

## 附錄：統計表

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### 二項分布**累**計機率表(Cumulative binomial distribution)

$$F_x(t) = P(X \leq t) = \sum_{x=0}^t \binom{n}{x} \times p^x \times q^{n-x}$$

n	t	機率 p																		
		0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95
1	0	0.9500	0.9000	0.8500	0.8000	0.7500	0.7000	0.6500	0.6000	0.5500	0.5000	0.4500	0.4000	0.3500	0.3000	0.2500	0.2000	0.1500	0.1000	0.0500
1	1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	0	0.9025	0.8100	0.7225	0.6400	0.5625	0.4900	0.4225	0.3600	0.3025	0.2500	0.2025	0.1600	0.1225	0.0900	0.0625	0.0400	0.0225	0.0100	0.0025
2	1	0.9975	0.9900	0.9775	0.9600	0.9375	0.9100	0.8775	0.8400	0.7975	0.7500	0.6975	0.6400	0.5775	0.5100	0.4375	0.3600	0.2775	0.1900	0.0975
2	2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
3	0	0.8574	0.7290	0.6141	0.5120	0.4219	0.3430	0.2746	0.2160	0.1664	0.1250	0.0911	0.0640	0.0429	0.0270	0.0156	0.0080	0.0034	0.0010	0.0001
3	1	0.9928	0.9720	0.9393	0.8960	0.8438	0.7840	0.7183	0.6480	0.5748	0.5000	0.4253	0.3520	0.2818	0.2160	0.1563	0.1040	0.0608	0.0280	0.0073
3	2	0.9999	0.9990	0.9966	0.9920	0.9844	0.9730	0.9571	0.9360	0.9089	0.8750	0.8336	0.7840	0.7254	0.6570	0.5781	0.4880	0.3859	0.2710	0.1426
3	3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4	0	0.8145	0.6561	0.5220	0.4096	0.3164	0.2401	0.1785	0.1296	0.0915	0.0625	0.0410	0.0256	0.0150	0.0081	0.0039	0.0016	0.0005	0.0001	0.0000
4	1	0.9860	0.9477	0.8905	0.8192	0.7383	0.6517	0.5630	0.4752	0.3910	0.3125	0.2415	0.1792	0.1265	0.0837	0.0508	0.0272	0.0120	0.0037	0.0005
4	2	0.9995	0.9963	0.9880	0.9728	0.9492	0.9163	0.8735	0.8208	0.7585	0.6875	0.6090	0.5248	0.4370	0.3483	0.2617	0.1808	0.1095	0.0523	0.0140
4	3	1.0000	0.9999	0.9995	0.9984	0.9961	0.9919	0.9850	0.9744	0.9590	0.9375	0.9085	0.8704	0.8215	0.7599	0.6836	0.5904	0.4780	0.3439	0.1855
4	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
5	0	0.7738	0.5905	0.4437	0.3277	0.2373	0.1681	0.1160	0.0778	0.0503	0.0313	0.0185	0.0102	0.0053	0.0024	0.0010	0.0003	0.0001	0.0000	0.0000
5	1	0.9774	0.9185	0.8352	0.7373	0.6328	0.5282	0.4284	0.3370	0.2562	0.1875	0.1312	0.0870	0.0540	0.0308	0.0156	0.0067	0.0022	0.0005	0.0000
5	2	0.9988	0.9914	0.9734	0.9421	0.8965	0.8369	0.7648	0.6826	0.5931	0.5000	0.4069	0.3174	0.2352	0.1631	0.1035	0.0579	0.0266	0.0086	0.0012
5	3	1.0000	0.9995	0.9978	0.9933	0.9844	0.9692	0.9460	0.9130	0.8688	0.8125	0.7438	0.6630	0.5716	0.4718	0.3672	0.2627	0.1648	0.0815	0.0226
5	4	1.0000	1.0000	0.9999	0.9997	0.9990	0.9976	0.9947	0.9898	0.9815	0.9688	0.9497	0.9222	0.8840	0.8319	0.7627	0.6723	0.5563	0.4095	0.2262
5	5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6	0	0.7351	0.5314	0.3771	0.2621	0.1780	0.1176	0.0754	0.0467	0.0277	0.0156	0.0083	0.0041	0.0018	0.0007	0.0002	0.0001	0.0000	0.0000	0.0000
6	1	0.9672	0.8857	0.7765	0.6554	0.5339	0.4202	0.3191	0.2333	0.1636	0.1094	0.0692	0.0410	0.0223	0.0109	0.0046	0.0016	0.0004	0.0001	0.0000
6	2	0.9978	0.9842	0.9527	0.9011	0.8306	0.7443	0.6471	0.5443	0.4415	0.3438	0.2553	0.1792	0.1174	0.0705	0.0376	0.0170	0.0059	0.0013	0.0001
6	3	0.9999	0.9987	0.9941	0.9830	0.9624	0.9295	0.8826	0.8208	0.7447	0.6563	0.5585	0.4557	0.3529	0.2557	0.1694	0.0989	0.0473	0.0159	0.0022
6	4	1.0000	0.9999	0.9996	0.9984	0.9954	0.9891	0.9777	0.9590	0.9308	0.8906	0.8364	0.7667	0.6809	0.5798	0.4661	0.3446	0.2235	0.1143	0.0328
6	5	1.0000	1.0000	1.0000	0.9999	0.9998	0.9993	0.9982	0.9959	0.9917	0.9844	0.9723	0.9533	0.9246	0.8824	0.8220	0.7379	0.6229	0.4686	0.2649
6	6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
7	0	0.6983	0.4783	0.3206	0.2097	0.1335	0.0824	0.0490	0.0280	0.0152	0.0078	0.0037	0.0016	0.0006	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000
7	1	0.9556	0.8503	0.7166	0.5767	0.4449	0.3294	0.2338	0.1586	0.1024	0.0625	0.0357	0.0188	0.0090	0.0038	0.0013	0.0004	0.0001	0.0000	0.0000
7	2	0.9962	0.9743	0.9262	0.8520	0.7564	0.6471	0.5323	0.4199	0.3164	0.2266	0.1529	0.0963	0.0556	0.0288	0.0129	0.0047	0.0012	0.0002	0.0000
7	3	0.9998	0.9973	0.9879	0.9667	0.9294	0.8740	0.8002	0.7102	0.6083	0.5000	0.3917	0.2898	0.1998	0.1260	0.0706	0.0333	0.0121	0.0027	0.0002
7	4	1.0000	0.9998	0.9988	0.9953	0.9871	0.9712	0.9444	0.9037	0.8471	0.7734	0.6836	0.5801	0.4677	0.3529	0.2436	0.1480	0.0738	0.0257	0.0038
7	5	1.0000	1.0000	0.9999	0.9996	0.9987	0.9962	0.9910	0.9812	0.9643	0.9375	0.8976	0.8414	0.7662	0.6706	0.5551	0.4233	0.2834	0.1497	0.0444
7	6	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9994	0.9984	0.9963	0.9922	0.9848	0.9720	0.9510	0.9176	0.8665	0.7903	0.6794	0.5217	0.3017
7	7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
8	0	0.6634	0.4305	0.2725	0.1678	0.1001	0.0576	0.0319	0.0168	0.0084	0.0039	0.0017	0.0007	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
8	1	0.9428	0.8131	0.6572	0.5033	0.3671	0.2553	0.1691	0.1064	0.0632	0.0352	0.0181	0.0085	0.0036	0.0013	0.0004	0.0001	0.0000	0.0000	0.0000
8	2	0.9942	0.9619	0.8948	0.7969	0.6785	0.5518	0.4278	0.3154	0.2201	0.1445	0.0885	0.0498	0.0253	0.0113	0.0042	0.0012	0.0002	0.0000	0.0000
8	3	0.9996	0.9950	0.9786	0.9437	0.8862	0.8059	0.7064	0.5941	0.4770	0.3633	0.2604	0.1737	0.1061	0.0580	0.0273	0.0104	0.0029	0.0004	0.0000
8	4	1.0000	0.9996	0.9971	0.9896	0.9727	0.9420	0.8939	0.8263	0.7396	0.6367	0.5230	0.4059	0.2936	0.1941	0.1138	0.0563	0.0214	0.0050	0.0004

