.30	0.869	0.950	0.985	0.996	0.999	1.000			0.003	0.026	0.099	0.246	0.450	0.660
0.31	0.849	0.940	0.981	0.995	0.999	1.000			0.003	0.022	0.086	0.220	0.415	0.626
0.32	0.828	0.929	0.976	0.994	0.999	1.000			0.002	0.018	0.073	0.195	0.382	0.593
0.33	0.805	0.916	0.971	0.992	0.998	1.000			0.002	0.015	0.063	0.173	0.350	0.558
0.34	0.781	0.902	0.965	0.990	0.998	1.000			0.001	0.012	0.053	0.153	0.319	0.524
0.35	0.755	0.887	0.958	0.988	0.997	1.000			0.001	0.010	0.045	0.134	0.289	0.490
0.36	0.728	0.870	0.950	0.985	0.996	0.999	1.000		0.001	0.008	0.038	0.117	0.261	0.456
0.37	0.700	0.851	0.940	0.981	0.995	0.999	1.000		0.001	0.006	0.032	0.102	0.235	0.423
0.38	0.671	0.831	0.930	0.977	0.994	0.999	1.000		0.000	0.005	0.027	0.088	0.211	0.391
0.39	0.641	0.810	0.918	0.972	0.993	0.999	1.000		0.000	0.004	0.022	0.076	0.188	0.359
0.40	0.610	0.787	0.905	0.966	0.991	0.998	1.000		0.000	0.003	0.018	0.065	0.167	0.329
0.41	0.579	0.763	0.890	0.960	0.988	0.998	1.000		0.000	0.003	0.015	0.056	0.147	0.300
0.42	0.547	0.737	0.875	0.952	0.986	0.997	1.000		0.000	0.002	0.012	0.047	0.129	0.272
0.43	0.515	0.710	0.857	0.944	0.983	0.996	0.999	1.000	0.000	0.002	0.010	0.040	0.113	0.246
0.44	0.484	0.682	0.838	0.934	0.979	0.995	0.999	1.000	0.000	0.001	0.008	0.034	0.098	0.221
0.45	0.452	0.654	0.818	0.923	0.975	0.994	0.999	1.000	0.000	0.001	0.007	0.028	0.085	0.198
0.46	0.421	0.624	0.797	0.911	0.969	0.992	0.999	1.000	0.000	0.001	0.005	0.023	0.074	0.176
0.47	0.391	0.593	0.773	0.898	0.964	0.990	0.998	1.000	0.000	0.001	0.004	0.019	0.063	0.156
0.48	0.361	0.563	0.749	0.883	0.957	0.988	0.998	1.000	0.000	0.000	0.003	0.016	0.054	0.137
0.49	0.332	0.531	0.723	0.867	0.949	0.985	0.997	1.000	0.000	0.000	0.003	0.013	0.046	0.120
0.50	0.304	0.500	0.696	0.849	0.941	0.982	0.996	1.000	0.000	0.000	0.002	0.011	0.038	0.105

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=16										n=17				
	k=6	7	8	9	10	11	12	13	14	k=0	1	2	3	4	
0.01											0.843	0.988	0.999	1.000	
0.02											0.709	0.955	0.996	1.000	
0.03											0.596	0.909	0.987	0.999	1.000
0.04											0.500	0.853	0.971	0.996	1.000
0.05											0.418	0.792	0.950	0.991	0.999
0.06											0.349	0.728	0.922	0.984	0.997
0.07	1.000										0.291	0.664	0.888	0.973	0.995
0.08	1.000										0.242	0.601	0.850	0.958	0.991
0.09	1.000										0.201	0.540	0.807	0.940	0.985
0.10	0.999	1.000									0.167	0.482	0.762	0.917	0.978
0.11	0.999	1.000									0.138	0.428	0.714	0.891	0.968
0.12	0.998	1.000									0.114	0.378	0.665	0.862	0.955
0.13	0.998	1.000									0.094	0.332	0.616	0.829	0.940
0.14	0.996	0.999	1.000								0.077	0.290	0.568	0.793	0.922
0.15	0.994	0.999	1.000								0.063	0.252	0.520	0.756	0.901
0.16	0.992	0.998	1.000								0.052	0.219	0.473	0.716	0.878
0.17	0.989	0.998	1.000								0.042	0.189	0.429	0.675	0.851
0.18	0.985	0.996	0.999	1.000							0.034	0.162	0.387	0.633	0.822
0.19	0.980	0.995	0.999	1.000							0.028	0.139	0.347	0.591	0.791
0.20	0.973	0.993	0.999	1.000							0.023	0.118	0.310	0.549	0.758
0.21	0.966	0.990	0.998	1.000							0.018	0.100	0.275	0.507	0.723
0.22	0.957	0.987	0.997	0.999	1.000						0.015	0.085	0.243	0.467	0.687
0.23	0.946	0.983	0.996	0.999	1.000						0.012	0.071	0.214	0.427	0.650
0.24	0.934	0.979	0.994	0.999	1.000						0.009	0.060	0.188	0.389	0.612
0.25	0.920	0.973	0.993	0.998	1.000						0.008	0.050	0.164	0.353	0.574
0.26	0.905	0.966	0.990	0.998	1.000						0.006	0.042	0.142	0.319	0.536
0.27	0.888	0.958	0.987	0.997	0.999	1.000					0.005	0.035	0.123	0.286	0.498
0.28	0.868	0.949	0.984	0.996	0.999	1.000					0.004	0.029	0.106	0.256	0.460
0.29	0.847	0.938	0.979	0.995	0.999	1.000					0.003	0.024	0.091	0.228	0.424
0.30	0.825	0.926	0.974	0.993	0.998	1.000					0.002	0.019	0.077	0.202	0.389
0.31	0.800	0.912	0.968	0.991	0.998	1.000					0.002	0.016	0.066	0.178	0.355
0.32	0.774	0.897	0.961	0.988	0.997	0.999	1.000				0.001	0.013	0.056	0.156	0.322
0.33	0.747	0.880	0.953	0.985	0.996	0.999	1.000				0.001	0.010	0.047	0.137	0.291
0.34	0.718	0.861	0.944	0.982	0.995	0.999	1.000				0.001	0.008	0.039	0.119	0.262
0.35	0.688	0.841	0.933	0.977	0.994	0.999	1.000				0.001	0.007	0.033	0.103	0.235
0.36	0.657	0.819	0.921	0.972	0.992	0.998	1.000				0.001	0.005	0.027	0.089	0.209
0.37	0.625	0.795	0.907	0.966	0.990	0.998	1.000				0.000	0.004	0.022	0.076	0.186
0.38	0.593	0.770	0.892	0.959	0.987	0.997	0.999	1.000			0.000	0.003	0.018	0.065	0.164
0.39	0.560	0.744	0.876	0.951	0.984	0.996	0.999	1.000			0.000	0.003	0.015	0.055	0.144
0.40	0.527	0.716	0.858	0.942	0.981	0.995	0.999	1.000			0.000	0.002	0.012	0.046	0.126
0.41	0.494	0.687	0.838	0.931	0.977	0.994	0.999	1.000			0.000	0.002	0.010	0.039	0.110
0.42	0.461	0.657	0.817	0.920	0.972	0.992	0.998	1.000			0.000	0.001	0.008	0.033	0.095
0.43	0.429	0.626	0.794	0.906	0.966	0.990	0.998	1.000			0.000	0.001	0.006	0.027	0.082
0.44	0.397	0.595	0.770	0.892	0.959	0.988	0.997	1.000			0.000	0.001	0.005	0.022	0.070
0.45	0.366	0.563	0.744	0.876	0.951	0.985	0.997	0.999	1.000		0.000	0.001	0.004	0.018	0.060
0.46	0.336	0.531	0.717	0.858	0.943	0.982	0.996	0.999	1.000		0.000	0.000	0.003	0.015	0.050
0.47	0.307	0.498	0.689	0.839	0.933	0.978	0.994	0.999	1.000		0.000	0.000	0.003	0.012	0.043
0.48	0.279	0.466	0.660	0.819	0.921	0.973	0.993	0.999	1.000		0.000	0.000	0.002	0.010	0.036
0.49	0.252	0.434	0.629	0.796	0.909	0.968	0.991	0.998	1.000		0.000	0.000	0.002	0.008	0.030
0.50	0.227	0.402	0.598	0.773	0.895	0.962	0.989	0.998	1.000		0.000	0.000	0.001	0.006	0.025

