

ตารางสถิติ
 ตารางสถิติ Statistical Tables

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Table I TEN THOUSAND RANDOM DIGITS

	RANDOM DIGITS										TEN THOUSAND RANDOM DIGITS									
	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-99
00	88758	66605	33843	43623	62774	25317	09560	41880	85426	60755	70896	44520	64720	49898	76740	47460	83110	78905	59870	
01	33661	42832	77410	88133	20686	26656	59698	86241	91352	49187	56809	42909	25853	47624	29486	75841	60353	42390	24847	
02	26335	03771	46115	06788	60841	06787	95962	60841	91788	86386	66109	84775	07515	91836	14196	75841	80778	21302	24975	
03	60826	74718	56327	29508	91975	13695	25215	72237	06337	73439	18071	36263	14053	32526	94822	48126	60778	19521	15345	
04	95044	94898	13763	31764	93970	60987	14692	71039	34165	21297	98732	15120	91754	12657	78500	01247	49715	47635	55514	
05	83746	47694	06143	42741	38338	97694	69300	99864	19641	15083	36075	83967	22268	77971	68584	21336	72511	66459	39708	
06	27998	47562	63402	10056	81668	48744	08400	83124	19886	18803	04110	45061	78062	18911	27855	56419	00655	70323	04538	
07	82685	33223	74625	14510	85927	76379	80588	14756	54937	76379	75638	58509	24479	10202	13150	95948	38308	16718	93561	
08	18386	13862	10988	04197	18770	28017	71418	18133	69503	44077	87403	19142	27208	35149	34889	14181	44813	17784	41036	
09	21717	13141	22707	68165	58440	19187	08421	03036	34208	34208	00095	52142	65021	64438	69610	12154	98422	79996	01935	
10	18446	83052	31842	08634	11887	86070	08464	20565	74390	36541	43674	47103	48614	70823	82403	93424	05236	51388	27757	
11	66027	75177	47398	66423	70160	16232	67343	50036	59411	59411	68597	68874	35367	98463	99671	81533	17228	44455	49260	
12	51420	96779	54309	87456	78967	79638	68869	49062	02196	55109	91874	70208	06308	40719	02772	69589	07514	44950	35190	
13	27045	62626	73159	91149	96509	44204	92237	29969	49315	11804	73854	19470	53014	29375	71488	74388	53945	49607	19816	
14	13094	17725	14103	00067	68843	63585	43804	94548	82693	22799	75304	53248	42151	93928	17343	28683	05926	35384	42328	
15	92382	62518	17732	53163	63852	44840	02597	88572	03107	90169	40005	35246	49440	40295	44390	83043	80201	02934	49260	
16	16215	50809	49326	77232	90155	69955	93892	70445	00906	57002	46686	29690	14821	69783	34733	64845	32065	14527	38702	
17	09342	14528	64727	71403	84156	34483	35613	35670	07468	07468	02717	61518	39583	72863	50707	07416	05041	36756	61065	
18	38148	79001	03509	79424	39625	73315	18811	86230	99882	82896	17048	22811	35573	28944	96889	51823	57268	27658	91950	
19	23689	19987	72382	15247	80205	58090	43804	94548	82693	22799	75304	53248	42151	93928	17343	28683	11252	10355	63175	
20	25407	37726	73089	51057	68733	75763	77991	72641	95386	62230	97844	62947	62230	30500	92816	82322	91701	11057	83257	
21	23349	69456	19693	85688	93876	18661	69018	10332	83137	88257	07611	71163	82712	20853	21499	51496	40715	78952	94287	
22	02322	74911	56095	37738	37738	18216	81781	32245	84081	18436	47744	04603	44522	20853	39347	72310	31052	40814	64207	
23	15072	33261	99219	43307	39239	79712	94753	41450	30944	53912	54293	43376	88116	67416	34908	15238	40561	36850	31078	
24	27002	31036	85278	74547	84809	36232	09373	69471	15606	77209	67556	93979	73363	00300	11217	74405	18937	68834	48307	
25	66181	83316	40386	54316	29505	86092	34563	93204	72973	90760	66581	73041	95809	73986	49408	53316	90841	53421	82315	
26	09779	01822	45337	13128	51128	82703	73550	25179	86104	40638	28020	86282	83365	76600	11261	74354	20868	12141	09539	
27	10791	07706	87481	26107	24857	27805	42710	63471	88004	23455	42578	32471	37840	30872	75074	79027	57813	34715	26693	
28	74833	55767	31312	76411	67389	04691	39687	13596	88730	86850	47290	15397	86163	10371	81911	92124	92971	80860	41012	
29	17583	24038	83701	28570	63561	00098	60784	76098	84217	34997	24856	63911	13221	77028	06573	33667	47280	12956	58666	
30	45601	46977	39325	09286	41133	34031	94867	11849	75171	57682	48352	24836	60799	76281	83402	44709	78930	82969	36910	
31	60683	33112	65985	64203	18070	65437	13624	90890	80945	71987	89060	79852	97854	28324	39638	86936	06702	74304	19496	
32	29956	81169	18877	15296	94368	16317	34239	03643	66031	12242	07637	30412	04921	26471	09605	20466	49793	40539	21077	
33	91713	84235	75296	68673	82414	03197	66596	13083	46278	73498	37711	47786	37468	31963	16908	80888	08252	72635	58926	
34	85704	86588	82837	67822	95963	83021	90732	32661	64751	83903	82994	53232	58202	73318	62471	49630	15868	98748	69191	
35	17921	26111	35373	86494	48266	01888	65735	05315	79328	13367	31722	67288	12110	04776	15168	69862	92347	90789	04162	
36	13929	71341	80488	89827	48277	07229	71953	16128	55074	28782	93819	78050	19364	38037	25706	90879	05215	00260	88207	
37	03248	18280	21667	01311	61806	80201	47889	83052	31029	06023	65557	24496	04713	23668	26623	41356	47049	60676	14426	
38	50583	17972	12690	00452	93766	16414	01212	27964	02766	28786	88001	91382	05129	36041	10257	55558	89979	58061	28957	
39	10636	46975	09419	45986	34672	46916	63881	83117	53947	95218	96648	70303	18191	62404	26558	92804	15415	02865	10701	
40	43896	41278	42205	10425	66560	59967	90139	73563	29875	79033	04118	51573	58356	04226	35010	98316	44602	96478	08433	
41	76714	80963	74907	16890	15492	27489	06067	22287	19760	13056	19317	27753	39431	28996	04465	69635	61374	06317	74669	
42	22393	46719	02083	62428	45177	57562	49243	31748	64278	05313	37182	91221	17307	68307	85725	81898	22568	42251	62025	
43	70942	32042	22776	47761	13503	16037	30875	80754	47491	96012	82590	03607	29560	60413	75000	03806	13111	79671	25416	
44	92011	60326	86346	26738	01983	04186	41388	03844	78554	14964	97294	21991	11217	98087	79124	52275	31088	23089	21498	
45	66456	00136	45685	67607	70796	04389	98128	13599	93710	23974	86771	69504	13345	42544	59616	07867	78717	82840	21515	
46	96292	44348	20898	02227	76512	53185	05357	10760	26809	26046	26046	55559	12200	95106	56496	76662	44880	89457	01332	
47	19680	07146	53951	10935	23333	76233	13706	20502	60403	09745	39689	05996	92290	79024	70271	93332	96212	94495	26842	
48	67347	31442	24536	60151	05498	64678	87569	65066	17790	55413	82265	89573	01437	43986	49041	52966	35035	88965	84671	
49	95888	59255	06898	99137	54071	81265	42223	83303	48694	81953	13128	35791	11296	45319	06330	82027	90608	43091	90387	