n	t	機率 p																		
		0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95
8	5	1.0000	1.0000	0.9998	0.9988	0.9958	0.9887	0.9747	0.9502	0.9115	0.8555	0.7799	0.6846	0.5722	0.4482	0.3215	0.2031	0.1052	0.0381	0.0058
8	6	1.0000	1.0000	1.0000	0.9999	0.9996	0.9987	0.9964	0.9915	0.9819	0.9648	0.9368	0.8936	0.8309	0.7447	0.6329	0.4967	0.3428	0.1869	0.0572
8	7	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9993	0.9983	0.9961	0.9916	0.9832	0.9681	0.9424	0.8999	0.8322	0.7275	0.5695	0.3366
8	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
9	0	0.6302	0.3874	0.2316	0.1342	0.0751	0.0404	0.0207	0.0101	0.0046	0.0020	0.0008	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	1	0.9288	0.7748	0.5995	0.4362	0.3003	0.1960	0.1211	0.0705	0.0385	0.0195	0.0091	0.0038	0.0014	0.0004	0.0001	0.0000	0.0000	0.0000	0.0000
9	2	0.9916	0.9470	0.8591	0.7382	0.6007	0.4628	0.3373	0.2318	0.1495	0.0898	0.0498	0.0250	0.0112	0.0043	0.0013	0.0003	0.0000	0.0000	0.0000
9	3	0.9994	0.9917	0.9661	0.9144	0.8343	0.7297	0.6089	0.4826	0.3614	0.2539	0.1658	0.0994	0.0536	0.0253	0.0100	0.0031	0.0006	0.0001	0.0000
9	4	1.0000	0.9991	0.9944	0.9804	0.9511	0.9012	0.8283	0.7334	0.6214	0.5000	0.3786	0.2666	0.1717	0.0988	0.0489	0.0196	0.0056	0.0009	0.0000
9	5	1.0000	0.9999	0.9994	0.9969	0.9900	0.9747	0.9464	0.9006	0.8342	0.7461	0.6386	0.5174	0.3911	0.2703	0.1657	0.0856	0.0339	0.0083	0.0006
9	6	1.0000	1.0000	1.0000	0.9997	0.9987	0.9957	0.9888	0.9750	0.9502	0.9102	0.8505	0.7682	0.6627	0.5372	0.3993	0.2618	0.1409	0.0530	0.0084
9	7	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9986	0.9962	0.9809	0.9805	0.9615	0.9295	0.8789	0.8040	0.6997	0.5638	0.4005	0.2252	0.0712
9	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9992	0.9980	0.9954	0.9899	0.9793	0.9596	0.9249	0.8658	0.7684	0.6126	0.3698
9	9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
10	0	0.5987	0.3487	0.1969	0.1074	0.0563	0.0282	0.0135	0.0060	0.0025	0.0010	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	1	0.9139	0.7361	0.5443	0.3758	0.2440	0.1493	0.0860	0.0464	0.0233	0.0107	0.0045	0.0017	0.0005	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
10	2	0.9885	0.9298	0.8202	0.6778	0.5256	0.3828	0.2616	0.1673	0.0996	0.0547	0.0274	0.0123	0.0048	0.0016	0.0004	0.0001	0.0000	0.0000	0.0000
10	3	0.9990	0.9872	0.9500	0.8791	0.7759	0.6496	0.5138	0.3823	0.2660	0.1719	0.1020	0.0548	0.0260	0.0106	0.0035	0.0009	0.0001	0.0000	0.0000
10	4	0.9999	0.9984	0.9901	0.9672	0.9219	0.8497	0.7515	0.6331	0.5044	0.3770	0.2616	0.1662	0.0949	0.0473	0.0197	0.0064	0.0014	0.0001	0.0000
10	5	1.0000	0.9999	0.9986	0.9936	0.9803	0.9527	0.9051	0.8338	0.7384	0.6230	0.4956	0.3669	0.2485	0.1503	0.0781	0.0328	0.0099	0.0016	0.0001
10	6	1.0000	1.0000	0.9999	0.9991	0.9965	0.9894	0.9740	0.9452	0.8980	0.8281	0.7340	0.6177	0.4862	0.3504	0.2241	0.1209	0.0500	0.0128	0.0010
10	7	1.0000	1.0000	1.0000	0.9999	0.9996	0.9984	0.9952	0.9877	0.9726	0.9453	0.9004	0.8327	0.7384	0.6172	0.4744	0.3222	0.1798	0.0702	0.0115
10	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9995	0.9983	0.9955	0.9893	0.9767	0.9536	0.9140	0.8507	0.7560	0.6242	0.4557	0.2639	0.0861
10	9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9990	0.9975	0.9940	0.9865	0.9718	0.9437	0.8926	0.8031	0.6513	0.4013	0.0000
10	10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