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=17											n=18		
	k=5	6	7	8	9	10	11	12	13	14	15	k=0	1	2
0.01												0.835	0.986	0.999
0.02												0.695	0.950	0.995
0.03												0.578	0.900	0.984
0.04												0.480	0.839	0.967
0.05	1.000											0.397	0.774	0.942
0.06	1.000											0.328	0.706	0.910
0.07	0.999	1.000										0.271	0.638	0.873
0.08	0.999	1.000										0.223	0.572	0.830
0.09	0.997	1.000										0.183	0.509	0.783
0.10	0.995	0.999	1.000									0.150	0.450	0.734
0.11	0.993	0.999	1.000									0.123	0.396	0.683
0.12	0.989	0.998	1.000									0.100	0.346	0.631
0.13	0.983	0.996	0.999	1.000								0.082	0.301	0.579
0.14	0.977	0.994	0.999	1.000								0.066	0.260	0.529
0.15	0.968	0.992	0.998	1.000								0.054	0.224	0.480
0.16	0.958	0.988	0.997	1.000								0.043	0.192	0.433
0.17	0.945	0.984	0.996	0.999	1.000							0.035	0.164	0.388
0.18	0.931	0.978	0.994	0.999	1.000							0.028	0.139	0.346
0.19	0.914	0.971	0.992	0.998	1.000							0.023	0.118	0.307
0.20	0.894	0.962	0.989	0.997	1.000							0.018	0.099	0.271
0.21	0.873	0.952	0.985	0.996	0.999	1.000						0.014	0.083	0.238
0.22	0.849	0.940	0.981	0.995	0.999	1.000						0.011	0.069	0.208
0.23	0.823	0.926	0.975	0.993	0.998	1.000						0.009	0.058	0.181
0.24	0.795	0.911	0.968	0.991	0.998	1.000						0.007	0.048	0.157
0.25	0.765	0.893	0.960	0.988	0.997	0.999	1.000					0.006	0.039	0.135
0.26	0.734	0.873	0.950	0.984	0.996	0.999	1.000					0.004	0.032	0.116
0.27	0.701	0.852	0.939	0.979	0.994	0.999	1.000					0.003	0.027	0.099
0.28	0.667	0.828	0.926	0.974	0.992	0.998	1.000					0.003	0.022	0.084
0.29	0.632	0.802	0.912	0.967	0.990	0.998	1.000					0.002	0.018	0.071
0.30	0.597	0.775	0.895	0.960	0.987	0.997	0.999	1.000				0.002	0.014	0.060
0.31	0.561	0.746	0.877	0.951	0.984	0.996	0.999	1.000				0.001	0.011	0.050
0.32	0.525	0.716	0.857	0.941	0.980	0.994	0.999	1.000				0.001	0.009	0.042
0.33	0.489	0.685	0.836	0.929	0.975	0.993	0.998	1.000				0.001	0.007	0.035
0.34	0.454	0.652	0.812	0.916	0.969	0.991	0.998	1.000				0.001	0.006	0.029
0.35	0.420	0.619	0.787	0.901	0.962	0.988	0.997	0.999				0.000	0.005	0.024
0.36	0.386	0.585	0.761	0.884	0.954	0.985	0.996	0.999				0.000	0.004	0.019
0.37	0.353	0.551	0.732	0.866	0.944	0.981	0.995	0.999				0.000	0.003	0.016
0.38	0.322	0.516	0.703	0.846	0.934	0.977	0.993	0.999				0.000	0.002	0.013
0.39	0.292	0.482	0.672	0.824	0.922	0.971	0.992	0.998				0.000	0.002	0.010
0.40	0.264	0.448	0.641	0.801	0.908	0.965	0.989	0.997				0.000	0.001	0.008
0.41	0.237	0.414	0.608	0.776	0.893	0.958	0.987	0.997	0.999	1.000		0.000	0.001	0.007
0.42	0.212	0.382	0.575	0.750	0.876	0.950	0.984	0.996	0.999	1.000		0.000	0.001	0.005
0.43	0.189	0.350	0.541	0.722	0.858	0.940	0.980	0.995	0.999	1.000		0.000	0.001	0.004
0.44	0.167	0.320	0.508	0.693	0.838	0.930	0.975	0.993	0.999	1.000		0.000	0.000	0.003
0.45	0.147	0.290	0.474	0.663	0.817	0.917	0.970	0.991	0.998	1.000		0.000	0.000	0.003
0.46	0.129	0.262	0.441	0.631	0.793	0.904	0.964	0.989	0.998	1.000		0.000	0.000	0.002
0.47	0.112	0.236	0.408	0.599	0.769	0.889	0.957	0.987	0.997	0.999	1.000	0.000	0.000	0.001
0.48	0.097	0.211	0.376	0.566	0.742	0.872	0.948	0.984	0.996	0.999	1.000	0.000	0.000	0.001
0.49	0.084	0.188	0.345	0.533	0.715	0.854	0.939	0.980	0.995	0.999	1.000	0.000	0.000	0.001
0.50	0.072	0.166	0.315	0.500	0.685	0.834	0.928	0.975	0.994	0.999	1.000	0.000	0.000	0.001

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

n=18															
p	k=3	4	5	6	7	8	9	10	11	12	13	14	15	16	
0.01	1.000														
0.02	1.000														
0.03	0.998	1.000													
0.04	0.995	0.999	1.000												
0.05	0.989	0.998	1.000												
0.06	0.980	0.997	1.000												
0.07	0.967	0.993	0.999	1.000											
0.08	0.949	0.988	0.998	1.000											
0.09	0.928	0.981	0.996	0.999	1.000										
0.10	0.902	0.972	0.994	0.999	1.000										
0.11	0.872	0.959	0.990	0.998	1.000										
0.12	0.838	0.944	0.985	0.997	0.999	1.000									
0.13	0.801	0.926	0.978	0.995	0.999	1.000									
0.14	0.762	0.904	0.969	0.992	0.998	1.000									
0.15	0.720	0.879	0.958	0.988	0.997	0.999	1.000								
0.16	0.677	0.852	0.945	0.983	0.996	0.999	1.000								
0.17	0.633	0.821	0.929	0.977	0.994	0.999	1.000								
0.18	0.589	0.788	0.911	0.969	0.991	0.998	1.000								
0.19	0.545	0.753	0.890	0.960	0.988	0.997	0.999	1.000							
0.20	0.501	0.716	0.867	0.949	0.984	0.996	0.999	1.000							
0.21	0.459	0.678	0.841	0.935	0.978	0.994	0.999	1.000							
0.22	0.418	0.639	0.813	0.920	0.972	0.992	0.998	1.000							
0.23	0.378	0.599	0.783	0.903	0.964	0.989	0.997	0.999	1.000						
0.24	0.341	0.559	0.751	0.883	0.954	0.985	0.996	0.999	1.000						
0.25	0.306	0.519	0.717	0.861	0.943	0.981	0.995	0.999	1.000						
0.26	0.273	0.479	0.682	0.837	0.930	0.975	0.993	0.998	1.000						
0.27	0.242	0.441	0.646	0.811	0.915	0.968	0.990	0.998	0.999	1.000					
0.28	0.214	0.403	0.609	0.783	0.899	0.961	0.987	0.997	0.999	1.000					
0.29	0.188	0.367	0.572	0.753	0.880	0.951	0.984	0.995	0.999	1.000					
0.30	0.165	0.333	0.534	0.722	0.859	0.940	0.979	0.994	0.999	1.000					
0.31	0.143	0.300	0.497	0.689	0.837	0.928	0.974	0.992	0.998	1.000					
0.32	0.124	0.269	0.460	0.655	0.812	0.914	0.967	0.990	0.997	0.999	1.000				
0.33	0.107	0.240	0.424	0.620	0.786	0.898	0.959	0.987	0.996	0.999	1.000				
0.34	0.092	0.213	0.389	0.585	0.758	0.880	0.951	0.983	0.995	0.999	1.000				
0.35	0.078	0.189	0.355	0.549	0.728	0.861	0.940	0.979	0.994	0.999	1.000				
0.36	0.066	0.166	0.322	0.513	0.697	0.840	0.929	0.974	0.992	0.998	1.000				
0.37	0.056	0.145	0.291	0.478	0.665	0.816	0.915	0.967	0.990	0.997	0.999	1.000			
0.38	0.047	0.126	0.262	0.442	0.632	0.792	0.900	0.960	0.987	0.997	0.999	1.000			
0.39	0.039	0.109	0.235	0.408	0.598	0.765	0.884	0.952	0.984	0.996	0.999	1.000			
0.40	0.033	0.094	0.209	0.374	0.563	0.737	0.865	0.942	0.980	0.994	0.999	1.000			
0.41	0.027	0.081	0.185	0.342	0.529	0.707	0.845	0.931	0.975	0.993	0.998	1.000			
0.42	0.022	0.069	0.163	0.311	0.494	0.676	0.823	0.919	0.969	0.991	0.998	1.000			
0.43	0.018	0.058	0.143	0.281	0.459	0.644	0.800	0.905	0.963	0.988	0.997	0.999	1.000		
0.44	0.015	0.049	0.124	0.252	0.425	0.611	0.774	0.889	0.955	0.985	0.996	0.999	1.000		
0.45	0.012	0.041	0.108	0.226	0.391	0.578	0.747	0.872	0.946	0.982	0.995	0.999	1.000		
0.46	0.010	0.034	0.093	0.201	0.359	0.544	0.719	0.853	0.936	0.977	0.994	0.999	1.000		
0.47	0.008	0.028	0.079	0.178	0.327	0.509	0.689	0.832	0.925	0.972	0.992	0.998	1.000		
0.48	0.006	0.023	0.068	0.156	0.297	0.475	0.658	0.810	0.912	0.967	0.990	0.998	1.000		
0.49	0.005	0.019	0.057	0.137	0.268	0.441	0.626	0.786	0.897	0.960	0.988	0.997	1.000		
0.50	0.004	0.015	0.048	0.119	0.240	0.407	0.593	0.760	0.881	0.952	0.985	0.996	0.999	1.000	