TEN THOUSAND RANDOM DIGITS

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	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-99
50	54441	64681	93190	00993	62130	44484	46293	60717	50239	76319	58149	85086	16502	97541	76611	94229	34987	86718	87208	05426
51	08573	52937	84274	95106	89117	65849	41356	65549	78787	76342	97306	52449	55596	97563	36525	92469	29469	31235	79276	10831
52	81067	68052	14270	19718	88499	63303	13533	91982	78787	60828	09942	79344	78160	55777	55777	22047	57615	15717	86239	36578
53	39737	58991	75278	98046	52284	40164	72442	77824	72900	14886	83842	28631	74893	47911	92170	38181	30416	54860	44120	73031
54	34958	76090	08827	61623	31114	86952	83645	91786	29633	78294	37378	30395	20163	76111	13712	39449	99224	18806	51418	70006
55	61417	72424	92626	71952	69709	81259	58472	43409	84454	88648	88381	56550	47467	59663	61117	39716	32927	06168	06217	45477
56	99187	14149	57474	32268	85424	90378	44682	47606	89295	02420	31044	21404	15968	67231	30772	81482	38807	84283	84283	63552
57	13130	13064	36465	48133	35319	05720	76317	70953	50823	06783	00909	63837	91328	81106	50193	86806	21931	18054	18054	49601
58	65563	11831	82402	46929	91446	72037	17205	89680	59084	53718	69882	37028	41732	37425	80832	03320	20680	32653	90145	03029
59	28737	49502	06060	52100	43704	50839	22538	56768	83467	19313	26059	78324	22501	73825	16927	31543	15695	74216	98372	28547
60	50353	74022	59767	49927	45882	74099	18758	37510	58560	07050	38573	98078	38982	33078	93524	45606	53463	20391	81637	37269
61	65208	96466	29917	22862	69972	35178	32911	08172	06277	62750	70624	00063	81455	16974	12848	21801	55481	78978	26795	10553
62	21323	38148	26696	81741	25131	20087	67452	19670	35898	50636	49806	23976	05640	29804	38988	25024	76051	02341	63219	75864
63	67875	29831	59330	46570	69768	36671	01031	95995	68417	68665	05461	67523	48316	14613	08541	35231	38312	14969	67279	50502
64	82631	26260	86554	31881	70512	37899	38851	40568	54284	24056	76582	62153	53801	51219	30424	32599	49099	83959	68408	20147
65	91989	39633	59039	12526	37730	68848	71999	28513	69018	10289	16660	80470	75062	75588	24384	27874	20018	11428	32265	07692
66	12950	31418	93423	69756	34036	53097	97241	92480	49745	42461	60166	42424	97470	88451	81270	80070	72959	26220	59939	31127
67	08328	27427	95474	97217	05034	26676	49629	13594	50525	13485	28953	03272	31460	41691	57736	72052	22762	96323	27616	53123
68	63986	16698	82804	04524	39919	32381	67488	89537	59490	67536	47536	86439	95210	96390	38704	15484	07426	70675	06888	81203
69	55775	75005	57912	20977	35722	51931	89565	77579	93085	06467	73457	26657	36983	72410	30244	97711	78085	25652	09373	64077
70	24761	56877	78809	40748	40748	69707	56652	12462	40528	73269	11190	66193	66287	09116	48140	37669	02932	50799	17255	06181
71	43820	80976	26795	57553	28319	23376	51795	26123	51102	89853	57062	78964	44455	14036	36098	40773	11688	33150	07439	36127
72	66669	02880	02987	33815	94206	70013	73872	88678	17726	60640	96254	97254	87254	18991	94884	54099	94884	42283	63258	50651
73	49944	66723	19779	50416	42800	21733	82052	28504	15593	51799	97521	83669	85968	16135	30133	51312	17831	75016	80278	68953
74	71003	87598	61296	95019	21568	86134	66096	65403	47166	78638	40273	04838	13561	64757	17461	78085	60094	27010	80945	66439
75	52715	04593	69484	93411	38046	40293	04293	60830	03914	75357	03250	06176	49963	29760	69546	61336	39429	41985	18572	98128
76	21998	31729	89963	11573	49442	69467	40265	56066	36074	23705	57451	47098	63495	71237	18304	29753	83844	80143	39048	62654
77	58970	96827	18377	31564	23555	86338	79250	43168	96929	97732	62331	20492	15393	84270	24396	32962	21632	92965	38670	44923
78	67592	59149	42554	42719	13553	48560	81167	10747	92532	19867	32290	51079	06512	38806	93327	80086	19088	59887	98416	24918
79	18298	16429	09357	96436	11237	88039	81020	00428	75731	37779	28014	80428	92853	31333	32648	16734	43418	90124	15086	48444
80	88420	28841	42628	84647	59024	52032	31251	72017	43875	48320	18950	16091	29543	65817	07002	73115	94115	20271	50250	25061
81	07627	88424	23381	29680	14027	75905	27037	22113	77873	78711	17403	59503	01866	13049	07263	13039	83844	80143	39048	62654
82	37917	95581	04979	21041	95252	62450	05937	81670	44894	47262	27099	50489	66613	21843	71746	65868	16208	46781	93402	12323
83	14783	95119	68464	08726	74818	91700	05961	23354	74649	50540	87076	53174	12165	84495	47947	60706	64034	31635	65169	93070
84	05378	32640	64562	15303	13168	23189	88198	63617	58566	56047	89044	43974	14924	46906	26052	51851	44197	61694	57429	63395
85	19640	96709	22047	07825	40563	99500	39989	96593	32254	37158	98048	64400	24705	75711	36232	57624	41424	77366	52790	84705
86	20514	11081	51131	56469	33947	77703	35679	45774	06776	67062	09345	12956	49770	80311	32319	48238	16032	92088	51222	82865
87	96763	56249	81243	62416	84451	14696	38195	70435	45948	67690	07086	76528	76195	47584	62414	40397	71837	54823	26536	56792
88	49439	61075	31558	59740	52759	55323	95226	01385	20158	54054	93128	25657	46872	11206	06831	87944	97914	64670	45760	34353
89	16294	50548	71317	32168	86071	47314	63393	56367	46910	51269	85137	70964	29947	27795	23547	37682	96105	26848	09389	04326
90	31381	94301	79273	32843	05862	96211	93960	00671	67631	23952	32798	39024	13814	98546	40585	84108	74603	94812	73968	68766
91	80302	87203	03227	66021	99666	98368	39222	36056	81992	20121	62196	26371	89880	52078	47781	35260	83464	65942	91761	68766
92	40700	31826	94774	11366	81391	33602	96088	84119	93204	26825	62707	81825	40987	97656	89714	52177	23778	07482	91678	40128
93	68692	66849	29366	77540	14978	06508	10824	63416	23629	63029	05500	28982	86124	19554	80612	94935	61924	31828	79369	23507
94	19047	10784	19607	20296	31804	72984	60060	50353	32360	58909	79476	31445	59496	85132	24582	26024	24002	63718	79164	43556
95	82867	69266	50733	62630	00956	61500	89913	30049	82321	62367	10653	29954	97568	91541	33139	84925	72271	02546	64818	14381
96	26328	28928	52600	72997	80943	04084	86662	90025	14360	64867	30524	06495	00896	40666	68574	49574	19705	16429	90881	04103
97	51166	00607	49962	30724	81707	14548	23844	47336	57492	02207	69050	28019	74066	14506	06423	38332	34191	62663	85323	83923
98	97245	53182	15368	85136	98869	37112	95152	50973	50973	98658	27908	78802	63446	07674	94871	72449	42705	26513	19883	19883
99	54998	88830	95639	45104	72676	28220	82576	57381	34438	24565	64520	16618	47409	18574	78136	46047	01277	79146	95759	36781

Source: Prepared by Fred Gruenberger, Numerical Analysis Laboratory, University of Wisconsin, Madison, Wis., 1952.

Table II Binomial Probability Sums $\sum_{r=0}^n \binom{n}{r} p^r (1-p)^{n-r}$

n	p										
	0.10	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.90
5	0.9805	0.3277	0.2373	0.1681	0.0778	0.0312	0.0102	0.0024	0.0003	0.0000	0.0000
1	0.9185	0.3713	0.6328	0.5282	0.3370	0.1875	0.0970	0.0508	0.0267	0.0141	0.0075
2	0.8834	0.3911	0.6863	0.6095	0.4826	0.3029	0.1718	0.1031	0.0579	0.0326	0.0186
3	0.8694	0.3987	0.7148	0.6672	0.5428	0.3572	0.2048	0.1219	0.0713	0.0423	0.0248
4	1.0000	0.9997	0.9990	0.9972	0.9949	0.9885	0.9732	0.9519	0.9273	0.9000	0.8700
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
10	0.3487	0.1074	0.0563	0.0282	0.0060	0.0010	0.0001	0.0000	0.0000	0.0000	0.0000
0	0.7361	0.3758	0.2440	0.1493	0.0464	0.0107	0.0017	0.0001	0.0000	0.0000	0.0000
1	0.9298	0.6778	0.5256	0.3828	0.1673	0.0547	0.0123	0.0016	0.0001	0.0000	0.0000
2	0.9872	0.8791	0.7759	0.6496	0.3823	0.1719	0.0548	0.0106	0.0009	0.0000	0.0000
3	0.9984	0.9672	0.9219	0.8497	0.6331	0.3730	0.1662	0.0474	0.0064	0.0002	0.0000
4	0.9999	0.9936	0.9803	0.9527	0.8338	0.6230	0.3669	0.1503	0.0028	0.0001	0.0000
5	1.0000	0.9991	0.9965	0.9894	0.9457	0.8281	0.6177	0.3504	0.1209	0.0128	0.0016
6	1.0000	0.9999	0.9996	0.9984	0.9877	0.9453	0.8327	0.6172	0.3222	0.0702	0.0202
7	1.0000	1.0000	1.0000	0.9999	0.9989	0.9893	0.9536	0.8507	0.6242	0.2639	0.0513
8	1.0000	1.0000	1.0000	1.0000	0.9999	0.9993	0.9940	0.9718	0.8926	0.6513	0.2639
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
15	0.2059	0.0332	0.0134	0.0047	0.0005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0	0.3490	0.1671	0.0802	0.0353	0.0052	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.8159	0.4482	0.2461	0.1268	0.0501	0.0176	0.0070	0.0030	0.0010	0.0000	0.0000
2	0.9374	0.6485	0.4065	0.2173	0.0922	0.0322	0.0094	0.0027	0.0000	0.0000	0.0000
3	0.9872	0.8189	0.5116	0.2716	0.1032	0.0338	0.0132	0.0008	0.0001	0.0000	0.0000
4	0.9997	0.9319	0.6434	0.3689	0.1206	0.0436	0.0151	0.0008	0.0000	0.0000	0.0000
5	1.0000	0.9958	0.9827	0.9500	0.8069	0.5000	0.2131	0.0500	0.0042	0.0000	0.0000
6	1.0000	0.9992	0.9958	0.9848	0.9050	0.6964	0.3902	0.1311	0.0181	0.0000	0.0000
7	1.0000	0.9999	0.9992	0.9963	0.9662	0.8491	0.7082	0.4845	0.1642	0.0127	0.0023
8	1.0000	1.0000	1.0000	0.9999	0.9981	0.9408	0.7827	0.5712	0.3518	0.1642	0.0556
9	1.0000	1.0000	1.0000	1.0000	0.9997	0.9963	0.9729	0.8712	0.6020	0.1841	0.0556
10	1.0000	1.0000	1.0000	1.0000	1.0000	0.9995	0.9948	0.9647	0.8329	0.4510	0.0556
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9995	0.9953	0.9648	0.7941	0.4510
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table III Poisson Probability Sums $\sum_{r=0}^n \frac{\mu^r}{r!} e^{-\mu}$

r	μ										
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.9	0.9
0	0.9048	0.8187	0.7408	0.6730	0.6065	0.5488	0.4966	0.4493	0.4066	0.3675	0.3311
1	0.9953	0.9825	0.9631	0.9384	0.9098	0.8781	0.8442	0.8088	0.7725	0.7358	0.6987
2	0.9998	0.9989	0.9964	0.9921	0.9856	0.9769	0.9659	0.9526	0.9371	0.9197	0.8985
3	1.0000	0.9999	0.9997	0.9992	0.9982	0.9966	0.9942	0.9909	0.9865	0.9810	0.9747
4	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9992	0.9986	0.9977	0.9967	0.9957
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9997	0.9996	0.9995
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Poisson Probability Sums $\sum_{x=0}^r p(x; \mu)$ (Continued)

	μ									
	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0002	0.0012	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002
2	0.0028	0.0012	0.0005	0.0010	0.0005	0.0002	0.0001	0.0002	0.0001	0.0002
3	0.0103	0.0049	0.0023	0.0037	0.0018	0.0009	0.0004	0.0007	0.0003	0.0001
4	0.0293	0.0151	0.0076	0.0107	0.0055	0.0028	0.0014	0.0007	0.0003	0.0001
5	0.0671	0.0375	0.0203	0.0259	0.0142	0.0076	0.0040	0.0021	0.0010	0.0002
6	0.1301	0.0786	0.0458	0.0540	0.0316	0.0180	0.0100	0.0054	0.0029	0.0010
7	0.2202	0.1432	0.0895	0.1058	0.0621	0.0374	0.0220	0.0126	0.0071	0.0034
8	0.3328	0.2320	0.1550	0.1658	0.1094	0.0699	0.0433	0.0261	0.0154	0.0071
9	0.4579	0.3405	0.2424	0.2517	0.1757	0.1185	0.0774	0.0491	0.0304	0.0154
10	0.5830	0.4599	0.3472	0.3532	0.2600	0.1848	0.1270	0.0847	0.0549	0.0304
11	0.6968	0.5793	0.4616	0.4631	0.3385	0.2676	0.1931	0.1350	0.0917	0.0549
12	0.7916	0.6887	0.5760	0.5730	0.4644	0.3632	0.2745	0.2009	0.1426	0.0917
13	0.8645	0.7813	0.6815	0.6751	0.5704	0.4657	0.3675	0.2808	0.2081	0.1426
14	0.9165	0.8540	0.7720	0.7651	0.6641	0.5681	0.4667	0.3715	0.2867	0.2081
15	0.9513	0.9074	0.8444	0.8444	0.7559	0.6641	0.5660	0.4677	0.3750	0.2867
16	0.9730	0.9441	0.8987	0.8987	0.8355	0.7489	0.6593	0.5640	0.4686	0.3750
17	0.9857	0.9678	0.9370	0.9370	0.8905	0.8272	0.7489	0.6540	0.5622	0.4686
18	0.9928	0.9823	0.9626	0.9626	0.9302	0.8826	0.8195	0.7423	0.6550	0.5622
19	0.9965	0.9907	0.9787	0.9787	0.9573	0.9235	0.8752	0.8122	0.7363	0.6509
20	0.9984	0.9953	0.9884	0.9884	0.9750	0.9521	0.9170	0.8682	0.8055	0.7307
21	0.9993	0.9977	0.9939	0.9939	0.9859	0.9712	0.9469	0.9108	0.8615	0.7991
22	0.9999	0.9990	0.9970	0.9970	0.9924	0.9833	0.9673	0.9418	0.9047	0.8551
23	1.0000	0.9995	0.9985	0.9985	0.9960	0.9907	0.9805	0.9633	0.9367	0.8989
24	1.0000	0.9999	0.9993	0.9993	0.9980	0.9950	0.9888	0.9777	0.9594	0.9317
25	1.0000	1.0000	0.9999	0.9999	0.9990	0.9974	0.9938	0.9869	0.9748	0.9554
26	1.0000	1.0000	0.9999	0.9999	0.9995	0.9987	0.9967	0.9925	0.9848	0.9718
27	1.0000	1.0000	0.9999	0.9999	0.9998	0.9994	0.9983	0.9959	0.9912	0.9827
28	1.0000	1.0000	0.9999	0.9999	0.9999	0.9997	0.9991	0.9978	0.9950	0.9897
29	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9996	0.9989	0.9973	0.9941
30	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9997	0.9993	0.9982
31	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9996	0.9990
32	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9990
33	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9990
34	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9990
35	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9990
36	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9990
37	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9990