11	0	0.5688	0.3138	0.1673	0.0859	0.0422	0.0198	0.0088	0.0036	0.0014	0.0005	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1	0.8981	0.6974	0.4922	0.3221	0.1971	0.1130	0.0606	0.0302	0.0139	0.0059	0.0022	0.0007	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	2	0.9848	0.9104	0.7788	0.6174	0.4552	0.3127	0.2001	0.1189	0.0652	0.0327	0.0148	0.0059	0.0020	0.0006	0.0001	0.0000	0.0000	0.0000	0.0000
11	3	0.9984	0.9815	0.9306	0.8389	0.7133	0.5696	0.4256	0.2963	0.1911	0.1133	0.0610	0.0293	0.0122	0.0043	0.0012	0.0002	0.0000	0.0000	0.0000
11	4	0.9999	0.9972	0.9841	0.9496	0.8854	0.7897	0.6683	0.5328	0.3971	0.2744	0.1738	0.0994	0.0501	0.0216	0.0076	0.0020	0.0003	0.0000	0.0000
11	5	1.0000	0.9997	0.9973	0.9883	0.9657	0.9218	0.8513	0.7535	0.6331	0.5000	0.3669	0.2465	0.1487	0.0782	0.0343	0.0117	0.0027	0.0003	0.0000
11	6	1.0000	1.0000	0.9997	0.9980	0.9924	0.9784	0.9499	0.9006	0.8262	0.7256	0.6029	0.4672	0.3317	0.2103	0.1146	0.0504	0.0159	0.0028	0.0001
11	7	1.0000	1.0000	1.0000	0.9998	0.9988	0.9957	0.9878	0.9707	0.9390	0.8867	0.8089	0.7037	0.5744	0.4304	0.2867	0.1611	0.0694	0.0185	0.0016
11	8	1.0000	1.0000	1.0000	1.0000	0.9999	0.9994	0.9980	0.9941	0.9852	0.9673	0.9348	0.8811	0.7999	0.6873	0.5448	0.3826	0.2212	0.0896	0.0152
11	9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9993	0.9978	0.9941	0.9861	0.9698	0.9394	0.8870	0.8029	0.6779	0.5078	0.3026	0.1019
11	10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9995	0.9986	0.9964	0.9912	0.9802	0.9578	0.9141	0.8327	0.6862	0.4312
11	11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12	0	0.5404	0.2824	0.1422	0.0687	0.0317	0.0138	0.0057	0.0022	0.0008	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	1	0.8816	0.6590	0.4435	0.2749	0.1584	0.0850	0.0424	0.0196	0.0083	0.0032	0.0011	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	2	0.9804	0.8891	0.7358	0.5583	0.3907	0.2528	0.1513	0.0834	0.0421	0.0193	0.0079	0.0028	0.0008	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
12	3	0.9978	0.9744	0.9078	0.7946	0.6488	0.4925	0.3467	0.2253	0.1345	0.0730	0.0356	0.0153	0.0056	0.0017	0.0004	0.0001	0.0000	0.0000	0.0000
12	4	0.9998	0.9957	0.9761	0.9274	0.8424	0.7237	0.5833	0.4382	0.3044	0.1938	0.1117	0.0573	0.0255	0.0095	0.0028	0.0006	0.0001	0.0000	0.0000
12	5	1.0000	0.9995	0.9954	0.9806	0.9456	0.8822	0.7873	0.6652	0.5269	0.3872	0.2607	0.1582	0.0846	0.0386	0.0143	0.0039	0.0007	0.0001	0.0000
12	6	1.0000	0.9999	0.9993	0.9961	0.9857	0.9614	0.9154	0.8418	0.7393	0.6128	0.4731	0.3348	0.2127	0.1178	0.0544	0.0194	0.0046	0.0005	0.0000
12	7	1.0000	1.0000	0.9999	0.9994	0.9972	0.9905	0.9745	0.9427	0.8883	0.8062	0.6956	0.5618	0.4167	0.2763	0.1576	0.0726	0.0239	0.0043	0.0002
12	8	1.0000	1.0000	1.0000	0.9999	0.9996	0.9983	0.9944	0.9847	0.9644	0.9270	0.8655	0.7747	0.6533	0.5075	0.3512	0.2054	0.0922	0.0256	0.0022
12	9	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9992	0.9972	0.9921	0.9807	0.9579	0.9166	0.8487	0.7472	0.6093	0.4417	0.2642	0.1109	0.0196
12	10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9989	0.9968	0.9917	0.9804	0.9576	0.9150	0.8416	0.7251	0.5565	0.3410	0.1184
12	11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9992	0.9978	0.9943	0.9862	0.9683	0.9313	0.8578	0.7176	0.4596	0.0000
12	12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
13	0	0.5133	0.2542	0.1209	0.0550	0.0238	0.0097	0.0037	0.0013	0.0004	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	1	0.8646	0.6213	0.3983	0.2336	0.1267	0.0637	0.0296	0.0126	0.0049	0.0017	0.0005	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	2	0.9755	0.8661	0.6920	0.5017	0.3326	0.2025	0.1132	0.0579	0.0269	0.0112	0.0041	0.0013	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
13	3	0.9969</																		