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

n=19														
p	k=0	1	2	3	4	5	6	7	8	9	10	11	12	13
0.01	0.826	0.985	0.999	1.000										
0.02	0.681	0.945	0.994	1.000										
0.03	0.561	0.890	0.982	0.998	1.000									
0.04	0.460	0.825	0.962	0.994	0.999	1.000								
0.05	0.377	0.755	0.933	0.987	0.998	1.000								
0.06	0.309	0.683	0.898	0.976	0.996	0.999	1.000							
0.07	0.252	0.612	0.856	0.960	0.991	0.999	1.000							
0.08	0.205	0.544	0.809	0.940	0.985	0.997	1.000							
0.09	0.167	0.480	0.759	0.915	0.977	0.995	0.999	1.000						
0.10	0.135	0.420	0.705	0.885	0.965	0.991	0.998	1.000						
0.11	0.109	0.366	0.651	0.851	0.950	0.986	0.997	0.999	1.000					
0.12	0.088	0.317	0.597	0.813	0.931	0.980	0.995	0.999	1.000					
0.13	0.071	0.272	0.543	0.772	0.910	0.971	0.992	0.998	1.000					
0.14	0.057	0.233	0.491	0.729	0.884	0.960	0.989	0.997	0.999	1.000				
0.15	0.046	0.198	0.441	0.684	0.856	0.946	0.984	0.996	0.999	1.000				
0.16	0.036	0.168	0.394	0.638	0.824	0.930	0.977	0.994	0.999	1.000				
0.17	0.029	0.142	0.350	0.591	0.789	0.911	0.969	0.991	0.998	1.000				
0.18	0.023	0.119	0.309	0.545	0.752	0.889	0.959	0.987	0.997	0.999	1.000			
0.19	0.018	0.100	0.271	0.499	0.714	0.864	0.947	0.983	0.995	0.999	1.000			
0.20	0.014	0.083	0.237	0.455	0.673	0.837	0.932	0.977	0.993	0.998	1.000			
0.21	0.011	0.069	0.206	0.412	0.632	0.807	0.916	0.969	0.991	0.998	1.000			
0.22	0.009	0.057	0.178	0.372	0.590	0.775	0.897	0.960	0.987	0.997	0.999	1.000		
0.23	0.007	0.047	0.153	0.333	0.548	0.741	0.875	0.950	0.983	0.995	0.999	1.000		
0.24	0.005	0.038	0.131	0.297	0.506	0.705	0.851	0.937	0.978	0.993	0.998	1.000		
0.25	0.004	0.031	0.111	0.263	0.465	0.668	0.825	0.923	0.971	0.991	0.998	1.000		
0.26	0.003	0.025	0.094	0.232	0.426	0.630	0.797	0.906	0.963	0.988	0.997	0.999	1.000	
0.27	0.003	0.020	0.079	0.204	0.387	0.591	0.766	0.887	0.954	0.984	0.996	0.999	1.000	
0.28	0.002	0.016	0.067	0.178	0.350	0.552	0.734	0.866	0.943	0.980	0.994	0.999	1.000	
0.29	0.001	0.013	0.056	0.154	0.315	0.513	0.701	0.843	0.931	0.974	0.992	0.998	1.000	
0.30	0.001	0.010	0.046	0.133	0.282	0.474	0.666	0.818	0.916	0.967	0.989	0.997	0.999	1.000
0.31	0.001	0.008	0.038	0.114	0.251	0.436	0.629	0.791	0.900	0.959	0.986	0.996	0.999	1.000
0.32	0.001	0.007	0.031	0.098	0.223	0.399	0.593	0.762	0.881	0.950	0.982	0.995	0.999	1.000
0.33	0.000	0.005	0.026	0.083	0.196	0.363	0.556	0.731	0.861	0.939	0.978	0.993	0.998	1.000
0.34	0.000	0.004	0.021	0.070	0.172	0.329	0.518	0.699	0.839	0.927	0.972	0.991	0.998	1.000
0.35	0.000	0.003	0.017	0.059	0.150	0.297	0.481	0.666	0.815	0.913	0.965	0.989	0.997	0.999
0.36	0.000	0.002	0.014	0.049	0.130	0.266	0.445	0.631	0.788	0.897	0.957	0.985	0.996	0.999
0.37	0.000	0.002	0.011	0.041	0.112	0.237	0.409	0.596	0.760	0.879	0.948	0.982	0.995	0.999
0.38	0.000	0.001	0.009	0.034	0.096	0.210	0.374	0.560	0.731	0.859	0.938	0.977	0.993	0.998
0.39	0.000	0.001	0.007	0.028	0.082	0.186	0.340	0.524	0.700	0.837	0.925	0.971	0.991	0.998
0.40	0.000	0.001	0.005	0.023	0.070	0.163	0.308	0.488	0.667	0.814	0.912	0.965	0.988	0.997
0.41	0.000	0.001	0.004	0.019	0.059	0.142	0.277	0.452	0.634	0.789	0.896	0.957	0.985	0.996
0.42	0.000	0.000	0.003	0.015	0.049	0.123	0.248	0.417	0.600	0.762	0.879	0.948	0.982	0.995
0.43	0.000	0.000	0.003	0.012	0.041	0.106	0.221	0.382	0.565	0.733	0.860	0.938	0.977	0.993
0.44	0.000	0.000	0.002	0.010	0.034	0.091	0.196	0.349	0.529	0.703	0.839	0.926	0.972	0.991
0.45	0.000	0.000	0.002	0.008	0.028	0.078	0.173	0.317	0.494	0.671	0.816	0.913	0.966	0.989
0.46	0.000	0.000	0.001	0.006	0.023	0.066	0.151	0.286	0.459	0.638	0.791	0.898	0.958	0.986
0.47	0.000	0.000	0.001	0.005	0.019	0.055	0.132	0.257	0.424	0.605	0.765	0.881	0.950	0.983
0.48	0.000	0.000	0.001	0.004	0.015	0.046	0.114	0.229	0.390	0.570	0.737	0.863	0.940	0.979
0.49	0.000	0.000	0.000	0.003	0.012	0.039	0.098	0.204	0.356	0.535	0.707	0.842	0.929	0.974
0.50	0.000	0.000	0.000	0.002	0.010	0.032	0.084	0.180	0.324	0.500	0.676	0.820	0.916	0.968