Poisson Probability Sums $\sum_{x=0}^r p(x; \mu)$ (Continued)

r	μ									
	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	
0	0.0041	0.0025	0.0015	0.0009	0.0006	0.0003	0.0002	0.0001	0.0001	
1	0.0266	0.0174	0.0113	0.0073	0.0047	0.0030	0.0019	0.0012	0.0008	
2	0.0884	0.0620	0.0430	0.0296	0.0203	0.0138	0.0093	0.0062	0.0042	
3	0.2017	0.1512	0.1118	0.0818	0.0591	0.0424	0.0301	0.0212	0.0149	
4	0.3575	0.2851	0.2237	0.1730	0.1321	0.0996	0.0744	0.0550	0.0403	
5	0.5289	0.4457	0.3690	0.3007	0.2414	0.1912	0.1496	0.1157	0.0885	
6	0.6860	0.6063	0.5265	0.4497	0.3782	0.3134	0.2562	0.2068	0.1649	
7	0.8095	0.7440	0.6728	0.5987	0.5246	0.4530	0.3856	0.3239	0.2687	
8	0.8944	0.8472	0.7916	0.7291	0.6620	0.5925	0.5231	0.4557	0.3918	
9	0.9462	0.9161	0.8774	0.8305	0.7764	0.7166	0.6530	0.5874	0.5218	
10	0.9747	0.9574	0.9332	0.9015	0.8622	0.8159	0.7634	0.7060	0.6453	
11	0.9890	0.9799	0.9661	0.9466	0.9208	0.8881	0.8487	0.8030	0.7520	
12	0.9955	0.9912	0.9840	0.9730	0.9573	0.9362	0.9091	0.8758	0.8364	
13	0.9983	0.9964	0.9929	0.9872	0.9784	0.9658	0.9486	0.9261	0.8981	
14	0.9994	0.9986	0.9970	0.9943	0.9897	0.9827	0.9726	0.9585	0.9400	
15	0.9998	0.9995	0.9988	0.9976	0.9954	0.9918	0.9862	0.9780	0.9665	
16	0.9999	0.9998	0.9996	0.9990	0.9980	0.9963	0.9934	0.9889	0.9823	
17	1.0000	0.9999	0.9998	0.9996	0.9992	0.9984	0.9970	0.9947	0.9911	
18	1.0000	1.0000	0.9999	0.9999	0.9997	0.9994	0.9987	0.9976	0.9957	
19	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9995	0.9989	0.9980	
20	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9991	
21	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	
22	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	
23	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	
24	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	

Table V THE DISTRIBUTION OF F^2 (TWO-TAILED TESTS)

Degrees of Freedom	Probability of a Larger Value, Sign Ignored									
	0.500	0.400	0.200	0.100	0.050	0.025	0.010	0.005	0.001	
1	1.000	1.376	3.078	6.314	12.706	25.452	63.657	14.089	0.001	
2	0.816	1.061	1.886	2.920	4.303	6.205	9.925	7.453	31.598	
3	0.765	0.978	1.638	2.353	3.182	4.176	5.841	5.598	12.941	
4	0.741	0.941	1.533	2.132	2.776	3.495	4.604	4.773	8.589	
5	0.727	0.920	1.476	2.015	2.571	3.163	4.032	4.317	5.959	
6	0.718	0.906	1.440	1.943	2.447	2.969	3.707	4.029	5.405	
7	0.711	0.896	1.415	1.895	2.365	2.841	3.499	3.832	5.041	
8	0.706	0.889	1.397	1.860	2.306	2.752	3.355	3.690	4.781	
9	0.703	0.883	1.383	1.833	2.262	2.685	3.250	3.581	4.587	
10	0.700	0.879	1.372	1.812	2.228	2.634	3.169	3.106	4.437	
11	0.697	0.876	1.363	1.796	2.201	2.593	3.106	3.428	4.318	
12	0.695	0.873	1.356	1.782	2.179	2.560	3.055	3.372	4.221	
13	0.694	0.870	1.350	1.771	2.160	2.533	3.012	3.326	4.140	
14	0.692	0.868	1.345	1.761	2.145	2.510	2.977	3.286	4.073	
15	0.691	0.866	1.341	1.753	2.131	2.490	2.947	3.252	4.015	
16	0.690	0.865	1.337	1.746	2.120	2.473	2.921	3.222	3.965	
17	0.689	0.863	1.333	1.740	2.110	2.458	2.898	3.197	3.922	
18	0.688	0.862	1.330	1.734	2.101	2.445	2.878	3.174	3.883	
19	0.688	0.861	1.328	1.729	2.093	2.433	2.861	3.153	3.850	
20	0.687	0.860	1.325	1.725	2.086	2.423	2.845	3.135	3.819	
21	0.686	0.859	1.323	1.721	2.080	2.414	2.831	3.119	3.792	
22	0.686	0.858	1.321	1.717	2.074	2.406	2.819	3.104	3.767	
23	0.685	0.858	1.319	1.714	2.069	2.398	2.807	3.090	3.745	
24	0.685	0.857	1.318	1.711	2.064	2.391	2.797	3.078	3.725	
25	0.684	0.856	1.316	1.708	2.060	2.385	2.787	3.067	3.707	
26	0.684	0.856	1.315	1.706	2.056	2.379	2.779	3.056	3.690	
27	0.684	0.855	1.314	1.703	2.052	2.373	2.771	3.047	3.674	
28	0.683	0.855	1.313	1.701	2.048	2.368	2.763	3.038	3.659	
29	0.683	0.854	1.311	1.699	2.045	2.364	2.756	3.030	3.646	
30	0.683	0.854	1.310	1.697	2.042	2.360	2.750	2.996	3.591	
35	0.682	0.852	1.306	1.690	2.030	2.342	2.724	2.971	3.551	
40	0.681	0.851	1.303	1.684	2.021	2.329	2.704	2.952	3.520	
45	0.680	0.850	1.301	1.680	2.014	2.319	2.690	2.937	3.496	
50	0.680	0.849	1.299	1.676	2.008	2.310	2.678	2.925	3.476	
55	0.679	0.849	1.297	1.673	2.004	2.304	2.669	2.915	3.460	
60	0.679	0.848	1.296	1.671	2.000	2.299	2.660	2.915	3.460	
70	0.678	0.847	1.294	1.667	1.994	2.290	2.648	2.899	3.435	
80	0.678	0.847	1.293	1.665	1.989	2.284	2.638	2.887	3.416	
90	0.678	0.846	1.291	1.662	1.986	2.279	2.631	2.878	3.402	
100	0.677	0.846	1.290	1.661	1.982	2.276	2.625	2.871	3.390	
120	0.677	0.845	1.289	1.658	1.980	2.270	2.617	2.860	3.373	
∞	0.6745	0.8416	1.2816	1.6448	1.9600	2.2414	2.5758	2.8070	3.2905	

* Parts of this table are reprinted by permission from R. A. Fisher's *Statistical Methods for Research Workers*, published by Oliver and Boyd, Edinburgh (1925-1950); from Maxine Mergenson's "Table of Percentage Points of the F -Distribution," *Biometrika*, 32:300 (1942); and from Bernard Ostle's *Statistics in Research*, Iowa State University Press (1954).

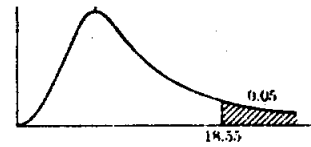
Table IV CUMULATIVE NORMAL FREQUENCY DISTRIBUTION
(Area under the standard normal curve from 0 to Z)

Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3.1	0.4990	0.4991	0.4991	0.4992	0.4992	0.4992	0.4992	0.4992	0.4993	0.4993
3.2	0.4993	0.4993	0.4994	0.4994	0.4994	0.4994	0.4994	0.4994	0.4995	0.4995
3.3	0.4995	0.4995	0.4995	0.4996	0.4996	0.4996	0.4996	0.4996	0.4997	0.4997
3.4	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4998
3.6	0.4998	0.4998	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.9	0.5000									

Percentage Points of the χ^2 Distribution

Table VI

Percentages represent areas in right-hand end of distribution. Example: For $\nu = 12$, $P(\chi^2 > 18.55) = 0.05$.



Degrees of freedom	Probability that chi-square value will be exceeded									
	0.995	0.990	0.975	0.950	0.900	0.100	0.050	0.025	0.010	0.005
1	0.00393	0.00157	0.00982	0.00393	0.0158	2.71	3.84	5.02	6.63	7.88
2	0.0100	0.0201	0.0506	0.103	0.211	4.61	5.99	7.38	9.21	10.60
3	0.072	0.115	0.216	0.352	0.584	6.25	7.81	9.35	11.34	12.84
4	0.207	0.297	0.484	0.711	1.064	7.78	9.49	11.14	13.28	14.86
5	0.412	0.554	0.831	1.145	1.61	9.24	11.07	12.83	15.09	16.75
6	0.676	0.872	1.24	1.64	2.20	10.64	12.50	14.45	16.81	18.55
7	0.989	1.24	1.69	2.17	2.83	12.02	14.07	16.01	18.48	20.23
8	1.34	1.65	2.18	2.73	3.49	13.36	15.51	17.53	20.09	21.96
9	1.73	2.09	2.70	3.33	4.17	14.68	16.92	19.02	21.67	23.59
10	2.16	2.56	3.25	3.94	4.87	15.99	18.31	20.48	23.21	25.19
11	2.60	3.05	3.82	4.57	5.58	17.28	19.63	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	44.13
24	9.89	10.36	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	12.83	14.57	16.15	18.11	36.74	40.11	43.19	46.96	49.64
28	12.46	13.56	15.31	16.93	18.94	37.92	41.34	44.46	48.28	50.99
29	13.12	14.26	16.05	17.71	19.77	39.09	42.56	45.72	49.59	52.34
30	13.79	14.95	16.79	18.49	20.60	40.26	43.77	46.98	50.89	53.67
40	20.71	22.16	24.43	26.51	29.05	51.80	55.76	59.34	63.69	66.77
50	27.99	29.71	32.36	34.76	37.69	63.17	67.50	71.42	76.15	79.49
60	35.53	37.43	40.48	43.19	46.46	74.40	79.08	83.30	83.38	91.95
70	43.28	45.44	48.76	51.74	55.33	85.53	90.53	95.02	100.4	104.22
80	51.17	53.54	57.15	60.39	64.28	98.58	101.9	106.6	112.3	116.32
90	59.20	61.75	65.65	69.13	73.29	107.6	113.1	118.1	124.1	123.3
100	67.33	70.06	74.22	77.93	82.36	113.5	124.3	129.6	135.3	140.2
z_α	-2.58	-2.33	-1.96	-1.64	-1.28	+1.28	+1.64	+1.96	+2.33	+2.58

NOTE: For $\nu > 100$ (i.e., for more than 100 degrees of freedom) take

$$\chi^2 = \nu \left[1 - \frac{2}{9\nu} + z_\alpha \sqrt{\frac{2}{9\nu}} \right]^2 \quad \text{or} \quad \chi^2 = \frac{1}{2} [z_\alpha + \sqrt{2(\nu - 1)}]^2$$

according to the degree of accuracy required. z_α is the standardized normal deviate corresponding to the α level of significance, and is shown in the bottom line of the table.