		機率 $p$																		
$n$	$t$	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95
15	2	0.9638	0.8159	0.6042	0.3980	0.2361	0.1268	0.0617	0.0271	0.0107	0.0037	0.0011	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	3	0.9945	0.9444	0.8227	0.6482	0.4613	0.2969	0.1727	0.0905	0.0424	0.0176	0.0063	0.0019	0.0005	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
15	4	0.9994	0.9873	0.9383	0.8358	0.6865	0.5155	0.3519	0.2173	0.1204	0.0592	0.0255	0.0093	0.0028	0.0007	0.0001	0.0000	0.0000	0.0000	0.0000
15	5	0.9999	0.9978	0.9832	0.9389	0.8516	0.7216	0.5643	0.4032	0.2608	0.1509	0.0769	0.0338	0.0124	0.0037	0.0008	0.0001	0.0000	0.0000	0.0000
15	6	1.0000	0.9997	0.9964	0.9819	0.9434	0.8689	0.7548	0.6098	0.4522	0.3036	0.1818	0.0950	0.0422	0.0152	0.0042	0.0008	0.0001	0.0000	0.0000
15	7	1.0000	1.0000	0.9994	0.9958	0.9827	0.9500	0.8868	0.7869	0.6535	0.5000	0.3465	0.2131	0.1132	0.0500	0.0173	0.0042	0.0006	0.0000	0.0000
15	8	1.0000	1.0000	0.9999	0.9992	0.9958	0.9848	0.9578	0.9050	0.8182	0.6964	0.5478	0.3902	0.2452	0.1311	0.0566	0.0181	0.0036	0.0003	0.0000
15	9	1.0000	1.0000	1.0000	0.9999	0.9992	0.9963	0.9876	0.9662	0.9231	0.8491	0.7392	0.5968	0.4357	0.2784	0.1484	0.0611	0.0168	0.0022	0.0001
15	10	1.0000	1.0000	1.0000	1.0000	0.9999	0.9993	0.9972	0.9907	0.9745	0.9408	0.8796	0.7827	0.6481	0.4845	0.3135	0.1642	0.0617	0.0127	0.0006
15	11	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9995	0.9981	0.9937	0.9824	0.9576	0.9095	0.8273	0.7031	0.5387	0.3518	0.1773	0.0556	0.0055
15	12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9989	0.9963	0.9893	0.9729	0.9383	0.8732	0.7639	0.6020	0.3958	0.1841	0.0362
15	13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9995	0.9983	0.9948	0.9858	0.9647	0.9198	0.8329	0.6814	0.4510	0.1710
15	14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9995	0.9984	0.9953	0.9866	0.9648	0.9126	0.7941	0.5367
15	15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
16	0	0.4401	0.1853	0.0743	0.0281	0.0100	0.0033	0.0010	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	1	0.8108	0.5147	0.2839	0.1407	0.0635	0.0261	0.0098	0.0033	0.0010	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	2	0.9571	0.7892	0.5614	0.3518	0.1971	0.0994	0.0451	0.0183	0.0066	0.0021	0.0006	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	3	0.9930	0.9316	0.7899	0.5981	0.4050	0.2459	0.1339	0.0651	0.0281	0.0106	0.0035	0.0009	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	4	0.9991	0.9830	0.9209	0.7982	0.6302	0.4499	0.2892	0.1666	0.0853	0.0384	0.0149	0.0049	0.0013	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000
16	5	0.9999	0.9967	0.9765	0.9183	0.8103	0.6598	0.4900	0.3288	0.1976	0.1051	0.0486	0.0191	0.0062	0.0016	0.0003	0.0000	0.0000	0.0000	0.0000
16	6	1.0000	0.9995	0.9944	0.9733	0.9204	0.8247	0.6881	0.5272	0.3660	0.2272	0.1241	0.0583	0.0229	0.0071	0.0016	0.0002	0.0000	0.0000	0.0000
16	7	1.0000	0.9999	0.9989	0.9930	0.9729	0.9256	0.8406	0.7161	0.5629	0.4018	0.2559	0.1423	0.0671	0.0257	0.0075	0.0015	0.0002	0.0000	0.0000
16	8	1.0000	1.0000	0.9998	0.9985	0.9925	0.9743	0.9329	0.8577	0.7441	0.5982	0.4371	0.2839	0.1594	0.0744	0.0271	0.0070	0.0011	0.0001	0.0000
16	9	1.0000	1.0000	1.0000	0.9998	0.9984	0.9929	0.9771	0.9417	0.8759	0.7728	0.6340	0.4728	0.3119	0.1753	0.0796	0.0267	0.0056	0.0005	0.0000
16	10	1.0000	1.0000	1.0000	1.0000	0.9997	0.9984	0.9938	0.9809	0.9514	0.8949	0.8024	0.6712	0.5100	0.3402	0.1897	0.0817	0.0235	0.0033	0.0001
16	11	1.0000	1.0000	1.0000	1.0000	1.0000	0.9997	0.9987	0.9951	0.9851	0.9616	0.9147	0.8334	0.7108	0.5501	0.3698	0.2018	0.0791	0.0170	0.0009
16	12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9991	0.9965	0.9894	0.9719	0.9349	0.8661	0.7541	0.5950	0.4019	0.2101	0.0684	0.0070
16	13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9994	0.9979	0.9934	0.9817	0.9549	0.9006	0.8029	0.6482	0.4386	0.2108	0.0429	
16	14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9990	0.9967	0.9902	0.9739	0.9365	0.8593	0.7161	0.4853	0.1892	
16	15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9997	0.9990	0.9967	0.9900	0.9719	0.9257	0.8147	0.5599
16	16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
17	0	0.4181	0.1668	0.0631	0.0225	0.0075	0.0023	0.0007	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	1	0.7922	0.4818	0.2525	0.1182	0.0501	0.0193	0.0067	0.0021	0.0006	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	2	0.9497	0.7618	0.5198	0.3096	0.1637	0.0774	0.0327	0.0123	0.0041	0.0012	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	3	0.9912	0.9174	0.7556	0.5489	0.3530	0.2019	0.1028	0.0464	0.0184	0.0064	0.0019	0.0005	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	4	0.9988	0.9779	0.9013	0.7582	0.5739	0.3887	0.2348	0.1260	0.0596	0.0245	0.0086	0.0025	0.0006	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
17	5	0.9999	0.9953	0.9681	0.8943	0.7653	0.5968	0.4197	0.2639	0.1471	0.0717	0.0301	0.0106	0.0030	0.0007	0.0001	0.0000	0.0000	0.0000	0.0000
17	6	1.0000	0.9992	0.9917	0.9623	0.8929	0.7752	0.6188	0.4478	0.2902	0.1662	0.0826	0.0348	0.0120	0.0032	0.0006	0.0001	0.0000	0.0000	0.0000
17	7	1.0000	0.9999	0.9983	0.9891	0.9598	0.8954	0.7872	0.6405	0.4743	0.3145	0.1834	0.0919	0.0383	0.0127	0.0031	0.0005	0.0000	0.0000	0.0000
17	8	1.0000	1.0000	0.9997	0.9974	0.9876	0.9597	0.9006	0.8011	0.6626	0.5000	0.3374	0.1989	0.0994	0.0403	0.0124	0.0026	0.0003	0.0000	0.0000
17	9	1.0000	1.0000	1.0000	0.9995	0.9969	0.9873	0.9617	0.9081	0.8166	0.6855	0.5257	0.3595	0.2128	0.1046	0.0402	0.0109	0.0017	0.0001	0.0000
17	10	1.0000	1.0000	1.0000	0.9999	0.9994	0.9968	0.9880	0.9652	0.9174	0.8338	0.7098	0.5522	0.3812	0.2248	0.1071	0.0377	0.0083	0.0008	0.0000
17	11	1.0000	1.0000	1.0000	1.0000	0.9999	0.9993	0.9970	0.9894	0.9699	0.9283	0.8529	0.7361	0.5803	0.4032	0.2347	0.1057	0.0319	0.0047	0.0001
17	12	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9994	0.9975	0.9914	0.9755	0.9404	0.8740	0.7652	0.6113	0.4261	0.2418	0.0987	0.0221	0.0012
17	13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9995	0.9981	0.9936	0.9816	0.9536	0.8972	0.7981	0.6470	0.4511	0.2444	0.0826	0.0088
17	14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9988	0.9959	0.9877	0.9673	0.9226	0.8363	0.6904	0.4802	0.2382	0.0503
17	15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9994	0.9979	0.9933	0.9807	0.9499	0.8818	0.7475	0.5182	0.2078	
17	16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9993	0.9977	0.9925	0.9775	0.9369	0.8332	0.5819
17	17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
18	0	0.3972	0.1501	0.0536	0.0180	0.0056	0.0016	0.0004	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	1	0.7735	0.4503	0.2241	0.0991	0.0395	0.0142	0.0046	0.0013	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	2	0.9419	0.7338	0.4797	0.2713	0.1353	0.0600	0.0236	0.0082	0.0025	0.0007	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	3	0.9891	0.9018	0.7202	0.5010	0.3057	0.1646	0.0783	0.0328	0.0120	0.0038	0.0010	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