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

p	n=19			n=20										
	k=14	15	16	k=	1	2	3	4	5	6	7	8	9	10
0.01				0.818	0.983	0.999	1.000							
0.02				0.668	0.940	0.993	0.999	1.000						
0.03				0.544	0.880	0.979	0.997	1.000						
0.04				0.442	0.810	0.956	0.993	0.999	1.000					
0.05				0.358	0.736	0.925	0.984	0.997	1.000					
0.06				0.290	0.660	0.885	0.971	0.994	0.999	1.000				
0.07				0.234	0.587	0.839	0.953	0.989	0.998	1.000				
0.08				0.189	0.517	0.788	0.929	0.982	0.996	0.999	1.000			
0.09				0.152	0.452	0.733	0.901	0.971	0.993	0.999	1.000			
0.10				0.122	0.392	0.677	0.867	0.957	0.989	0.998	1.000			
0.11				0.097	0.338	0.620	0.829	0.939	0.982	0.996	0.999	1.000		
0.12				0.078	0.289	0.563	0.787	0.917	0.974	0.993	0.999	1.000		
0.13				0.062	0.246	0.508	0.743	0.892	0.963	0.990	0.998	1.000		
0.14				0.049	0.208	0.455	0.696	0.863	0.949	0.985	0.996	0.999	1.000	
0.15				0.039	0.176	0.405	0.648	0.830	0.933	0.978	0.994	0.999	1.000	
0.16				0.031	0.147	0.358	0.599	0.794	0.913	0.970	0.991	0.998	1.000	
0.17				0.024	0.123	0.315	0.550	0.756	0.890	0.959	0.987	0.997	0.999	1.000
0.18				0.019	0.102	0.275	0.503	0.715	0.864	0.946	0.982	0.995	0.999	1.000
0.19				0.015	0.084	0.239	0.456	0.673	0.836	0.931	0.976	0.993	0.998	1.000
0.20				0.012	0.069	0.206	0.411	0.630	0.804	0.913	0.968	0.990	0.997	0.999
0.21				0.009	0.057	0.177	0.369	0.586	0.770	0.893	0.958	0.986	0.996	0.999
0.22				0.007	0.046	0.151	0.329	0.542	0.734	0.870	0.946	0.981	0.995	0.999
0.23				0.005	0.037	0.128	0.292	0.499	0.696	0.844	0.933	0.975	0.992	0.998
0.24				0.004	0.030	0.109	0.257	0.456	0.657	0.816	0.917	0.968	0.990	0.997
0.25				0.003	0.024	0.091	0.225	0.415	0.617	0.786	0.898	0.959	0.986	0.996
0.26				0.002	0.019	0.076	0.196	0.375	0.577	0.753	0.878	0.948	0.982	0.995
0.27				0.002	0.016	0.064	0.170	0.338	0.536	0.719	0.855	0.936	0.976	0.993
0.28				0.001	0.012	0.053	0.147	0.302	0.495	0.683	0.829	0.922	0.970	0.990
0.29				0.001	0.010	0.043	0.126	0.269	0.455	0.646	0.802	0.905	0.962	0.987
0.30				0.001	0.008	0.035	0.107	0.238	0.416	0.608	0.772	0.887	0.952	0.983
0.31				0.001	0.006	0.029	0.091	0.209	0.379	0.569	0.741	0.866	0.941	0.978
0.32				0.000	0.005	0.023	0.077	0.183	0.343	0.531	0.708	0.843	0.928	0.972
0.33				0.000	0.004	0.019	0.064	0.159	0.308	0.492	0.673	0.818	0.913	0.965
0.34				0.000	0.003	0.015	0.054	0.137	0.276	0.454	0.638	0.791	0.897	0.957
0.35	1.000			0.000	0.002	0.012	0.044	0.118	0.245	0.417	0.601	0.762	0.878	0.947
0.36	1.000			0.000	0.002	0.010	0.037	0.101	0.217	0.380	0.564	0.732	0.858	0.935
0.37	1.000			0.000	0.001	0.008	0.030	0.086	0.191	0.345	0.527	0.700	0.835	0.922
0.38	1.000			0.000	0.001	0.006	0.024	0.073	0.167	0.312	0.489	0.666	0.810	0.908
0.39	1.000			0.000	0.001	0.005	0.020	0.061	0.145	0.280	0.452	0.631	0.784	0.891
0.40	0.999	1.000		0.000	0.001	0.004	0.016	0.051	0.126	0.250	0.416	0.596	0.755	0.872
0.41	0.999	1.000		0.000	0.000	0.003	0.013	0.042	0.108	0.222	0.380	0.559	0.725	0.852
0.42	0.999	1.000		0.000	0.000	0.002	0.010	0.035	0.092	0.196	0.346	0.523	0.694	0.830
0.43	0.998	1.000		0.000	0.000	0.002	0.008	0.029	0.078	0.172	0.313	0.486	0.661	0.805
0.44	0.998	1.000		0.000	0.000	0.001	0.006	0.023	0.066	0.150	0.282	0.450	0.626	0.779
0.45	0.997	0.999	1.000	0.000	0.000	0.001	0.005	0.019	0.055	0.130	0.252	0.414	0.591	0.751
0.46	0.996	0.999	1.000	0.000	0.000	0.001	0.004	0.015	0.046	0.112	0.224	0.379	0.556	0.721
0.47	0.995	0.999	1.000	0.000	0.000	0.001	0.003	0.012	0.038	0.096	0.198	0.345	0.520	0.690
0.48	0.994	0.999	1.000	0.000	0.000	0.000	0.002	0.010	0.031	0.081	0.174	0.313	0.483	0.657
0.49	0.992	0.998	1.000	0.000	0.000	0.000	0.002	0.008	0.026	0.069	0.152	0.281	0.447	0.623
0.50	0.990	0.998	1.000	0.000	0.000	0.000	0.001	0.006	0.021	0.058	0.132	0.252	0.412	0.588

Table 7: Binomial Distribution (cont'd)
 $\Pr(X \leq k)$

n=20						
P	k=11	12	13	14	15	16
0.01						
0.02						
0.03						
0.04						
0.05						
0.06						
0.07						
0.08						
0.09						
0.10						
0.11						
0.12						
0.13						
0.14						
0.15						
0.16						
0.17						
0.18						
0.19						
0.20	1.000					
0.21	1.000					
0.22	1.000					
0.23	1.000					
0.24	0.999	1.000				
0.25	0.999	1.000				
0.26	0.999	1.000				
0.27	0.998	1.000				
0.28	0.997	0.999	1.000			
0.29	0.996	0.999	1.000			
0.30	0.995	0.999	1.000			
0.31	0.993	0.998	1.000			
0.32	0.991	0.998	0.999	1.000		
0.33	0.988	0.997	0.999	1.000		
0.34	0.985	0.995	0.999	1.000		
0.35	0.980	0.994	0.998	1.000		
0.36	0.975	0.992	0.998	1.000		
0.37	0.969	0.990	0.997	0.999	1.000	
0.38	0.962	0.987	0.996	0.999	1.000	
0.39	0.953	0.983	0.995	0.999	1.000	
0.40	0.943	0.979	0.994	0.998	1.000	
0.41	0.932	0.974	0.992	0.998	1.000	
0.42	0.919	0.968	0.989	0.997	0.999	1.000
0.43	0.904	0.960	0.986	0.996	0.999	1.000
0.44	0.888	0.952	0.983	0.995	0.999	1.000
0.45	0.869	0.942	0.979	0.994	0.998	1.000
0.46	0.849	0.931	0.973	0.992	0.998	1.000
0.47	0.827	0.918	0.967	0.989	0.997	0.999
0.48	0.802	0.903	0.960	0.987	0.996	0.999
0.49	0.776	0.887	0.952	0.983	0.995	0.999
0.50	0.748	0.868	0.942	0.979	0.994	0.999