F Distribution (Upper 5% points) (Upper 1% points) Table VII

n	m	1	2	3	4	5	6	7	8	9	10	12	15	20	24	30	40	60	120	∞
1	1	161.4	199.5	216.7	224.6	230.2	234.0	238.0	240.5	241.9	242.9	243.9	245.0	246.0	247.0	248.0	249.1	251.1	253.3	254.3
2	1	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40	19.41	19.43	19.44	19.45	19.46	19.47	19.48	19.49	19.50
3	1	10.13	9.55	9.28	9.12	9.01	8.94	8.88	8.85	8.81	8.79	8.77	8.76	8.75	8.74	8.74	8.73	8.73	8.73	8.73
4	1	7.71	6.94	6.58	6.39	6.26	6.16	6.08	6.04	6.00	5.98	5.96	5.95	5.94	5.94	5.94	5.93	5.93	5.93	5.93
5	1	6.61	5.70	5.41	5.19	5.05	4.95	4.86	4.82	4.77	4.74	4.73	4.72	4.71	4.71	4.71	4.70	4.70	4.70	4.70
6	1	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.08	4.07	4.06	4.05	4.05	4.05	4.04	4.04	4.04	4.04
7	1	5.48	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.63	3.62	3.61	3.61	3.61	3.60	3.60	3.60	3.60
8	1	5.05	4.46	4.07	3.84	3.68	3.58	3.50	3.44	3.39	3.35	3.33	3.32	3.31	3.31	3.31	3.30	3.30	3.30	3.30
9	1	4.71	4.26	3.86	3.63	3.48	3.37	3.28	3.23	3.18	3.14	3.12	3.11	3.10	3.10	3.10	3.09	3.09	3.09	3.09
10	1	4.46	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.96	2.95	2.94	2.94	2.94	2.93	2.93	2.93	2.93
11	1	4.24	3.96	3.57	3.34	3.20	3.09	3.01	2.94	2.89	2.85	2.83	2.82	2.81	2.81	2.81	2.80	2.80	2.80	2.80
12	1	4.05	3.80	3.41	3.18	3.04	2.93	2.85	2.78	2.73	2.69	2.67	2.66	2.65	2.65	2.65	2.64	2.64	2.64	2.64
13	1	3.89	3.64	3.25	3.02	2.88	2.77	2.69	2.62	2.57	2.53	2.51	2.50	2.49	2.49	2.49	2.48	2.48	2.48	2.48
14	1	3.74	3.49	3.10	2.87	2.73	2.62	2.54	2.47	2.42	2.38	2.36	2.35	2.34	2.34	2.34	2.33	2.33	2.33	2.33
15	1	3.61	3.36	2.97	2.74	2.60	2.49	2.41	2.34	2.29	2.25	2.23	2.22	2.21	2.21	2.21	2.20	2.20	2.20	2.20
16	1	3.49	3.24	2.85	2.62	2.48	2.37	2.29	2.22	2.17	2.13	2.11	2.10	2.09	2.09	2.09	2.08	2.08	2.08	2.08
17	1	3.38	3.13	2.74	2.51	2.37	2.26	2.18	2.11	2.06	2.02	1.99	1.98	1.97	1.97	1.97	1.96	1.96	1.96	1.96
18	1	3.28	3.03	2.64	2.41	2.27	2.16	2.08	2.01	1.96	1.92	1.89	1.88	1.87	1.87	1.87	1.86	1.86	1.86	1.86
19	1	3.19	2.94	2.55	2.32	2.18	2.07	1.99	1.92	1.87	1.83	1.80	1.79	1.78	1.78	1.78	1.77	1.77	1.77	1.77
20	1	3.11	2.86	2.47	2.24	2.10	1.99	1.91	1.84	1.79	1.75	1.72	1.71	1.70	1.70	1.70	1.69	1.69	1.69	1.69
21	1	3.04	2.79	2.40	2.17	2.03	1.92	1.84	1.77	1.72	1.68	1.65	1.64	1.63	1.63	1.63	1.62	1.62	1.62	1.62
22	1	2.97	2.72	2.33	2.10	1.96	1.85	1.77	1.70	1.65	1.61	1.58	1.57	1.56	1.56	1.56	1.55	1.55	1.55	1.55
23	1	2.91	2.66	2.27	2.04	1.90	1.79	1.71	1.64	1.59	1.55	1.52	1.51	1.50	1.50	1.50	1.49	1.49	1.49	1.49
24	1	2.85	2.60	2.21	1.98	1.84	1.73	1.65	1.58	1.53	1.49	1.46	1.45	1.44	1.44	1.44	1.43	1.43	1.43	1.43
25	1	2.80	2.55	2.16	1.93	1.79	1.68	1.60	1.53	1.48	1.44	1.41	1.40	1.39	1.39	1.39	1.38	1.38	1.38	1.38
26	1	2.75	2.50	2.11	1.88	1.74	1.63	1.55	1.48	1.43	1.39	1.36	1.35	1.34	1.34	1.34	1.33	1.33	1.33	1.33
27	1	2.70	2.45	2.06	1.83	1.69	1.58	1.50	1.43	1.38	1.34	1.31	1.30	1.29	1.29	1.29	1.28	1.28	1.28	1.28
28	1	2.66	2.41	2.02	1.79	1.65	1.54	1.46	1.39	1.34	1.30	1.27	1.26	1.25	1.25	1.25	1.24	1.24	1.24	1.24
29	1	2.62	2.37	1.98	1.75	1.61	1.50	1.42	1.35	1.30	1.26	1.23	1.22	1.21	1.21	1.21	1.20	1.20	1.20	1.20
30	1	2.58	2.33	1.94	1.71	1.57	1.46	1.38	1.31	1.26	1.22	1.19	1.18	1.17	1.17	1.17	1.16	1.16	1.16	1.16
35	1	2.48	2.23	1.84	1.61	1.47	1.36	1.28	1.21	1.16	1.12	1.09	1.08	1.07	1.07	1.07	1.06	1.06	1.06	1.06
40	1	2.41	2.16	1.77	1.54	1.40	1.29	1.21	1.14	1.09	1.05	1.02	1.01	1.00	1.00	1.00	0.99	0.99	0.99	0.99
45	1	2.35	2.10	1.71	1.48	1.34	1.23	1.15	1.08	1.03	0.99	0.96	0.95	0.94	0.94	0.94	0.93	0.93	0.93	0.93
50	1	2.30	2.05	1.66	1.43	1.29	1.18	1.10	1.03	0.98	0.94	0.91	0.90	0.89	0.89	0.89	0.88	0.88	0.88	0.88
60	1	2.24	1.99	1.60	1.37	1.23	1.12	1.04	0.97	0.92	0.88	0.85	0.84	0.83	0.83	0.83	0.82	0.82	0.82	0.82
70	1	2.19	1.94	1.55	1.32	1.18	1.07	0.99	0.92	0.87	0.83	0.80	0.79	0.78	0.78	0.78	0.77	0.77	0.77	0.77
80	1	2.15	1.90	1.51	1.28	1.14	1.03	0.95	0.88	0.83	0.79	0.76	0.75	0.74	0.74	0.74	0.73	0.73	0.73	0.73
90	1	2.11	1.86	1.47	1.24	1.10	0.99	0.91	0.84	0.79	0.75	0.72	0.71	0.70	0.70	0.70	0.69	0.69	0.69	0.69
100	1	2.08	1.83	1.44	1.21	1.07	0.96	0.88	0.81	0.76	0.72	0.69	0.68	0.67	0.67	0.67	0.66	0.66	0.66	0.66
120	1	2.04	1.79	1.40	1.17	1.03	0.92	0.84	0.77	0.72	0.68	0.65	0.64	0.63	0.63	0.63	0.62	0.62	0.62	0.62
∞	1	2.00	1.75	1.36	1.13	0.99	0.88	0.80	0.73	0.68	0.64	0.61	0.60	0.59	0.59	0.59	0.58	0.58	0.58	0.58

SOURCE: This table is abridged from Table 18 of the *Biometrika Tables for Statisticians*, Vol. 1 (1st ed.), edited by E. S. Pearson and H. O. Hartley. Reproduced with the kind permission of E. S. Pearson and the trustees of *Biometrika*.