		機率 $p$																			
$n$	$t$	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	
19	13	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9993	0.9969	0.9891	0.9682	0.9223	0.8371	0.7032	0.5261	0.3322	0.1631	0.0537	0.0086	0.0002
19	14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9994	0.9972	0.9904	0.9720	0.9304	0.8500	0.7178	0.5346	0.3267	0.1444	0.0352	0.0020	
19	15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9995	0.9978	0.9923	0.9770	0.9409	0.8668	0.7369	0.5449	0.3159	0.1150	0.0132	
19	16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9985	0.9945	0.9830	0.9538	0.8887	0.7631	0.5587	0.2946	0.0665		
19	17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9992	0.9969	0.9896	0.9171	0.8015	0.5797	0.2453		
19	18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9989	0.9958	0.9856	0.9544	0.8649	0.6226		
19	19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
20	0	0.3585	0.1216	0.0388	0.0115	0.0032	0.0008	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
20	1	0.7358	0.3917	0.1756	0.0692	0.0243	0.0076	0.0021	0.0005	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
20	2	0.9245	0.6769	0.4049	0.2061	0.0913	0.0355	0.0121	0.0036	0.0009	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
20	3	0.9841	0.8670	0.6477	0.4114	0.2252	0.1071	0.0444	0.0160	0.0049	0.0013	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
20	4	0.9974	0.9568	0.8298	0.6296	0.4148	0.2375	0.1182	0.0510	0.0189	0.0059	0.0015	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
20	5	0.9997	0.9887	0.9327	0.8042	0.6172	0.4164	0.2454	0.1256	0.0553	0.0207	0.0064	0.0016	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
20	6	1.0000	0.9976	0.9781	0.9133	0.7858	0.6080	0.4166	0.2500	0.1299	0.0577	0.0214	0.0065	0.0015	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000	
20	7	1.0000	0.9996	0.9941	0.9679	0.8982	0.7723	0.6010	0.4159	0.2520	0.1316	0.0580	0.0210	0.0060	0.0013	0.0002	0.0000	0.0000	0.0000	0.0000	
20	8	1.0000	0.9999	0.9987	0.9900	0.9591	0.8867	0.7624	0.5956	0.4143	0.2517	0.1308	0.0565	0.0196	0.0051	0.0009	0.0001	0.0000	0.0000	0.0000	
20	9	1.0000	1.0000	0.9998	0.9974	0.9861	0.9520	0.8782	0.7553	0.5914	0.4119	0.2493	0.1275	0.0532	0.0171	0.0039	0.0006	0.0000	0.0000	0.0000	
20	10	1.0000	1.0000	1.0000	0.9994	0.9961	0.9829	0.9468	0.8725	0.7507	0.5881	0.4086	0.2447	0.1218	0.0480	0.0139	0.0026	0.0002	0.0000	0.0000	
20	11	1.0000	1.0000	1.0000	0.9999	0.9991	0.9949	0.9804	0.9435	0.8692	0.7483	0.5857	0.4044	0.2376	0.1133	0.0409	0.0100	0.0013	0.0001	0.0000	
20	12	1.0000	1.0000	1.0000	1.0000	0.9998	0.9987	0.9940	0.9790	0.9420	0.8684	0.7480	0.5841	0.3990	0.2277	0.1018	0.0321	0.0059	0.0004	0.0000	
20	13	1.0000	1.0000	1.0000	1.0000	1.0000	0.9997	0.9985	0.9935	0.9786	0.9423	0.8701	0.7500	0.5834	0.3920	0.2142	0.0867	0.0219	0.0024	0.0000	
20	14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9997	0.9984	0.9936	0.9793	0.9447	0.8744	0.7546	0.5836	0.3828	0.1958	0.0673	0.0113	0.0003	
20	15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9997	0.9985	0.9941	0.9811	0.9490	0.8818	0.7625	0.5852	0.3704	0.1702	0.0432	0.0026	
20	16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9997	0.9987	0.9951	0.9840	0.9556	0.8929	0.7748	0.5886	0.3523	0.1330	0.0159		
20	17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9991	0.9964	0.9879	0.9645	0.9087	0.7939	0.5951	0.3231	0.0755		
20	18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9995	0.9979	0.9924	0.9757	0.9308	0.8244	0.6083	0.2642	
20	19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.9992	0.9968	0.9885	0.9612	0.8784	0.6415	
20	20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	