Table 8: Poisson Distribution
 $\Pr(X \leq k)$

λ	k=0	1	2	3	4	5	6	7	8	9	10
0.1	0.905	0.995	1.000	1.000							
0.2	0.819	0.982	0.999	1.000							
0.3	0.741	0.963	0.996	1.000							
0.4	0.670	0.938	0.992	0.999	1.000						
0.5	0.607	0.910	0.986	0.998	1.000						
0.6	0.549	0.878	0.977	0.997	1.000						
0.7	0.497	0.844	0.966	0.994	0.999	1.000					
0.8	0.449	0.809	0.953	0.991	0.999	1.000					
0.9	0.407	0.772	0.937	0.987	0.998	1.000					
1.0	0.368	0.736	0.920	0.981	0.996	0.999	1.000				
1.1	0.333	0.699	0.900	0.974	0.995	0.999	1.000				
1.2	0.301	0.663	0.879	0.966	0.992	0.998	1.000				
1.3	0.273	0.627	0.857	0.957	0.989	0.998	1.000				
1.4	0.247	0.592	0.833	0.946	0.986	0.997	0.999	1.000			
1.5	0.223	0.558	0.809	0.934	0.981	0.996	0.999	1.000			
1.6	0.202	0.525	0.783	0.921	0.976	0.994	0.999	1.000			
1.7	0.183	0.493	0.757	0.907	0.970	0.992	0.998	1.000			
1.8	0.165	0.463	0.731	0.891	0.964	0.990	0.997	0.999	1.000		
1.9	0.150	0.434	0.704	0.875	0.956	0.987	0.997	0.999	1.000		
2.0	0.135	0.406	0.677	0.857	0.947	0.983	0.995	0.999	1.000		
2.1	0.122	0.380	0.650	0.839	0.938	0.980	0.994	0.999	1.000		
2.2	0.111	0.355	0.623	0.819	0.928	0.975	0.993	0.998	1.000		
2.3	0.100	0.331	0.596	0.799	0.916	0.970	0.991	0.997	0.999	1.000	
2.4	0.091	0.308	0.570	0.779	0.904	0.964	0.988	0.997	0.999	1.000	
2.5	0.082	0.287	0.544	0.758	0.891	0.958	0.986	0.996	0.999	1.000	
2.6	0.074	0.267	0.518	0.736	0.877	0.951	0.983	0.995	0.999	1.000	
2.7	0.067	0.249	0.494	0.714	0.863	0.943	0.979	0.993	0.998	0.999	1.000
2.8	0.061	0.231	0.469	0.692	0.848	0.935	0.976	0.992	0.998	0.999	1.000
2.9	0.055	0.215	0.446	0.670	0.832	0.926	0.971	0.990	0.997	0.999	1.000
3.0	0.050	0.199	0.423	0.647	0.815	0.916	0.966	0.988	0.996	0.999	1.000
3.1	0.045	0.185	0.401	0.625	0.798	0.906	0.961	0.986	0.995	0.999	1.000
3.2	0.041	0.171	0.380	0.603	0.781	0.895	0.955	0.983	0.994	0.998	1.000
3.3	0.037	0.159	0.359	0.580	0.763	0.883	0.949	0.980	0.993	0.998	0.999
3.4	0.033	0.147	0.340	0.558	0.744	0.871	0.942	0.977	0.992	0.997	0.999
3.5	0.030	0.136	0.321	0.537	0.725	0.858	0.935	0.973	0.990	0.997	0.999
3.6	0.027	0.126	0.303	0.515	0.706	0.844	0.927	0.969	0.988	0.996	0.999
3.7	0.025	0.116	0.285	0.494	0.687	0.830	0.918	0.965	0.986	0.995	0.998
3.8	0.022	0.107	0.269	0.473	0.668	0.816	0.909	0.960	0.984	0.994	0.998
3.9	0.020	0.099	0.253	0.453	0.648	0.801	0.899	0.955	0.981	0.993	0.998
4.0	0.018	0.092	0.238	0.433	0.629	0.785	0.889	0.949	0.979	0.992	0.997
4.1	0.017	0.085	0.224	0.414	0.609	0.769	0.879	0.943	0.976	0.990	0.997
4.2	0.015	0.078	0.210	0.395	0.590	0.753	0.867	0.936	0.972	0.989	0.996
4.3	0.014	0.072	0.197	0.377	0.570	0.737	0.856	0.929	0.968	0.987	0.995
4.4	0.012	0.066	0.185	0.359	0.551	0.720	0.844	0.921	0.964	0.985	0.994
4.5	0.011	0.061	0.174	0.342	0.532	0.703	0.831	0.913	0.960	0.983	0.993
4.6	0.010	0.056	0.163	0.326	0.513	0.686	0.818	0.905	0.955	0.980	0.992
4.7	0.009	0.052	0.152	0.310	0.495	0.668	0.805	0.896	0.950	0.978	0.991
4.8	0.008	0.048	0.143	0.294	0.476	0.651	0.791	0.887	0.944	0.975	0.990
4.9	0.007	0.044	0.133	0.279	0.458	0.634	0.777	0.877	0.938	0.972	0.988
5.0	0.007	0.040	0.125	0.265	0.440	0.616	0.762	0.867	0.932	0.968	0.986

Table 8: Poisson Distribution (cont'd)

λ	$\Pr(X \leq k)$										
	k=0	1	2	3	4	5	6	7	8	9	10
5.1	0.006	0.037	0.116	0.251	0.423	0.598	0.747	0.856	0.925	0.964	0.984
5.2	0.006	0.034	0.109	0.238	0.406	0.581	0.732	0.845	0.918	0.960	0.982
5.3	0.005	0.031	0.102	0.225	0.390	0.563	0.717	0.833	0.911	0.956	0.980
5.4	0.005	0.029	0.095	0.213	0.373	0.546	0.702	0.822	0.903	0.951	0.977
5.5	0.004	0.027	0.088	0.202	0.358	0.529	0.686	0.809	0.894	0.946	0.975
5.6	0.004	0.024	0.082	0.191	0.342	0.512	0.670	0.797	0.886	0.941	0.972
5.7	0.003	0.022	0.077	0.180	0.327	0.495	0.654	0.784	0.877	0.935	0.969
5.8	0.003	0.021	0.072	0.170	0.313	0.478	0.638	0.771	0.867	0.929	0.965
5.9	0.003	0.019	0.067	0.160	0.299	0.462	0.622	0.758	0.857	0.923	0.961
6.0	0.002	0.017	0.062	0.151	0.285	0.446	0.606	0.744	0.847	0.916	0.957
6.1	0.002	0.016	0.058	0.143	0.272	0.430	0.590	0.730	0.837	0.909	0.953
6.2	0.002	0.015	0.054	0.134	0.259	0.414	0.574	0.716	0.826	0.902	0.949
6.3	0.002	0.013	0.050	0.126	0.247	0.399	0.558	0.702	0.815	0.894	0.944
6.4	0.002	0.012	0.046	0.119	0.235	0.384	0.542	0.687	0.803	0.886	0.939
6.5	0.002	0.011	0.043	0.112	0.224	0.369	0.527	0.673	0.792	0.877	0.933
6.6	0.001	0.010	0.040	0.105	0.213	0.355	0.511	0.658	0.780	0.869	0.927
6.7	0.001	0.009	0.037	0.099	0.202	0.341	0.495	0.643	0.767	0.860	0.921
6.8	0.001	0.009	0.034	0.093	0.192	0.327	0.480	0.628	0.755	0.850	0.915
6.9	0.001	0.008	0.032	0.087	0.182	0.314	0.465	0.614	0.742	0.840	0.908
7.0	0.001	0.007	0.030	0.082	0.173	0.301	0.450	0.599	0.729	0.830	0.901
7.1	0.001	0.007	0.027	0.077	0.164	0.288	0.435	0.584	0.716	0.820	0.894
7.2	0.001	0.006	0.025	0.072	0.156	0.276	0.420	0.569	0.703	0.810	0.887
7.3	0.001	0.006	0.024	0.067	0.147	0.264	0.406	0.554	0.689	0.799	0.879
7.4	0.001	0.005	0.022	0.063	0.140	0.253	0.392	0.539	0.676	0.788	0.871
7.5	0.001	0.005	0.020	0.059	0.132	0.241	0.378	0.525	0.662	0.776	0.862
7.6	0.001	0.004	0.019	0.055	0.125	0.231	0.365	0.510	0.648	0.765	0.854
7.7	0.000	0.004	0.017	0.052	0.118	0.220	0.351	0.496	0.634	0.753	0.845
7.8	0.000	0.004	0.016	0.048	0.112	0.210	0.338	0.481	0.620	0.741	0.835
7.9	0.000	0.003	0.015	0.045	0.106	0.201	0.326	0.467	0.607	0.729	0.826
8.0	0.000	0.003	0.014	0.042	0.100	0.191	0.313	0.453	0.593	0.717	0.816
8.1	0.000	0.003	0.013	0.040	0.094	0.182	0.301	0.439	0.579	0.704	0.806
8.2	0.000	0.003	0.012	0.037	0.089	0.174	0.290	0.425	0.565	0.692	0.796
8.3	0.000	0.002	0.011	0.035	0.084	0.165	0.278	0.412	0.551	0.679	0.785
8.4	0.000	0.002	0.010	0.032	0.079	0.157	0.267	0.399	0.537	0.666	0.774
8.5	0.000	0.002	0.009	0.030	0.074	0.150	0.256	0.386	0.523	0.653	0.763
8.6	0.000	0.002	0.009	0.028	0.070	0.142	0.246	0.373	0.509	0.640	0.752
8.7	0.000	0.002	0.008	0.026	0.066	0.135	0.235	0.360	0.496	0.627	0.741
8.8	0.000	0.001	0.007	0.024	0.062	0.128	0.226	0.348	0.482	0.614	0.729
8.9	0.000	0.001	0.007	0.023	0.058	0.122	0.216	0.336	0.469	0.601	0.718
9.0	0.000	0.001	0.006	0.021	0.055	0.116	0.207	0.324	0.456	0.587	0.706
9.1	0.000	0.001	0.006	0.020	0.052	0.110	0.198	0.312	0.443	0.574	0.694
9.2	0.000	0.001	0.005	0.018	0.049	0.104	0.189	0.301	0.430	0.561	0.682
9.3	0.000	0.001	0.005	0.017	0.046	0.099	0.181	0.290	0.417	0.548	0.670
9.4	0.000	0.001	0.005	0.016	0.043	0.093	0.173	0.279	0.404	0.535	0.658
9.5	0.000	0.001	0.004	0.015	0.040	0.089	0.165	0.269	0.392	0.522	0.645
9.6	0.000	0.001	0.004	0.014	0.038	0.084	0.157	0.258	0.380	0.509	0.633
9.7	0.000	0.001	0.004	0.013	0.035	0.079	0.150	0.248	0.368	0.496	0.621
9.8	0.000	0.001	0.003	0.012	0.033	0.075	0.143	0.239	0.356	0.483	0.608
9.9	0.000	0.001	0.003	0.011	0.031	0.071	0.137	0.229	0.344	0.471	0.596
10.0	0.000	0.000	0.003	0.010	0.029	0.067	0.130	0.220	0.333	0.458	0.583