UPPER PERCENTAGE POINTS OF THE STUDENTIZED RANGE, $q_{\alpha} = \frac{\bar{x}_{\max} - \bar{x}_{\min}}{s}$
 Table VIII
 UPPER PERCENTAGE POINTS OF THE STUDENTIZED RANGE, $q_{\alpha} = \frac{\bar{x}_{\max} - \bar{x}_{\min}}{s}$

Error d_f	α	$p = \text{number of treatment means}$										α									
		2	3	4	5	6	7	8	9	10	11		12	13	14	15	16	17	18	19	20
5	.05	3.64	4.60	5.22	5.67	6.03	6.33	6.58	6.80	6.99	7.17	7.32	7.47	7.60	7.72	7.83	7.93	8.02	8.12	8.21	.05
	.01	5.70	6.97	7.80	8.42	8.91	9.32	9.67	9.97	10.24	10.48	10.70	10.89	11.08	11.24	11.40	11.55	11.68	11.81	11.93	.01
6	.05	3.46	4.34	4.90	5.31	5.63	5.89	6.12	6.32	6.49	6.65	6.79	6.92	7.05	7.14	7.24	7.34	7.43	7.51	7.59	.05
	.01	5.24	6.33	7.03	7.56	7.97	8.32	8.61	8.87	9.10	9.30	9.49	9.65	9.81	9.95	10.08	10.21	10.32	10.43	10.54	.01
7	.05	3.34	4.16	4.68	5.06	5.36	5.61	5.82	6.00	6.16	6.30	6.43	6.55	6.66	6.76	6.85	6.94	7.02	7.09	7.17	.05
	.01	4.95	5.92	6.54	7.01	7.37	7.68	7.94	8.17	8.37	8.53	8.71	8.86	9.00	9.12	9.24	9.35	9.46	9.55	9.65	.01
8	.05	3.26	4.04	4.53	4.89	5.17	5.40	5.60	5.77	5.92	6.05	6.18	6.29	6.39	6.48	6.57	6.65	6.73	6.80	6.87	.05
	.01	4.74	5.63	6.20	6.63	6.96	7.24	7.47	7.68	7.87	8.03	8.18	8.31	8.44	8.55	8.66	8.76	8.85	8.94	9.03	.01
9	.05	3.20	3.95	4.42	4.76	5.02	5.24	5.43	5.60	5.74	5.87	5.98	6.09	6.19	6.28	6.36	6.44	6.51	6.58	6.64	.05
	.01	4.60	5.48	5.96	6.35	6.66	6.91	7.13	7.32	7.49	7.65	7.78	7.93	8.03	8.13	8.23	8.32	8.41	8.49	8.57	.01
10	.05	3.15	3.88	4.35	4.65	4.91	5.12	5.30	5.46	5.60	5.72	5.83	5.93	6.03	6.11	6.20	6.27	6.34	6.40	6.47	.05
	.01	4.48	5.27	5.77	6.14	6.43	6.67	6.87	7.05	7.21	7.36	7.48	7.60	7.71	7.81	7.91	7.99	8.07	8.15	8.22	.01
11	.05	3.11	3.82	4.26	4.57	4.82	5.03	5.20	5.35	5.49	5.61	5.71	5.81	5.90	5.99	6.06	6.14	6.20	6.26	6.33	.05
	.01	4.39	5.14	5.62	5.97	6.25	6.48	6.67	6.84	6.99	7.13	7.25	7.36	7.46	7.56	7.65	7.73	7.81	7.88	7.95	.01
12	.05	3.08	3.77	4.20	4.51	4.75	4.95	5.12	5.27	5.40	5.51	5.62	5.71	5.80	5.88	5.95	6.03	6.09	6.15	6.21	.05
	.01	4.32	5.04	5.50	5.84	6.10	6.32	6.51	6.67	6.81	6.94	7.06	7.17	7.26	7.36	7.44	7.52	7.59	7.66	7.73	.01
13	.05	3.06	3.73	4.15	4.45	4.69	4.88	5.05	5.19	5.32	5.43	5.53	5.63	5.71	5.79	5.86	5.93	6.00	6.05	6.11	.05
	.01	4.26	4.96	5.40	5.73	5.98	6.19	6.37	6.53	6.67	6.79	6.90	7.01	7.10	7.19	7.27	7.34	7.42	7.48	7.55	.01
14	.05	3.03	3.70	4.11	4.41	4.64	4.83	4.99	5.13	5.25	5.36	5.46	5.55	5.64	5.72	5.79	5.85	5.92	5.97	6.03	.05
	.01	4.21	4.89	5.32	5.63	5.88	6.08	6.26	6.41	6.54	6.66	6.77	6.87	6.96	7.05	7.12	7.20	7.27	7.33	7.39	.01
15	.05	3.01	3.67	4.08	4.37	4.60	4.78	4.94	5.08	5.20	5.31	5.40	5.49	5.58	5.65	5.72	5.79	5.85	5.90	5.96	.05
	.01	4.17	4.83	5.25	5.56	5.80	5.99	6.16	6.31	6.44	6.55	6.66	6.76	6.84	6.93	7.00	7.07	7.14	7.20	7.26	.01
16	.05	3.00	3.65	4.05	4.33	4.56	4.74	4.90	5.03	5.15	5.26	5.35	5.44	5.52	5.59	5.66	5.72	5.79	5.84	5.90	.05
	.01	4.13	4.78	5.19	5.49	5.72	5.92	6.08	6.22	6.35	6.46	6.56	6.66	6.74	6.82	6.90	6.97	7.03	7.09	7.15	.01
17	.05	2.98	3.63	4.02	4.30	4.52	4.71	4.86	4.99	5.11	5.21	5.31	5.39	5.47	5.55	5.61	5.68	5.74	5.79	5.84	.05
	.01	4.10	4.74	5.14	5.43	5.66	5.85	6.01	6.15	6.27	6.38	6.48	6.57	6.66	6.73	6.80	6.87	6.94	7.00	7.05	.01
18	.05	2.97	3.61	4.00	4.28	4.49	4.67	4.82	4.96	5.07	5.17	5.27	5.35	5.43	5.50	5.57	5.63	5.69	5.74	5.79	.05
	.01	4.07	4.70	5.09	5.38	5.60	5.79	5.94	6.08	6.20	6.31	6.41	6.50	6.58	6.65	6.72	6.79	6.85	6.91	6.96	.01
19	.05	2.96	3.59	3.98	4.25	4.47	4.65	4.79	4.92	5.04	5.14	5.23	5.32	5.39	5.46	5.53	5.59	5.65	5.70	5.75	.05
	.01	4.05	4.67	5.05	5.33	5.55	5.73	5.89	6.02	6.14	6.25	6.34	6.43	6.51	6.58	6.65	6.72	6.78	6.84	6.89	.01
20	.05	2.95	3.58	3.96	4.23	4.45	4.62	4.77	4.90	5.01	5.11	5.20	5.28	5.36	5.43	5.49	5.55	5.61	5.66	5.71	.05
	.01	4.02	4.64	5.02	5.29	5.51	5.69	5.84	5.97	6.09	6.19	6.29	6.37	6.45	6.52	6.59	6.65	6.71	6.76	6.82	.01
24	.05	2.92	3.53	3.90	4.17	4.37	4.54	4.68	4.81	4.92	5.01	5.10	5.18	5.25	5.32	5.38	5.44	5.50	5.54	5.59	.05
	.01	3.96	4.54	4.91	5.17	5.37	5.54	5.69	5.81	5.92	6.02	6.11	6.19	6.26	6.33	6.39	6.45	6.51	6.56	6.61	.01
30	.05	2.89	3.49	3.84	4.10	4.30	4.46	4.60	4.72	4.83	4.92	5.00	5.08	5.15	5.21	5.27	5.33	5.38	5.43	5.48	.05
	.01	3.89	4.45	4.80	5.05	5.24	5.40	5.54	5.65	5.76	5.85	5.93	6.01	6.08	6.14	6.20	6.26	6.31	6.36	6.41	.01
40	.05	2.86	3.44	3.79	4.04	4.23	4.39	4.52	4.63	4.74	4.82	4.91	4.98	5.05	5.11	5.16	5.22	5.27	5.31	5.36	.05
	.01	3.82	4.37	4.70	4.93	5.11	5.27	5.39	5.50	5.60	5.69	5.77	5.84	5.90	5.96	6.02	6.07	6.12	6.17	6.21	.01
60	.05	2.83	3.40	3.74	3.98	4.16	4.31	4.44	4.55	4.65	4.73	4.81	4.88	4.94	5.00	5.06	5.11	5.16	5.20	5.24	.05
	.01	3.76	4.28	4.60	4.82	4.99	5.13	5.25	5.36	5.45	5.53	5.60	5.67	5.73	5.79	5.84	5.89	5.93	5.98	6.02	.01
120	.05	2.80	3.36	3.69	3.92	4.10	4.24	4.36	4.48	4.56	4.64	4.72	4.78	4.84	4.90	4.95	5.00	5.05	5.09	5.13	.05
	.01	3.70	4.20	4.50	4.71	4.87	5.01	5.12	5.21	5.30	5.38	5.44	5.51	5.56	5.61	5.66	5.70	5.75	5.79	5.83	.01
∞	.05	2.77	3.31	3.63	3.86	4.03	4.17	4.29	4.39	4.47	4.55	4.62	4.68	4.74	4.80	4.85	4.89	4.93	4.97	5.01	.05
	.01	3.64	4.12	4.40	4.62	4.76	4.88	4.99	5.08	5.16	5.23	5.29	5.35	5.40	5.45	5.49	5.54	5.57	5.61	5.65	.01

Source: This table is abridged from Table 29, *Biometrika Tables for Statisticians*, vol. 1, Cambridge University Press, 1954. It is reproduced with permission of the *Biometrika* trustees and the editors, E. S. Pearson and H. O. Hartley. The original work appeared in a paper by J. M. May, "Extended and corrected tables of the upper percentage points of the Studentized range," *Biometrika*, 39: 192-193 (1952).

Table IX Critical Values for the Maximum F-Ratio [46]
 95% points (first line), 99% points (second line)

k	f								
	2	3	4	5	6	7	8	9	
2	39.0	15.4	9.60	7.15	5.82	4.99	4.43	4.03	
	199	47.5	23.2	14.9	11.1	8.89	7.50	6.54	
3	87.5	27.8	15.5	10.8	8.38	6.94	6.00	5.34	
	448	85	37	22	15.5	12.1	9.9	8.5	
4	142	39.2	20.6	13.7	10.4	8.44	7.18	6.31	
	729	120	49	28	19.1	14.5	11.7	9.9	
5	202	50.7	25.2	16.3	12.1	9.70	8.12	7.11	
	1036	151	59	33	22	16.5	13.2	11.1	
6	266	62.0	29.5	18.7	13.7	10.8	9.03	7.80	
	1362	184	69	38	25	18.4	14.5	12.1	
7	333	72.9	33.6	20.8	15.0	11.8	9.78	8.41	
	1705	216	79	42	27	20	15.8	13.1	
8	403	83.5	37.5	22.9	16.3	12.7	10.5	8.95	
	2063	249	89	46	30	22	16.9	13.9	
9	475	93.9	41.1	24.7	17.5	13.5	11.1	9.45	
	2432	281	97	50	32	23	17.9	14.7	
10	550	104	44.6	26.5	18.6	14.3	11.7	9.91	
	2813	310	106	54	34	24	18.9	15.3	
11	626	114	48.0	28.2	19.7	15.1	12.2	10.3	
	3204	337	113	57	36	26	19.8	16.0	
12	704	124	51.4	29.9	20.7	15.8	12.7	10.7	
	3605	361	120	60	37	27	21	16.6	

k	10	12	15	20	30	60	-
	2	3.72	3.28	2.86	2.46	2.07	1.67
5.85		4.91	4.07	3.32	2.63	1.96	1.00
3	4.85	4.16	3.54	2.95	2.40	1.85	1.00
	7.4	6.1	4.9	3.8	3.0	2.2	1.0
4	5.67	4.79	4.01	3.29	2.61	1.96	1.00
	8.6	6.9	5.5	4.3	3.3	2.3	1.0
5	6.34	5.30	4.37	3.54	2.78	2.04	1.00
	9.6	7.6	6.0	4.6	3.4	2.4	1.0
6	6.92	5.72	4.68	3.76	2.91	2.11	1.00
	10.4	8.2	6.4	4.9	3.6	2.4	1.0
7	7.42	6.09	4.95	3.94	3.02	2.17	1.00
	11.1	8.7	6.7	5.1	3.7	2.5	1.0
8	7.87	6.42	5.19	4.10	3.12	2.22	1.00
	11.8	9.1	7.1	5.3	3.8	2.5	1.0
9	8.28	6.72	5.40	4.24	3.21	2.26	1.00
	12.4	9.5	7.3	5.5	3.9	2.6	1.0
10	8.66	7.00	5.59	4.37	3.29	2.30	1.00
	12.9	9.9	7.5	5.6	4.0	2.6	1.0
11	9.01	7.25	5.77	4.49	3.36	2.33	1.00
	13.4	10.2	7.8	5.8	4.1	2.7	1.0
12	9.34	7.48	5.93	4.59	3.39	2.36	1.00
	13.9	10.6	8.0	5.9	4.2	2.7	1.0

Table X

Values given are for the statistic $(largest\ s^2)/(2s^2)$, where each of the k values of s^2 has ν degrees of freedom.