卜瓦松分布累積機率表(Cumulative Poisson distribution)

$$F_x(t) = P(X \leq t) = \sum_{x=0}^t \left( e^{-\mu} \times \frac{\mu^x}{x!} \right) = \sum_{0 \text{ 次成功}}^t \text{次成功} \left( e^{-\text{期望值}} \times \frac{\text{期望值}^{\text{成功次數}}}{\text{成功次數!}} \right)$$

$x \ t$	$\mu$									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
0	0.9048	0.8187	0.7408	0.6703	0.6065	0.5488	0.4966	0.4493	0.4066	0.3679
1	0.9953	0.9825	0.9631	0.9384	0.9098	0.8781	0.8442	0.8088	0.7725	0.7358
2	0.9998	0.9989	0.9964	0.9921	0.9856	0.9769	0.9659	0.9526	0.9371	0.9197
3	1.0000	0.9999	0.9997	0.9992	0.9982	0.9966	0.9942	0.9909	0.9865	0.9810
4	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996	0.9992	0.9986	0.9977	0.9963
5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9997	0.9994
6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
7	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$x \ t$	$\mu$									
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
0	0.3329	0.3012	0.2725	0.2466	0.2231	0.2019	0.1827	0.1653	0.1496	0.1353
1	0.6990	0.6626	0.6268	0.5918	0.5578	0.5249	0.4932	0.4628	0.4337	0.4060
2	0.9004	0.8795	0.8571	0.8335	0.8088	0.7834	0.7572	0.7306	0.7037	0.6767
3	0.9743	0.9662	0.9569	0.9463	0.9344	0.9212	0.9068	0.8913	0.8747	0.8571
4	0.9946	0.9923	0.9893	0.9857	0.9814	0.9763	0.9704	0.9636	0.9559	0.9473
5	0.9990	0.9985	0.9978	0.9968	0.9955	0.9940	0.9920	0.9896	0.9868	0.9834
6	0.9999	0.9997	0.9996	0.9994	0.9991	0.9987	0.9981	0.9974	0.9966	0.9955
7	1.0000	1.0000	0.9999	0.9999	0.9998	0.9997	0.9996	0.9994	0.9992	0.9989
8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9998	0.9998
9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$x \ t$	$\mu$									
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3
0	0.1225	0.1108	0.1003	0.0907	0.0821	0.0743	0.0672	0.0608	0.0550	0.0498
1	0.3796	0.3546	0.3309	0.3084	0.2873	0.2674	0.2487	0.2311	0.2146	0.1991
2	0.6496	0.6227	0.5960	0.5697	0.5438	0.5184	0.4936	0.4695	0.4460	0.4232
3	0.8386	0.8194	0.7993	0.7787	0.7576	0.7360	0.7141	0.6919	0.6696	0.6472
4	0.9379	0.9275	0.9162	0.9041	0.8912	0.8774	0.8629	0.8477	0.8318	0.8153