Table 8: Poisson Distribution (cont'd)

λ	$\Pr(X \leq k)$									
	k=11	12	13	14	15	16	17	18	19	20
3.9	0.999	1.000								
4.0	0.999	1.000								
4.1	0.999	1.000								
4.2	0.999	1.000								
4.3	0.998	0.999	1.000							
4.4	0.998	0.999	1.000							
4.5	0.998	0.999	1.000							
4.6	0.997	0.999	1.000							
4.7	0.997	0.999	1.000							
4.8	0.996	0.999	1.000							
4.9	0.995	0.998	0.999	1.000						
5.0	0.995	0.998	0.999	1.000						
5.1	0.994	0.998	0.999	1.000						
5.2	0.993	0.997	0.999	1.000						
5.3	0.992	0.997	0.999	1.000						
5.4	0.990	0.996	0.999	1.000						
5.5	0.989	0.996	0.998	0.999	1.000					
5.6	0.988	0.995	0.998	0.999	1.000					
5.7	0.986	0.994	0.998	0.999	1.000					
5.8	0.984	0.993	0.997	0.999	1.000					
5.9	0.982	0.992	0.997	0.999	1.000					
6.0	0.980	0.991	0.996	0.999	0.999	1.000				
6.1	0.978	0.990	0.996	0.998	0.999	1.000				
6.2	0.975	0.989	0.995	0.998	0.999	1.000				
6.3	0.972	0.987	0.995	0.998	0.999	1.000				
6.4	0.969	0.986	0.994	0.997	0.999	1.000				
6.5	0.966	0.984	0.993	0.997	0.999	1.000				
6.6	0.963	0.982	0.992	0.997	0.999	0.999	1.000			
6.7	0.959	0.980	0.991	0.996	0.998	0.999	1.000			
6.8	0.955	0.978	0.990	0.996	0.998	0.999	1.000			
6.9	0.951	0.976	0.989	0.995	0.998	0.999	1.000			
7.0	0.947	0.973	0.987	0.994	0.998	0.999	1.000			
7.1	0.942	0.970	0.986	0.994	0.997	0.999	1.000			
7.2	0.937	0.967	0.984	0.993	0.997	0.999	1.000			
7.3	0.932	0.964	0.982	0.992	0.996	0.999	0.999	1.000		
7.4	0.926	0.961	0.980	0.991	0.996	0.998	0.999	1.000		
7.5	0.921	0.957	0.978	0.990	0.995	0.998	0.999	1.000		
7.6	0.915	0.954	0.976	0.989	0.995	0.998	0.999	1.000		
7.7	0.909	0.950	0.974	0.987	0.994	0.997	0.999	1.000		
7.8	0.902	0.945	0.971	0.986	0.993	0.997	0.999	1.000		
7.9	0.895	0.941	0.969	0.984	0.993	0.997	0.999	0.999	1.000	
8.0	0.888	0.936	0.966	0.983	0.992	0.996	0.998	0.999	1.000	
8.1	0.881	0.931	0.963	0.981	0.991	0.996	0.998	0.999	1.000	
8.2	0.873	0.926	0.960	0.979	0.990	0.995	0.998	0.999	1.000	
8.3	0.865	0.921	0.956	0.977	0.989	0.995	0.998	0.999	1.000	
8.4	0.857	0.915	0.952	0.975	0.987	0.994	0.997	0.999	1.000	
8.5	0.849	0.909	0.949	0.973	0.986	0.993	0.997	0.999	0.999	1.000
8.6	0.840	0.903	0.945	0.970	0.985	0.993	0.997	0.999	0.999	1.000
8.7	0.831	0.897	0.940	0.967	0.983	0.992	0.996	0.998	0.999	1.000
8.8	0.822	0.890	0.936	0.965	0.982	0.991	0.996	0.998	0.999	1.000
8.9	0.813	0.883	0.931	0.962	0.980	0.990	0.995	0.998	0.999	1.000
9.0	0.803	0.876	0.926	0.959	0.978	0.989	0.995	0.998	0.999	1.000
9.1	0.793	0.868	0.921	0.955	0.976	0.988	0.994	0.997	0.999	0.999
9.2	0.783	0.861	0.916	0.952	0.974	0.987	0.993	0.997	0.999	0.999
9.3	0.773	0.853	0.910	0.948	0.972	0.985	0.993	0.997	0.998	0.999
9.4	0.763	0.845	0.904	0.944	0.969	0.984	0.992	0.996	0.998	0.999
9.5	0.752	0.836	0.898	0.940	0.967	0.982	0.991	0.996	0.998	0.999
9.6	0.741	0.828	0.892	0.936	0.964	0.981	0.990	0.995	0.998	0.999
9.7	0.730	0.819	0.885	0.931	0.961	0.979	0.989	0.995	0.998	0.999
9.8	0.719	0.810	0.879	0.927	0.958	0.977	0.988	0.994	0.997	0.999
9.9	0.708	0.801	0.872	0.922	0.955	0.975	0.987	0.993	0.997	0.999
10.0	0.697	0.792	0.864	0.917	0.951	0.973	0.986	0.993	0.997	0.998