CRITICAL VALUES FOR COCHRAN'S TEST

PERCENTILE 95

$\nu \backslash k$	1	2	3	4	5	6	7	8	9	10	16	36	144	∞
2	0.9985	0.9750	0.9392	0.9057	0.8772	0.8534	0.8332	0.8159	0.8010	0.7880	0.7341	0.6602	0.5813	0.5000
3	0.9669	0.8709	0.7977	0.7457	0.7071	0.6771	0.6530	0.6333	0.6167	0.6025	0.5466	0.4748	0.4031	0.3333
4	0.9065	0.7879	0.6841	0.6287	0.5895	0.5598	0.5362	0.5175	0.5017	0.4884	0.4366	0.3720	0.3093	0.2500
5	0.8412	0.6838	0.5981	0.5441	0.5065	0.4783	0.4564	0.4387	0.4241	0.4118	0.3645	0.3046	0.2513	0.2000
6	0.7808	0.6161	0.5321	0.4803	0.4447	0.4184	0.3980	0.3817	0.3682	0.3568	0.3135	0.2612	0.2119	0.1667
7	0.7271	0.5612	0.4800	0.4307	0.3974	0.3726	0.3535	0.3384	0.3259	0.3154	0.2756	0.2278	0.1833	0.1429
8	0.6798	0.5157	0.4377	0.3910	0.3595	0.3362	0.3185	0.3043	0.2926	0.2829	0.2462	0.2022	0.1616	0.1250
9	0.6385	0.4775	0.4027	0.3584	0.3286	0.3067	0.2901	0.2768	0.2659	0.2568	0.2226	0.1820	0.1446	0.1111
10	0.6020	0.4450	0.3733	0.3311	0.3029	0.2823	0.2666	0.2541	0.2439	0.2353	0.2032	0.1655	0.1308	0.1000
12	0.5410	0.3924	0.3264	0.2880	0.2624	0.2439	0.2299	0.2187	0.2098	0.2020	0.1737	0.1403	0.1100	0.0833
15	0.4709	0.3346	0.2758	0.2419	0.2195	0.2034	0.1911	0.1815	0.1736	0.1671	0.1429	0.1144	0.0889	0.0667
20	0.3894	0.2705	0.2205	0.1921	0.1735	0.1602	0.1501	0.1422	0.1357	0.1303	0.1108	0.0879	0.0675	0.0500
24	0.3434	0.2354	0.1907	0.1656	0.1493	0.1374	0.1286	0.1216	0.1163	0.1113	0.0942	0.0743	0.0567	0.0417
30	0.2929	0.1980	0.1593	0.1377	0.1237	0.1137	0.1061	0.1002	0.0958	0.0921	0.0771	0.0604	0.0457	0.0313
40	0.2370	0.1576	0.1259	0.1082	0.0968	0.0887	0.0827	0.0780	0.0745	0.0713	0.0595	0.0462	0.0347	0.0250
60	0.1737	0.1131	0.0895	0.0765	0.0682	0.0623	0.0583	0.0552	0.0520	0.0497	0.0411	0.0316	0.0234	0.0167
120	0.0998	0.0632	0.0495	0.0419	0.0371	0.0337	0.0312	0.0292	0.0279	0.0266	0.0218	0.0165	0.0120	0.0083
∞	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PERCENTILE 99

$\nu \backslash k$	1	2	3	4	5	6	7	8	9	10	16	36	144	∞
2	0.9999	0.9950	0.9794	0.9586	0.9373	0.9172	0.8988	0.8823	0.8674	0.8539	0.7949	0.7067	0.6062	0.5000
3	0.9933	0.9423	0.8831	0.8335	0.7933	0.7606	0.7337	0.7107	0.6912	0.6743	0.6059	0.5153	0.4230	0.3333
4	0.9676	0.8643	0.7814	0.7212	0.6761	0.6410	0.6129	0.5897	0.5702	0.5536	0.4884	0.4057	0.3251	0.2500
5	0.9279	0.7885	0.6957	0.6329	0.5875	0.5531	0.5259	0.5037	0.4854	0.4697	0.4094	0.3351	0.2644	0.2000
6	0.8828	0.7218	0.6258	0.5635	0.5195	0.4866	0.4608	0.4401	0.4229	0.4084	0.3529	0.2858	0.2229	0.1667
7	0.8376	0.6644	0.5685	0.5080	0.4659	0.4347	0.4105	0.3911	0.3751	0.3616	0.3105	0.2494	0.1929	0.1429
8	0.7945	0.6152	0.5209	0.4627	0.4226	0.3932	0.3704	0.3522	0.3373	0.3248	0.2779	0.2214	0.1700	0.1250
9	0.7544	0.5727	0.4810	0.4251	0.3870	0.3592	0.3378	0.3207	0.3067	0.2950	0.2514	0.1992	0.1521	0.1111
10	0.7175	0.5358	0.4469	0.3934	0.3572	0.3308	0.3106	0.2945	0.2813	0.2704	0.2297	0.1811	0.1376	0.1000
12	0.6528	0.4751	0.3919	0.3428	0.3096	0.2851	0.2680	0.2535	0.2419	0.2320	0.1961	0.1535	0.1157	0.0833
15	0.5747	0.4069	0.3317	0.2882	0.2565	0.2346	0.2228	0.2104	0.2002	0.1918	0.1612	0.1251	0.0934	0.0667
20	0.4799	0.3297	0.2654	0.2288	0.2048	0.1877	0.1748	0.1646	0.1567	0.1501	0.1248	0.0960	0.0709	0.0500
24	0.4247	0.2871	0.2295	0.1970	0.1759	0.1608	0.1495	0.1406	0.1338	0.1283	0.1060	0.0810	0.0595	0.0417
30	0.3632	0.2412	0.1913	0.1635	0.1454	0.1327	0.1232	0.1157	0.1100	0.1054	0.0867	0.0658	0.0480	0.0333
40	0.2940	0.1915	0.1508	0.1281	0.1135	0.1033	0.0957	0.0898	0.0853	0.0816	0.0668	0.0503	0.0360	0.0250
60	0.2151	0.1371	0.1060	0.0902	0.0796	0.0722	0.0668	0.0625	0.0594	0.0567	0.0461	0.0344	0.0245	0.0167
120	0.1225	0.0759	0.0585	0.0489	0.0429	0.0387	0.0357	0.0334	0.0316	0.0302	0.0242	0.0178	0.0125	0.0083
∞	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Unit Normal Loss Function $G(|h|)$

Table XI



h	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.3989	0.3940	0.3890	0.3841	0.3793	0.3744	0.3697	0.3649	0.3602	0.3556
0.1	0.3509	0.3464	0.3418	0.3373	0.3328	0.3284	0.3240	0.3197	0.3154	0.3111
0.2	0.3069	0.3027	0.2986	0.2944	0.2904	0.2863	0.2824	0.2784	0.2745	0.2706
0.3	0.2668	0.2630	0.2592	0.2555	0.2518	0.2481	0.2445	0.2409	0.2374	0.2339
0.4	0.2304	0.2270	0.2236	0.2203	0.2169	0.2137	0.2104	0.2072	0.2040	0.2009
0.5	0.1978	0.1947	0.1917	0.1887	0.1857	0.1828	0.1799	0.1771	0.1742	0.1714
0.6	0.1687	0.1659	0.1633	0.1606	0.1580	0.1554	0.1528	0.1503	0.1478	0.1453
0.7	0.1429	0.1405	0.1381	0.1358	0.1334	0.1312	0.1289	0.1267	0.1245	0.1223
0.8	0.1202	0.1181	0.1160	0.1140	0.1120	0.1100	0.1080	0.1061	0.1042	0.1023
0.9	0.1004	0.09860	0.09680	0.09503	0.09328	0.09156	0.08986	0.08819	0.08654	0.08491
1.0	0.08332	0.08174	0.08019	0.07866	0.07716	0.07568	0.07422	0.07279	0.07138	0.06999
1.1	0.06862	0.06727	0.06595	0.06465	0.06336	0.06210	0.06086	0.05964	0.05844	0.05726
1.2	0.05610	0.05496	0.05384	0.05274	0.05165	0.05059	0.04954	0.04851	0.04750	0.04650
1.3	0.04553	0.04457	0.04363	0.04270	0.04179	0.04090	0.04002	0.03916	0.03831	0.03748
1.4	0.03667	0.03587	0.03508	0.03431	0.03356	0.03281	0.03208	0.03137	0.03067	0.02998
1.5	0.02931	0.02865	0.02800	0.02736	0.02674	0.02612	0.02552	0.02494	0.02436	0.02380
1.6	0.02324	0.02270	0.02217	0.02165	0.02114	0.02064	0.02015	0.01967	0.01920	0.01874
1.7	0.01829	0.01785	0.01742	0.01699	0.01658	0.01617	0.01578	0.01539	0.01501	0.01464
1.8	0.01428	0.01392	0.01357	0.01323	0.01290	0.01257	0.01226	0.01195	0.01164	0.01134
1.9	0.01105	0.01077	0.01049	0.01022	0.009957	0.009698	0.009445	0.009198	0.008957	0.008721
2.0	0.008491	0.008266	0.008046	0.007832	0.007623	0.007418	0.007219	0.007024	0.006835	0.006649
2.1	0.006468	0.006292	0.006120	0.005952	0.005788	0.005628	0.005472	0.005320	0.005172	0.005028
2.2	0.004887	0.004750	0.004616	0.004486	0.004358	0.004235	0.004114	0.003996	0.003882	0.003770
2.3	0.003662	0.003556	0.003453	0.003352	0.003255	0.003159	0.003067	0.002977	0.002889	0.002804
2.4	0.002720	0.002640	0.002561	0.002484	0.002410	0.002337	0.002267	0.002199	0.002132	0.002067
2.5	0.002004	0.001943	0.001883	0.001826	0.001769	0.001715	0.001662	0.001610	0.001560	0.001511
2.6	0.001464	0.001418	0.001373	0.001330	0.001288	0.001247	0.001207	0.001169	0.001132	0.001095
2.7	0.001060	0.001026	0.009928	0.009607	0.009295	0.008992	0.008699	0.008414	0.008138	0.007870
2.8	0.007611	0.007359	0.007115	0.006879	0.006650	0.006428	0.006213	0.006004	0.005802	0.005606
2.9	0.005417	0.005233	0.005055	0.004883	0.004716	0.004555	0.004398	0.004247	0.004101	0.003959
3.0	0.003822	0.003689	0.003560	0.003436	0.003316	0.003199	0.003087	0.002978	0.002873	0.002771
3.1	0.002673	0.002577	0.002485	0.002396	0.002311	0.002227	0.002147	0.002070	0.001995	0.001922
3.2	0.001852	0.001785	0.001720	0.001657	0.001596	0.001537	0.001480	0.001426	0.001373	0.001322
3.3	0.001273	0.001225	0.001179	0.001135	0.001093	0.001051	0.001012	0.009734	0.009365	0.009009
3.4	0.008666	0.008335	0.008016	0.007709	0.007413	0.007127	0.006852	0.006587	0.006331	0.006085
3.5	0.005848	0.005620	0.005400	0.005188	0.004984	0.004788	0.004599	0.004417	0.004242	0.004073
3.6	0.003911	0.003755	0.003605	0.003460	0.003321	0.003188	0.003059	0.002935	0.002816	0.002702
3.7	0.002592	0.002486	0.002385	0.002287	0.002193	0.002103	0.002016	0.001933	0.001853	0.001776
3.8	0.001702	0.001632	0.001563	0.001498	0.001435	0.001375	0.001317	0.001262	0.001208	0.001157
3.9	0.001108	0.001061	0.001016	0.009723	0.009307	0.008908	0.008525	0.008158	0.007806	0.007469
4.0	0.007145	0.006835	0.006538	0.006253	0.005980	0.005718	0.005468	0.005227	0.004997	0.004777
4.1	0.004566	0.004364	0.004170	0.003985	0.003807	0.003637	0.003475	0.003319	0.003170	0.003027
4.2	0.002891	0.002760	0.002635	0.002516	0.002402	0.002292	0.002188	0.002088	0.001992	0.001901
4.3	0.001814	0.001730	0.001656	0.001574	0.001501	0.001431	0.001365	0.001301	0.001241	0.001183
4.4	0.001127	0.001074	0.001024	0.009756	0.009296	0.008857	0.008437	0.008037	0.007655	0.007290
4.5	0.006942	0.006610	0.006294	0.005992	0.005704	0.005429	0.005167	0.004917	0.004679	0.004452
4.6	0.004236	0.004029	0.003833	0.003645	0.003467	0.003297	0.003135	0.002981	0.002834	0.002694
4.7	0.002560	0.002433	0.002313	0.002197	0.002088	0.001984	0.001884	0.001790	0.001700	0.001615
4.8	0.001533	0.001456	0.001382	0.001312	0.001246	0.001182	0.001122	0.001065	0.001011	0.009588
4.9	0.009096	0.008629	0.008185	0.007763	0.007362	0.006982	0.006620	0.006276	0.005950	0.005640