$x \ t$	$\mu$									
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3
5	0.9796	0.9751	0.9700	0.9643	0.9580	0.9510	0.9433	0.9349	0.9258	0.9161
6	0.9941	0.9925	0.9906	0.9884	0.9858	0.9828	0.9794	0.9756	0.9713	0.9665
7	0.9985	0.9980	0.9974	0.9967	0.9958	0.9947	0.9934	0.9919	0.9901	0.9881
8	0.9997	0.9995	0.9994	0.9991	0.9989	0.9985	0.9981	0.9976	0.9969	0.9962
9	0.9999	0.9999	0.9999	0.9998	0.9997	0.9996	0.9995	0.9993	0.9991	0.9989
10	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9998	0.9998	0.9997
11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999
12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$x \ t$	$\mu$									
	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4
0	0.0450	0.0408	0.0369	0.0334	0.0302	0.0273	0.0247	0.0224	0.0202	0.0183
1	0.1847	0.1712	0.1586	0.1468	0.1359	0.1257	0.1162	0.1074	0.0992	0.0916
2	0.4012	0.3799	0.3594	0.3397	0.3208	0.3027	0.2854	0.2689	0.2531	0.2381
3	0.6248	0.6025	0.5803	0.5584	0.5366	0.5152	0.4942	0.4735	0.4532	0.4335
4	0.7982	0.7806	0.7626	0.7442	0.7254	0.7064	0.6872	0.6678	0.6484	0.6288
5	0.9057	0.8946	0.8829	0.8705	0.8576	0.8441	0.8301	0.8156	0.8006	0.7851
6	0.9612	0.9554	0.9490	0.9421	0.9347	0.9267	0.9182	0.9091	0.8995	0.8893
7	0.9858	0.9832	0.9802	0.9769	0.9733	0.9692	0.9648	0.9599	0.9546	0.9489
8	0.9953	0.9943	0.9931	0.9917	0.9901	0.9883	0.9863	0.9840	0.9815	0.9786
9	0.9986	0.9982	0.9978	0.9973	0.9967	0.9960	0.9952	0.9942	0.9931	0.9919
10	0.9996	0.9995	0.9994	0.9992	0.9990	0.9987	0.9984	0.9981	0.9977	0.9972
11	0.9999	0.9999	0.9998	0.9998	0.9997	0.9996	0.9995	0.9994	0.9993	0.9991
12	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998	0.9998	0.9997
13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999
14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$x \ t$	$\mu$									
	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5
0	0.0166	0.0150	0.0136	0.0123	0.0111	0.0101	0.0091	0.0082	0.0074	0.0067
1	0.0845	0.0780	0.0719	0.0663	0.0611	0.0563	0.0518	0.0477	0.0439	0.0404
2	0.2238	0.2102	0.1974	0.1851	0.1736	0.1626	0.1523	0.1425	0.1333	0.1247
3	0.4142	0.3954	0.3772	0.3594	0.3423	0.3257	0.3097	0.2942	0.2793	0.2650
4	0.6093	0.5898	0.5704	0.5512	0.5321	0.5132	0.4946	0.4763	0.4582	0.4405
5	0.7693	0.7531	0.7367	0.7199	0.7029	0.6858	0.6684	0.6510	0.6335	0.6160
6	0.8786	0.8675	0.8558	0.8436	0.8311	0.8180	0.8046	0.7908	0.7767	0.7622
7	0.9427	0.9361	0.9290	0.9214	0.9134	0.9049	0.8960	0.8867	0.8769	0.8666
8	0.9755	0.9721	0.9683	0.9642	0.9597	0.9549	0.9497	0.9442	0.9382	0.9319
9	0.9905	0.9889	0.9871	0.9851	0.9829	0.9805	0.9778	0.9749	0.9717	0.9682
10	0.9966	0.9959	0.9952	0.9943	0.9933	0.9922	0.9910	0.9896	0.9880	0.9863
11	0.9989	0.9986	0.9983	0.9980	0.9976	0.9971	0.9966	0.9960	0.9953	0.9945
12	0.9997	0.9996	0.9995	0.9993	0.9992	0.9990	0.9988	0.9986	0.9983	0.9980
13	0.9999	0.9999	0.9998	0.9998	0.9997	0.9997	0.9996	0.9995	0.9994	0.9993
14	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9999	0.9999	0.9998	0.9998
15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999
16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$x \ t$	$\mu$									
	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6
0	0.0061	0.0055	0.0050	0.0045	0.0041	0.0037	0.0033	0.0030	0.0027	0.0025
1	0.0372	0.0342	0.0314	0.0289	0.0266	0.0244	0.0224	0.0206	0.0189	0.0174
2	0.1165	0.1088	0.1016	0.0948	0.0884	0.0824	0.0768	0.0715	0.0666	0.0620
3	0.2513	0.2381	0.2254	0.2133	0.2017	0.1906	0.1800	0.1700	0.1604	0.1512
4	0.4231	0.4061	0.3895	0.3733	0.3575	0.3422	0.3272	0.3127	0.2987	0.2851
5	0.5984	0.5809	0.5635	0.5461	0.5289	0.5119	0.4950	0.4783	0.4619	0.4457
6	0.7474	0.7324	0.7171	0.7017	0.6860	0.6703	0.6544	0.6384	0.6224	0.6063

$x \ t$	$\mu$									
	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6
7	0.8560	0.8449	0.8335	0.8217	0.8095	0.7970	0.7841	0.7710	0.7576	0.7440
8	0.9252	0.9181	0.9106	0.9027	0.8944	0.8857	0.8766	0.8672	0.8574	0.8472
9	0.9644	0.9603	0.9559	0.9512	0.9462	0.9409	0.9352	0.9292	0.9228	0.9161
10	0.9844	0.9823	0.9800	0.9775	0.9747	0.9718	0.9686	0.9651	0.9614	0.9574
11	0.9937	0.9927	0.9916	0.9904	0.9890	0.9875	0.9859	0.9841	0.9821	0.9799
12	0.9976	0.9972	0.9967	0.9962	0.9955	0.9949	0.9941	0.9932	0.9922	0.9912
13	0.9992	0.9990	0.9988	0.9986	0.9983	0.9980	0.9977	0.9973	0.9969	0.9964
14	0.9997	0.9997	0.9996	0.9995	0.9994	0.9993	0.9991	0.9990	0.9988	0.9986
15	0.9999	0.9999	0.9999	0.9998	0.9998	0.9998	0.9997	0.9996	0.9996	0.9995
16	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9998
17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$x \ t$	$\mu$									
	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7
0	0.0022	0.0020	0.0018	0.0017	0.0015	0.0014	0.0012	0.0011	0.0010	0.0009
1	0.0159	0.0146	0.0134	0.0123	0.0113	0.0103	0.0095	0.0087	0.0080	0.0073
2	0.0577	0.0536	0.0498	0.0463	0.0430	0.0400	0.0371	0.0344	0.0320	0.0296
3	0.1425	0.1342	0.1264	0.1189	0.1118	0.1052	0.0988	0.0928	0.0871	0.0818
4	0.2719	0.2592	0.2469	0.2351	0.2237	0.2127	0.2022	0.1920	0.1823	0.1730
5	0.4298	0.4141	0.3988	0.3837	0.3690	0.3547	0.3406	0.3270	0.3137	0.3007
6	0.5902	0.5742	0.5582	0.5423	0.5265	0.5108	0.4953	0.4799	0.4647	0.4497
7	0.7301	0.7160	0.7017	0.6873	0.6728	0.6581	0.6433	0.6285	0.6136	0.5987
8	0.8367	0.8259	0.8148	0.8033	0.7916	0.7796	0.7673	0.7548	0.7420	0.7291
9	0.9090	0.9016	0.8939	0.8858	0.8774	0.8686	0.8596	0.8502	0.8405	0.8305
10	0.9531	0.9486	0.9437	0.9386	0.9332	0.9274	0.9214	0.9151	0.9084	0.9015
11	0.9776	0.9750	0.9723	0.9693	0.9661	0.9627	0.9591	0.9552	0.9510	0.9467
12	0.9900	0.9887	0.9873	0.9857	0.9840	0.9821	0.9801	0.9779	0.9755	0.9730
13	0.9958	0.9952	0.9945	0.9937	0.9929	0.9920	0.9909	0.9898	0.9885	0.9872
14	0.9984	0.9981	0.9978	0.9974	0.9970	0.9966	0.9961	0.9956	0.9950	0.9943
15	0.9994	0.9993	0.9992	0.9990	0.9988	0.9986	0.9984	0.9982	0.9979	0.9976
16	0.9998	0.9997	0.9997	0.9996	0.9996	0.9995	0.9994	0.9993	0.9992	0.9990
17	0.9999	0.9999	0.9999	0.9999	0.9998	0.9998	0.9998	0.9997	0.9997	0.9996
18	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
19	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