Table 9: Durbin-Watson Statistic Table

n	k ^e =1		k ^e =2		k ^e =3		k ^e =4		k ^e =5		k ^e =6		k ^e =7		k ^e =8		k ^e =9		k ^e =10	
	d _L	d _U	d _L	d _U	d _L	d _U	d _L	d _U	d _L	d _U	d _L	d _U	d _L	d _U	d _L	d _U	d _L	d _U	d _L	d _U
15	1.077	1.361	0.946	1.543	0.814	1.750	0.685	1.977	0.562	2.220	0.447	2.471	0.343	2.727	0.251	2.979	0.175	3.216	0.111	3.438
16	1.106	1.371	0.982	1.539	0.857	1.728	0.734	1.935	0.615	2.157	0.502	2.388	0.398	2.624	0.304	2.860	0.222	3.090	0.155	3.304
17	1.133	1.381	1.015	1.536	0.897	1.710	0.779	1.900	0.664	2.104	0.554	2.318	0.451	2.537	0.356	2.757	0.272	2.975	0.198	3.184
18	1.158	1.391	1.046	1.535	0.933	1.696	0.820	1.872	0.710	2.060	0.603	2.258	0.502	2.461	0.407	2.668	0.321	2.873	0.244	3.073
19	1.180	1.401	1.074	1.536	0.967	1.685	0.859	1.848	0.752	2.023	0.649	2.206	0.549	2.396	0.456	2.589	0.369	2.783	0.290	2.974
20	1.201	1.411	1.100	1.537	0.998	1.676	0.894	1.828	0.792	1.991	0.691	2.162	0.595	2.339	0.502	2.521	0.416	2.704	0.336	2.885
21	1.221	1.420	1.125	1.538	1.026	1.669	0.927	1.812	0.829	1.964	0.731	2.124	0.637	2.290	0.546	2.461	0.461	2.633	0.380	2.806
22	1.239	1.429	1.147	1.541	1.053	1.664	0.958	1.797	0.863	1.940	0.769	2.090	0.677	2.246	0.588	2.407	0.504	2.571	0.424	2.735
23	1.257	1.437	1.168	1.543	1.078	1.660	0.986	1.785	0.895	1.920	0.804	2.061	0.715	2.208	0.628	2.360	0.545	2.514	0.465	2.670
24	1.273	1.446	1.188	1.546	1.101	1.656	1.013	1.775	0.925	1.902	0.837	2.035	0.750	2.174	0.666	2.318	0.584	2.464	0.506	2.613
25	1.288	1.454	1.206	1.550	1.123	1.654	1.038	1.767	0.953	1.886	0.868	2.013	0.784	2.144	0.702	2.280	0.621	2.419	0.544	2.560
26	1.302	1.461	1.224	1.553	1.143	1.652	1.062	1.759	0.979	1.873	0.897	1.992	0.816	2.117	0.735	2.246	0.657	2.379	0.581	2.513
27	1.316	1.469	1.240	1.556	1.162	1.651	1.084	1.753	1.004	1.861	0.925	1.974	0.845	2.093	0.767	2.216	0.691	2.342	0.616	2.470
28	1.328	1.476	1.255	1.560	1.181	1.650	1.104	1.747	1.028	1.850	0.951	1.959	0.874	2.071	0.798	2.188	0.723	2.309	0.649	2.431
29	1.341	1.483	1.270	1.563	1.198	1.650	1.124	1.743	1.050	1.841	0.975	1.944	0.900	2.052	0.826	2.164	0.753	2.278	0.681	2.396
30	1.352	1.489	1.284	1.567	1.214	1.650	1.143	1.739	1.071	1.833	0.998	1.931	0.926	2.034	0.854	2.141	0.782	2.251	0.712	2.363
31	1.363	1.496	1.297	1.570	1.229	1.650	1.160	1.735	1.090	1.825	1.020	1.920	0.950	2.018	0.879	2.120	0.810	2.226	0.741	2.333
32	1.373	1.502	1.309	1.574	1.244	1.650	1.177	1.732	1.109	1.819	1.041	1.909	0.972	2.004	0.904	2.102	0.836	2.203	0.769	2.306
33	1.383	1.508	1.321	1.577	1.258	1.651	1.193	1.730	1.127	1.813	1.061	1.900	0.994	1.991	0.927	2.085	0.861	2.181	0.796	2.281
34	1.393	1.514	1.333	1.580	1.271	1.652	1.208	1.728	1.144	1.808	1.079	1.891	1.015	1.978	0.950	2.069	0.885	2.162	0.821	2.257
35	1.402	1.519	1.343	1.584	1.283	1.653	1.222	1.726	1.160	1.803	1.097	1.884	1.034	1.967	0.971	2.054	0.908	2.144	0.845	2.236
36	1.411	1.525	1.354	1.587	1.295	1.654	1.236	1.724	1.175	1.799	1.114	1.876	1.053	1.957	0.991	2.041	0.930	2.127	0.868	2.216
37	1.419	1.530	1.364	1.590	1.307	1.655	1.249	1.723	1.190	1.795	1.131	1.870	1.071	1.948	1.011	2.029	0.951	2.112	0.891	2.197
38	1.427	1.535	1.373	1.594	1.318	1.656	1.261	1.722	1.204	1.792	1.146	1.864	1.088	1.939	1.029	2.017	0.970	2.098	0.912	2.180
39	1.435	1.540	1.382	1.597	1.328	1.658	1.273	1.722	1.218	1.789	1.161	1.859	1.104	1.932	1.047	2.007	0.990	2.085	0.932	2.164
40	1.442	1.544	1.391	1.600	1.338	1.659	1.285	1.721	1.230	1.786	1.175	1.854	1.120	1.924	1.064	1.997	1.008	2.072	0.952	2.149
45	1.475	1.566	1.430	1.615	1.383	1.666	1.336	1.720	1.287	1.776	1.238	1.835	1.189	1.895	1.139	1.958	1.089	2.022	1.038	2.088
50	1.503	1.585	1.462	1.628	1.421	1.674	1.378	1.721	1.335	1.771	1.291	1.822	1.246	1.875	1.201	1.930	1.156	1.986	1.110	2.044
55	1.528	1.601	1.490	1.641	1.452	1.681	1.414	1.724	1.374	1.768	1.334	1.814	1.294	1.861	1.253	1.909	1.212	1.959	1.170	2.010
60	1.549	1.616	1.514	1.652	1.480	1.689	1.444	1.727	1.408	1.767	1.372	1.808	1.335	1.850	1.298	1.894	1.260	1.939	1.222	1.984
65	1.567	1.629	1.536	1.662	1.503	1.696	1.471	1.731	1.438	1.767	1.404	1.805	1.370	1.843	1.336	1.882	1.301	1.923	1.266	1.964
70	1.583	1.641	1.554	1.672	1.525	1.703	1.494	1.735	1.464	1.768	1.433	1.802	1.401	1.838	1.369	1.874	1.337	1.910	1.305	1.948
75	1.598	1.652	1.571	1.680	1.543	1.709	1.515	1.739	1.487	1.770	1.458	1.801	1.428	1.834	1.399	1.867	1.369	1.901	1.339	1.935
80	1.611	1.662	1.586	1.688	1.560	1.715	1.534	1.743	1.507	1.772	1.480	1.801	1.453	1.831	1.425	1.861	1.397	1.893	1.369	1.925
85	1.624	1.671	1.600	1.696	1.575	1.721	1.550	1.747	1.525	1.774	1.500	1.801	1.474	1.829	1.448	1.857	1.422	1.886	1.396	1.916
90	1.635	1.679	1.612	1.703	1.589	1.726	1.566	1.751	1.542	1.776	1.518	1.801	1.494	1.827	1.469	1.854	1.445	1.881	1.420	1.909
95	1.645	1.687	1.623	1.709	1.602	1.732	1.579	1.755	1.557	1.778	1.535	1.802	1.512	1.827	1.489	1.852	1.465	1.877	1.442	1.903
100	1.654	1.694	1.634	1.715	1.613	1.736	1.592	1.758	1.571	1.780	1.550	1.803	1.528	1.826	1.506	1.850	1.484	1.874	1.462	1.898
150	1.720	1.747	1.706	1.760	1.693	1.774	1.679	1.788	1.665	1.802	1.651	1.817	1.637	1.832	1.622	1.846	1.608	1.862	1.593	1.877
200	1.758	1.779	1.748	1.789	1.738	1.799	1.728	1.809	1.718	1.820	1.707	1.831	1.697	1.841	1.686	1.852	1.675	1.863	1.665	1.874

k^e is the number of regressors excluding the intercept term. This table was calculated by Dr R. W. Farebrother of the University of Manchester.