$G(-h) = h + G(h)$
 Examples: $G(3.57) = 0.004417 = 0.00004417$
 $G(-3.57) = 3.57004417$

Table XII
Critical Values of r for the Sign Test

(Two-tail percentage points are given for the binomial for $p = 0.5$)

N	1%	5%	10%	25%	N	1%	5%	10%	25%
1					51	15	18	19	20
2					52	16	18	19	21
3				0	53	16	18	20	21
4				0	54	17	19	20	22
5			0	0	55	17	19	20	22
6		0	0	1	56	17	20	21	23
7		0	0	1	57	18	20	21	23
8	0	0	1	1	58	18	21	22	24
9	0	1	1	2	59	19	21	22	24
10	0	1	1	2	60	19	21	23	25
11	0	1	2	3	61	20	22	23	25
12	1	2	2	3	62	20	22	24	25
13	1	2	3	3	63	20	23	24	26
14	1	2	3	4	64	21	23	24	26
15	2	3	3	4	65	21	24	25	27
16	2	3	4	5	66	22	24	25	27
17	2	4	4	5	67	22	25	26	28
18	3	4	5	6	68	22	25	26	28
19	3	4	5	6	69	23	25	27	29
20	3	5	5	6	70	23	26	27	29
21	4	5	6	7	71	24	26	28	30
22	4	5	6	7	72	24	27	28	30
23	4	6	7	8	73	25	27	28	31
24	5	6	7	8	74	25	28	29	31
25	5	7	7	9	75	25	28	29	32
26	6	7	8	9	76	26	28	30	32
27	6	7	8	10	77	26	29	30	32
28	6	8	9	10	78	27	29	31	33
29	7	8	9	10	79	27	30	31	33
30	7	9	10	11	80	28	30	32	34
31	7	9	10	11	81	28	31	32	34
32	8	9	10	12	82	28	31	33	35
33	8	10	11	12	83	29	32	33	35
34	9	10	11	13	84	29	32	33	36
35	9	11	12	13	85	30	32	34	36
36	9	11	12	14	86	30	33	34	37
37	10	12	13	14	87	31	33	35	37
38	10	12	13	14	88	31	34	35	38
39	11	12	13	15	89	31	34	36	38
40	11	13	14	15	90	32	35	36	39
41	11	13	14	16	91	32	35	37	39
42	12	14	15	16	92	33	36	37	39
43	12	14	15	17	93	33	36	38	40
44	13	15	16	17	94	34	37	38	40
45	13	15	16	18	95	34	37	38	41
46	13	15	16	18	96	34	37	39	41
47	14	16	17	19	97	35	38	39	42
48	14	16	17	19	98	35	38	40	42
49	15	17	18	19	99	36	39	40	43
50	15	17	18	20	100	36	39	41	43

Table XIII Critical Values of *T* in the Wilcoxon Matched-Pairs Signed-Ranks Test

Critical Values of *T* at Various Levels of Probability

The symbol *T* denotes the smaller sum of ranks associated with differences that are all of the same sign. For any given *N* (number of ranked differences), the obtained *T* is significant at a given level if it is equal to or less than the value shown in the table.

N	Level of significance for one-tailed test				N	Level of significance for one-tailed test			
	.05	.025	.01	.005		.05	.025	.01	.005
	Level of significance for two-tailed test					Level of significance for two-tailed test			
	.10	.05	.02	.01		.10	.05	.02	.01
5	0	--	--	--	28	130	116	101	91
6	2	0	--	--	29	140	126	110	100
7	3	2	0	--	30	151	137	120	109
8	5	3	1	0	31	163	147	130	118
9	8	5	3	1	32	175	159	140	128
10	10	8	5	3	33	187	170	151	138
11	13	10	7	5	34	200	182	162	148
12	17	13	9	7	35	213	195	173	159
13	21	17	12	9	36	227	208	185	171
14	25	21	15	12	37	241	221	198	182
15	30	25	19	15	38	256	235	211	194
16	35	29	23	19	39	271	249	224	207
17	41	34	27	23	40	286	264	238	220
18	47	40	32	27	41	302	279	252	233
19	53	46	37	32	42	319	294	266	247
20	60	52	43	37	43	336	310	281	261
21	67	58	49	42	44	353	327	296	276
22	75	65	55	48	45	371	343	312	291
23	83	73	62	54	46	389	361	328	307
24	91	81	69	61	47	407	378	345	322
25	100	89	76	68	48	426	396	362	339
26	110	98	84	75	49	446	415	379	355
27	119	107	92	83	50	466	434	397	373

(Slight discrepancies will be found between the critical values appearing in the table above and in Table 2 of the 1964 revision of F. Wilcoxon, and R. A. Wilcox, *Some Rapid Approximate Statistical Procedures*, New York, Lederle Laboratories, 1964. The disparity reflects the latter's policy of selecting the critical value nearest a given significance level, occasionally overstepping that level. For example, for *N* = 8,

the probability of a *T* of 3 = 0.0390 (two-tail)

and

the probability of a *T* of 4 = 0.0546 (two-tail).

Wilcoxon and Wilcox select a *T* of 4 as the critical value at the 0.05 level of significance (two-tail), whereas Table J reflects a more conservative policy by setting a *T* of 3 as the critical value at this level.)

Table XIV

Critical values and probability levels for the Wilcoxon rank-sum test

n	$\alpha_0 = P = .05$ one-sided					$\alpha_0 = P = .01$ one-sided					$\alpha_0 = P = .02$ two-sided				
	m=6	m=7	m=8	m=9	m=10	m=6	m=7	m=8	m=9	m=10	m=6	m=7	m=8	m=9	m=10
6	28, 50 .0465					24, 54 .0076									
7	29, 49 .0660					25, 53 .0130									
8	29, 55 .0367	39, 66 .0487				25, 59 .0070	34, 71 .0337								
9	30, 54 .0507	40, 65 .0641				26, 58 .0111	35, 70 .0131								
10	31, 59 .0406	41, 71 .0469	51, 85 .0415			27, 63 .0100	35, 77 .0370	45, 91 .0374							
11	32, 58 .0539	42, 70 .0603	52, 84 .0524			28, 62 .0147	36, 76 .0103	45, 90 .0103							
12	33, 63 .0440	43, 76 .0454	54, 90 .0404	66, 105 .0470		28, 68 .0058	37, 82 .0332	47, 97 .0076	59, 112 .0024						
13	34, 62 .0587	44, 75 .0571	55, 89 .0570	67, 104 .0567		29, 67 .0128	38, 81 .0115	49, 96 .0103	50, 111 .0122						
14	35, 67 .0457	45, 81 .0439	56, 96 .0416	69, 111 .0374	82, 128 .0446	29, 73 .0080	39, 87 .0093	49, 103 .0078	51, 119 .0036						
15	36, 66 .0539	45, 80 .0544	57, 95 .0506	70, 110 .0564	83, 127 .0326	30, 72 .0112	39, 85 .0125	50, 102 .0103	52, 113 .0110						
16	37, 71 .0491	47, 85 .0427	59, 101 .0454	72, 117 .0476	85, 134 .0493	31, 77 .0101	40, 93 .0077	51, 109 .0079	53, 126 .0079	74, 125 .0093					
17	38, 70 .0603	48, 95 .0521	60, 100 .0543	73, 116 .0560	87, 133 .0572	32, 82 .0071	41, 92 .0102	52, 108 .0102	54, 125 .0100	73, 142 .0121					
18	38, 76 .0415	49, 91 .0416	62, 106 .0489	75, 123 .0477	89, 141 .0465	33, 81 .0122	42, 98 .0035	53, 115 .0079	55, 132 .0022	79, 131 .0084					
19	39, 75 .0512	50, 90 .0501	63, 105 .0576	76, 122 .0555	90, 140 .0536	33, 87 .0084	43, 97 .0111	54, 114 .0101	57, 131 .0114	80, 140 .0103					
20	40, 80 .0437	52, 95 .0424	64, 112 .0445	78, 129 .0478	92, 148 .0441	34, 96 .0110	44, 103 .0093	56, 120 .0099	59, 139 .0035	82, 153 .0039					
21	41, 79 .0530	53, 94 .0573	65, 111 .0521	79, 128 .0551	93, 147 .0505	34, 92 .0077	45, 109 .0079	57, 119 .0123	59, 138 .0104	83, 137 .0107					
22	42, 84 .0457	54, 100 .0459	67, 117 .0475	81, 135 .0478	95, 154 .0478	35, 91 .0100	46, 108 .0100	58, 125 .0120	60, 144 .0115	85, 155 .0093					
23	43, 83 .0547	55, 99 .0550	68, 115 .0550	82, 134 .0547	97, 153 .0542	35, 96 .0092	47, 114 .0086	60, 132 .0097	62, 144 .0115	86, 172 .0096					
24	44, 88 .0474	56, 105 .0455	69, 123 .0437	84, 141 .0478	99, 161 .0455	37, 95 .0117	48, 113 .0106	61, 131 .0117	63, 137 .0115	87, 171 .0113					
25	45, 87 .0561	57, 104 .0531	70, 122 .0503	85, 140 .0542	100, 160 .0513	37, 101 .0085	49, 119 .0092	62, 138 .0096	64, 137 .0115	88, 179 .0099					
26	46, 92 .0490	58, 110 .0443	72, 128 .0463	87, 147 .0477	103, 167 .0487	38, 100 .0107	50, 118 .0112	63, 137 .0115	65, 137 .0116	89, 178 .0115					
27	47, 91 .0574	59, 109 .0513	73, 127 .0528	88, 146 .0538	104, 166 .0545	39, 105 .0099	51, 124 .0097	64, 144 .0095	66, 136 .0116	90, 187 .0106					
28	48, 96 .0505	61, 114 .0497	75, 133 .0497	90, 153 .0476	106, 174 .0465	40, 104 .0122	52, 123 .0119	65, 143 .0113	67, 136 .0107	91, 187 .0088					
29	49, 101 .0448	63, 119 .0454	77, 139 .0452	91, 159 .0475	107, 173 .0517	40, 110 .0091	52, 120 .0085	66, 150 .0094	68, 138 .0107	92, 186 .0102					
30	50, 100 .0518	64, 118 .0550	78, 138 .0510	94, 158 .0531	111, 179 .0546	41, 109 .0112	53, 129 .0103	67, 149 .0110	69, 139 .0116	93, 194 .0104					
31	51, 105 .0462	65, 124 .0471	80, 144 .0475	96, 165 .0474	113, 187 .0472	41, 115 .0085	54, 135 .0090	68, 156 .0093	70, 140 .0116	94, 193 .0104					
32	52, 104 .0530	66, 123 .0533	81, 143 .0532	97, 164 .0527	114, 186 .0521	42, 114 .0104	55, 134 .0108	69, 155 .0108	71, 141 .0116	95, 201 .0093					