Table 10: MacKinnon's Critical Values

Response Surface for Critical Values of Co-Integration Tests

n	Model	Point(%)	ϕ_∞	SE	ϕ_1	ϕ_2
1	No constant, no Trend	1	-2.5658	(0.0023)	-1.960	-10.04
		5	-1.9393	(0.0008)	-0.398	-0.00
		10	-1.6156	(0.0007)	-0.181	-0.00
1	Constant, no trend	1	-3.4336	(0.0024)	-5.999	-29.25
		5	-2.8621	(0.0011)	-2.738	-8.36
		10	-2.5671	(0.0009)	-1.438	-4.48
1	Constant + trend	1	-3.9638	(0.0019)	-8.353	-47.44
		5	-3.4126	(0.0012)	-4.039	-17.83
		10	-3.1279	(0.0009)	-2.418	-7.58
2	Constant, no trend	1	-3.9001	(0.0022)	-10.534	-30.03
		5	-3.3377	(0.0012)	-5.967	-8.98
		10	-3.0462	(0.0009)	-4.069	-5.73
2	Constant + trend	1	-4.3266	(0.0022)	-15.531	-34.03
		5	-3.7809	(0.0013)	-9.421	-15.06
		10	-3.4959	(0.0009)	-7.203	-4.01
3	Constant, no trend	1	-4.2981	(0.0023)	-13.790	-46.37
		5	-3.7429	(0.0012)	-8.352	-13.41
		10	-3.4518	(0.0010)	-6.241	-2.79
3	Constant + trend	1	-4.6676	(0.0022)	-18.492	-49.35
		5	-4.1193	(0.0011)	-12.024	-13.13
		10	-3.8344	(0.0009)	-9.188	-4.85
4	Constant, no trend	1	-4.6493	(0.0023)	-17.188	-59.20
		5	-4.1000	(0.0012)	-10.745	-21.57
		10	-3.8110	(0.0009)	-8.317	-5.19
4	Constant + trend	1	-4.9695	(0.0021)	-22.504	-50.22
		5	-4.4294	(0.0012)	-14.501	-19.54
		10	-4.1474	(0.0010)	-11.165	-9.88
5	Constant, no trend	1	-4.9587	(0.0026)	-22.140	-37.29
		5	-4.4185	(0.0013)	-13.641	-21.16
		10	-4.1327	(0.0009)	-10.638	-5.48
5	Constant + trend	1	-5.2497	(0.0024)	-26.606	-49.56
		5	-4.7154	(0.0013)	-17.432	-16.50
		10	-4.4345	(0.0010)	-13.654	-5.77
6	Constant, no trend	1	-5.2400	(0.0029)	-26.278	-41.65
		5	-4.7048	(0.0018)	-17.120	-11.17
		10	-4.4242	(0.0010)	-13.347	-0.00
6	Constant + trend	1	-5.5127	(0.0033)	-30.735	-52.50
		5	-4.9767	(0.0017)	-20.883	-9.05
		10	-4.6999	(0.0011)	-16.445	-0.00

$$C(p) = \phi_\infty + \phi_1 T^{-1} + \phi_2 T^{-2}$$

Source: James MacKinnon (1991) "Critical Values for Cointegration Tests", in Engle, R. and Granger, C. Long-Run Economic Relationships, Oxford University Press.

Reproduced by permission of Oxford University Press.

Table 11: Johansen Critical Values

Critical Values for Johansen Test :Intercept in Cointegrating Vector

p-r	$\lambda - \max$						Trace					
	50%	80%	90%	95%	97.5%	99%	50%	80%	90%	95%	97.5%	99%
1	3.40	5.91	7.52	9.24	10.80	12.97	3.40	5.91	7.52	9.24	10.80	12.97
2	8.27	11.54	13.75	15.67	17.63	20.20	11.25	15.25	17.85	19.96	22.05	24.60
3	13.47	17.40	19.77	22.00	24.07	26.81	23.28	28.75	32.00	34.91	37.61	41.07
4	18.70	22.95	25.56	28.14	30.32	33.24	38.84	45.65	49.65	53.12	56.06	60.16
5	23.78	28.76	31.66	34.40	36.90	39.79	58.46	66.91	71.86	76.07	80.06	84.45
6	29.08	34.25	37.45	40.30	43.22	46.82	81.90	91.57	97.18	102.14	106.74	111.01
7	34.73	40.13	43.25	46.45	48.99	51.91	109.17	120.35	125.58	131.70	136.49	143.09
8	39.70	45.53	48.91	52.00	54.71	57.95	139.83	152.56	159.48	165.58	171.28	177.20
9	44.97	50.73	54.35	57.42	60.50	63.71	174.88	198.08	196.37	202.92	208.81	215.74
10	50.21	56.52	60.25	63.57	66.24	69.94	212.93	228.08	236.54	244.15	251.30	257.68
11	55.70	62.38	66.02	69.74	72.64	76.63	254.84	272.82	282.45	291.40	298.31	307.64

Critical Values for Johansen Test :Intercept in ECM

p-r	$\lambda - \max$						Trace					
	50%	80%	90%	95%	97.5%	99%	50%	80%	90%	95%	97.5%	99%
1	0.44	1.66	2.69	3.76	4.95	6.65	0.44	1.66	2.69	3.76	4.95	6.65
2	6.85	10.04	12.07	14.07	16.05	18.63	7.55	11.07	13.33	15.41	17.52	20.04
3	12.34	16.20	18.60	20.97	23.09	25.52	18.70	23.64	26.79	29.68	32.56	35.65
4	17.66	21.98	24.73	27.07	28.98	32.24	33.60	40.15	43.95	47.21	50.35	54.46
5	23.05	27.85	30.90	33.46	35.71	38.77	52.30	60.29	64.84	68.52	71.80	76.07
6	28.45	33.67	36.76	39.37	41.86	45.10	75.26	84.57	89.48	94.15	98.33	103.18
7	33.83	39.12	42.32	45.28	47.96	51.57	101.22	112.30	118.50	124.24	128.45	133.57
8	39.29	45.05	48.33	51.42	54.29	57.69	131.62	143.97	150.53	156.00	161.32	168.36
9	44.58	50.55	53.98	57.12	59.33	62.80	165.11	178.90	186.39	192.89	198.82	204.95
10	49.66	55.97	59.62	62.81	65.44	69.09	202.58	217.81	225.85	233.13	239.46	247.18
11	54.99	61.55	65.38	68.83	72.11	75.95	243.90	260.82	269.96	277.71	284.87	293.44

Critical Values for Johansen Test :Trend in ECM

p-r	$\lambda - \max$						Trace					
	50%	80%	90%	95%	97.5%	99%	50%	80%	90%	95%	97.5%	99%
1	5.55	8.65	10.49	12.25	14.21	16.26	5.55	8.65	10.49	12.25	14.21	16.26
2	10.90	14.70	16.85	18.96	21.14	23.65	15.59	20.19	22.76	25.32	27.75	30.45
3	16.24	20.45	23.11	25.54	27.68	30.34	29.53	35.56	39.06	42.44	45.42	48.45
4	21.50	26.30	29.12	31.46	33.60	36.65	47.17	54.80	59.14	62.99	66.25	70.05
5	26.72	31.72	34.75	37.52	40.01	42.36	68.64	77.83	83.20	87.31	91.06	96.58
6	32.01	37.50	40.91	43.97	46.84	49.51	94.05	104.73	110.42	114.90	119.29	124.75
7	37.57	43.11	46.32	49.42	51.94	54.71	122.87	134.57	141.01	146.76	152.52	158.49
8	42.72	48.56	52.16	55.50	58.08	62.46	155.40	169.10	176.67	182.82	187.91	196.08
9	48.17	54.34	57.87	61.29	64.12	67.88	192.37	207.55	215.17	222.21	228.05	234.41
10	53.21	59.49	63.18	66.23	69.56	73.73	231.59	247.91	256.72	263.42	270.33	279.07
11	58.54	64.97	69.26	72.72	75.72	79.23	276.34	294.12	303.13	310.81	318.02	327.45

Critical Values for Johansen Test :Trend in Cointegrating Vector

p-r	$\lambda - \max$						Trace					
	50%	80%	90%	95%	97.5%	99%	50%	80%	90%	95%	97.5%	99%
1	0.45	1.61	2.57	3.74	4.85	6.40	0.45	1.61	2.57	3.74	4.85	6.40
2	8.84	12.55	14.84	16.87	18.57	21.47	9.68	13.56	16.06	18.17	20.13	23.46
3	14.70	18.94	21.53	23.78	26.07	28.83	22.66	28.13	31.42	34.55	36.94	40.49
4	19.99	24.81	27.76	30.33	32.56	35.68	39.43	46.66	50.74	54.64	57.79	61.24
5	25.78	30.75	33.74	36.41	38.68	41.58	60.33	68.66	73.40	77.74	80.94	85.78
6	30.96	36.51	39.50	42.48	45.12	48.17	84.53	94.45	100.14	104.94	109.62	114.36
7	36.44	42.07	45.49	48.45	51.46	54.48	112.75	124.18	130.84	136.61	141.55	146.99
8	41.68	47.51	51.14	54.25	56.87	60.81	144.39	157.11	164.34	170.80	176.43	182.51
9	46.92	53.12	57.01	60.29	62.98	66.91	179.72	194.04	201.95	208.97	215.41	222.46
10	52.33	59.01	62.69	66.10	69.41	72.96	219.42	235.26	244.12	250.84	256.60	263.94
11	57.76	64.40	68.22	71.68	74.90	78.51	262.30	279.31	288.08	295.99	303.98	312.58

Source: Osterwald-Lenum, M. (1992) "A Note with Quantiles of the Asymptotic Distribution of the Maximum Likelihood Cointegration Rank Test Statistics, *Oxford Bulletin of Economics and Statistics*, 53,461-471.

Reproduced by permission of Blackwell Publishers.