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Table XV Critical values of the R in the Runs Test

Given in the bodies of Table XV₁ and Table XV₂ are various critical values of R for various values of n₁ and n₂. For the one-sample run test, any value of R which is equal to or smaller than that shown in Table XV₁ or equal to or larger than that shown in Table XV₂ is significant at the .05 level. For the Wald-Wolfowitz two-sample runs test, any value of R which is equal to or smaller than that shown in Table XV₁ is significant at the .05 level.

Table XV₁

n ₁ \ n ₂	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

* Adapted from Swed, Frieda S., and Eisenhart, C. 1943. Tables for testing randomness of grouping in a sequence of alternatives. *Ann. Math. Statist.*, 14, 83-86, with the kind permission of the authors and publisher.

Table XV₂

n ₁ \ n ₂	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

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Table XVI Durbin-Watson Test Statistic, Lower and Upper Bounds of the 5%, 1% and 2.5% Points

Significance Points of d_L and d_U : 5%

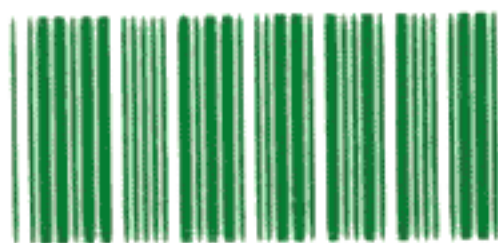
n	K=1		K=2		K=3		K=4		K=5	
	d_L	d_U	d_L	d_U	d_L	d_U	d_L	d_U	d_L	d_U
15	1.08	1.30	0.95	1.54	0.82	1.75	0.56	1.97	0.56	2.21
16	1.10	1.37	0.98	1.54	0.86	1.73	0.74	1.93	0.62	2.15
17	1.13	1.38	1.02	1.54	0.90	1.71	0.78	1.90	0.67	2.10
18	1.16	1.39	1.05	1.53	0.93	1.69	0.82	1.87	0.71	2.06
19	1.18	1.40	1.07	1.53	0.97	1.68	0.86	1.85	0.75	2.02
20	1.20	1.41	1.10	1.54	1.00	1.68	0.90	1.83	0.79	1.99
21	1.22	1.42	1.13	1.54	1.03	1.67	0.93	1.81	0.83	1.96
22	1.24	1.43	1.15	1.54	1.05	1.66	0.96	1.80	0.86	1.94
23	1.26	1.44	1.17	1.54	1.08	1.66	0.99	1.79	0.90	1.92
24	1.27	1.45	1.19	1.55	1.10	1.66	1.01	1.78	0.93	1.90
25	1.29	1.45	1.21	1.55	1.12	1.66	1.04	1.77	0.95	1.89
26	1.30	1.46	1.22	1.55	1.14	1.65	1.06	1.76	0.98	1.88
27	1.32	1.47	1.24	1.55	1.16	1.65	1.08	1.76	1.01	1.86
28	1.33	1.48	1.26	1.56	1.18	1.65	1.10	1.75	1.03	1.85
29	1.34	1.48	1.27	1.56	1.20	1.65	1.12	1.74	1.05	1.84
30	1.35	1.49	1.28	1.57	1.21	1.65	1.14	1.74	1.07	1.83
31	1.36	1.50	1.30	1.57	1.23	1.65	1.16	1.74	1.09	1.83
32	1.37	1.50	1.31	1.57	1.24	1.65	1.18	1.73	1.11	1.82
33	1.38	1.51	1.32	1.58	1.26	1.65	1.19	1.73	1.13	1.81
34	1.39	1.51	1.33	1.58	1.27	1.65	1.21	1.73	1.15	1.81
35	1.40	1.52	1.34	1.58	1.28	1.65	1.22	1.73	1.16	1.80
36	1.41	1.52	1.35	1.59	1.29	1.65	1.24	1.73	1.18	1.80
37	1.42	1.53	1.36	1.59	1.31	1.66	1.25	1.72	1.19	1.80
38	1.43	1.54	1.37	1.59	1.32	1.66	1.26	1.72	1.21	1.79
39	1.43	1.54	1.38	1.60	1.33	1.66	1.27	1.72	1.22	1.79
40	1.44	1.54	1.39	1.60	1.34	1.66	1.29	1.72	1.23	1.79
45	1.48	1.57	1.43	1.62	1.38	1.67	1.34	1.72	1.29	1.78
50	1.50	1.59	1.46	1.63	1.42	1.67	1.38	1.72	1.34	1.77
55	1.53	1.60	1.49	1.64	1.45	1.68	1.41	1.72	1.36	1.77
60	1.55	1.62	1.51	1.65	1.48	1.69	1.44	1.72	1.41	1.77
65	1.57	1.63	1.54	1.66	1.50	1.70	1.47	1.73	1.44	1.77
70	1.58	1.64	1.55	1.67	1.52	1.70	1.49	1.74	1.46	1.77
75	1.60	1.65	1.57	1.68	1.54	1.71	1.51	1.74	1.49	1.77
80	1.61	1.66	1.59	1.69	1.56	1.72	1.53	1.74	1.51	1.77
85	1.62	1.67	1.60	1.70	1.57	1.72	1.55	1.75	1.52	1.77
90	1.63	1.68	1.61	1.70	1.59	1.73	1.57	1.75	1.54	1.78
95	1.64	1.69	1.62	1.71	1.60	1.73	1.58	1.75	1.56	1.78
100	1.65	1.69	1.63	1.72	1.61	1.74	1.59	1.76	1.57	1.78

Note: K = number of explanatory variables excluding the constant term.
 Source: J. Durbin and G. S. Watson, "Testing for Serial Correlation in Least Squares Regression", *Biometrika*, vol. 38, 1951, pp. 159-77. Reprinted with the permission of the authors and the *Biometrika* trustees.

Significance Points of d_L and d_U : 1%

n	K=1		K=2		K=3		K=4		K=5	
	d_L	d_U	d_L	d_U	d_L	d_U	d_L	d_U	d_L	d_U
15	0.81	1.07	0.70	1.25	0.59	1.46	0.49	1.70	0.39	1.96
16	0.84	1.09	0.74	1.25	0.63	1.44	0.53	1.66	0.44	1.90
17	0.87	1.10	0.77	1.25	0.67	1.43	0.57	1.63	0.48	1.85
18	0.90	1.12	0.80	1.26	0.71	1.42	0.61	1.60	0.52	1.80
19	0.93	1.13	0.83	1.26	0.74	1.41	0.65	1.58	0.56	1.74
20	0.95	1.15	0.86	1.27	0.77	1.41	0.68	1.57	0.60	1.74
21	0.97	1.16	0.89	1.27	0.80	1.41	0.72	1.55	0.63	1.71
22	1.00	1.17	0.91	1.28	0.83	1.40	0.75	1.54	0.66	1.67
23	1.02	1.19	0.94	1.29	0.86	1.41	0.80	1.53	0.70	1.67
24	1.04	1.20	0.96	1.30	0.88	1.41	0.83	1.52	0.75	1.65
25	1.05	1.21	0.98	1.30	0.90	1.41	0.85	1.52	0.78	1.64
26	1.07	1.22	1.00	1.31	0.93	1.41	0.88	1.51	0.81	1.63
27	1.09	1.23	1.02	1.32	0.95	1.41	0.90	1.51	0.83	1.62
28	1.10	1.24	1.04	1.32	0.97	1.41	0.92	1.51	0.85	1.61
29	1.12	1.25	1.05	1.33	0.99	1.42	0.94	1.51	0.88	1.61
30	1.13	1.26	1.07	1.34	1.01	1.42	0.96	1.51	0.90	1.60
31	1.15	1.27	1.08	1.34	1.02	1.42	0.98	1.51	0.92	1.60
32	1.16	1.28	1.10	1.35	1.04	1.43	0.98	1.51	0.94	1.59
33	1.17	1.29	1.11	1.36	1.05	1.43	1.01	1.51	0.95	1.59
34	1.18	1.30	1.13	1.36	1.07	1.43	1.01	1.51	0.97	1.59
35	1.19	1.31	1.14	1.37	1.08	1.44	1.03	1.51	0.97	1.59
36	1.21	1.32	1.15	1.38	1.10	1.44	1.04	1.51	0.99	1.59
37	1.22	1.32	1.16	1.38	1.11	1.45				
38	1.23	1.33	1.18	1.39	1.12					
39	1.24	1.34	1.19	1.39	1.14	1.45				
40	1.25	1.34	1.20	1.40	1.15	1.46				
45	1.29	1.38	1.24	1.42	1.20	1.48				
50	1.32	1.40	1.28	1.45	1.24	1.49				
55	1.36	1.43	1.32	1.47	1.28	1.51				
60	1.38	1.45	1.35	1.48	1.32	1.52				
65	1.41	1.47	1.38	1.50	1.35	1.53				
70	1.43	1.49	1.40	1.52	1.37	1.55				
75	1.45	1.50	1.42	1.53	1.39	1.56				
80	1.47	1.52	1.44	1.54	1.42	1.57				
85	1.48	1.53	1.46	1.55	1.43	1.58				
90	1.50	1.54	1.47	1.56	1.45	1.59				
95	1.51	1.55	1.49	1.57	1.47	1.60				
100	1.52	1.56	1.50	1.58	1.48	1.60				

Note: K = number of explanatory variables excluding the constant term.
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