$x \ t$	$\mu$									
	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8
0	0.0008	0.0007	0.0007	0.0006	0.0006	0.0005	0.0005	0.0004	0.0004	0.0003
1	0.0067	0.0061	0.0056	0.0051	0.0047	0.0043	0.0039	0.0036	0.0033	0.0030
2	0.0275	0.0255	0.0236	0.0219	0.0203	0.0188	0.0174	0.0161	0.0149	0.0138
3	0.0767	0.0719	0.0674	0.0632	0.0591	0.0554	0.0518	0.0485	0.0453	0.0424
4	0.1641	0.1555	0.1473	0.1395	0.1321	0.1249	0.1181	0.1117	0.1055	0.0996
5	0.2881	0.2759	0.2640	0.2526	0.2414	0.2307	0.2203	0.2103	0.2006	0.1912
6	0.4349	0.4204	0.4060	0.3920	0.3782	0.3646	0.3514	0.3384	0.3257	0.3134
7	0.5838	0.5689	0.5541	0.5393	0.5246	0.5100	0.4956	0.4812	0.4670	0.4530
8	0.7160	0.7027	0.6892	0.6757	0.6620	0.6482	0.6343	0.6204	0.6065	0.5925
9	0.8202	0.8096	0.7988	0.7877	0.7764	0.7649	0.7531	0.7411	0.7290	0.7166
10	0.8942	0.8867	0.8788	0.8707	0.8622	0.8535	0.8445	0.8352	0.8257	0.8159
11	0.9420	0.9371	0.9319	0.9265	0.9208	0.9148	0.9085	0.9020	0.8952	0.8881
12	0.9703	0.9673	0.9642	0.9609	0.9573	0.9536	0.9496	0.9454	0.9409	0.9362
13	0.9857	0.9841	0.9824	0.9805	0.9784	0.9762	0.9739	0.9714	0.9687	0.9658
14	0.9935	0.9927	0.9918	0.9908	0.9897	0.9886	0.9873	0.9859	0.9844	0.9827
15	0.9972	0.9969	0.9964	0.9959	0.9954	0.9948	0.9941	0.9934	0.9926	0.9918
16	0.9989	0.9987	0.9985	0.9983	0.9980	0.9978	0.9974	0.9971	0.9967	0.9963



$x \ t$	$\mu$									
	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8
17	0.9996	0.9995	0.9994	0.9993	0.9992	0.9991	0.9989	0.9988	0.9986	0.9984
18	0.9998	0.9998	0.9998	0.9997	0.9997	0.9996	0.9996	0.9995	0.9994	0.9993
19	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9998	0.9998	0.9998	0.9997
20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9999
21	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$x \ t$	$\mu$									
	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9
0	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001
1	0.0028	0.0025	0.0023	0.0021	0.0019	0.0018	0.0016	0.0015	0.0014	0.0012
2	0.0127	0.0118	0.0109	0.0100	0.0093	0.0086	0.0079	0.0073	0.0068	0.0062
3	0.0396	0.0370	0.0346	0.0323	0.0301	0.0281	0.0262	0.0244	0.0228	0.0212
4	0.0940	0.0887	0.0837	0.0789	0.0744	0.0701	0.0660	0.0621	0.0584	0.0550
5	0.1822	0.1736	0.1653	0.1573	0.1496	0.1422	0.1352	0.1284	0.1219	0.1157
6	0.3013	0.2896	0.2781	0.2670	0.2562	0.2457	0.2355	0.2256	0.2160	0.2068
7	0.4391	0.4254	0.4119	0.3987	0.3856	0.3728	0.3602	0.3478	0.3357	0.3239
8	0.5786	0.5647	0.5507	0.5369	0.5231	0.5094	0.4958	0.4823	0.4689	0.4557
9	0.7041	0.6915	0.6788	0.6659	0.6530	0.6400	0.6269	0.6137	0.6006	0.5874
10	0.8058	0.7955	0.7850	0.7743	0.7634	0.7522	0.7409	0.7294	0.7178	0.7060
11	0.8807	0.8731	0.8652	0.8571	0.8487	0.8400	0.8311	0.8220	0.8126	0.8030
12	0.9313	0.9261	0.9207	0.9150	0.9091	0.9029	0.8965	0.8898	0.8829	0.8758
13	0.9628	0.9595	0.9561	0.9524	0.9486	0.9445	0.9403	0.9358	0.9311	0.9261
14	0.9810	0.9791	0.9771	0.9749	0.9726	0.9701	0.9675	0.9647	0.9617	0.9585
15	0.9908	0.9898	0.9887	0.9875	0.9862	0.9848	0.9832	0.9816	0.9798	0.9780
16	0.9958	0.9953	0.9947	0.9941	0.9934	0.9926	0.9918	0.9909	0.9899	0.9889
17	0.9982	0.9979	0.9977	0.9973	0.9970	0.9966	0.9962	0.9957	0.9952	0.9947
18	0.9992	0.9991	0.9990	0.9989	0.9987	0.9985	0.9983	0.9981	0.9978	0.9976
19	0.9997	0.9997	0.9996	0.9995	0.9995	0.9994	0.9993	0.9992	0.9991	0.9989
20	0.9999	0.9999	0.9998	0.9998	0.9998	0.9998	0.9997	0.9997	0.9996	0.9996
21	1.0000	1.0000	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9998	0.9998
22	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999

$x \ t$	$\mu$									
	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10
0	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000
1	0.0011	0.0010	0.0009	0.0009	0.0008	0.0007	0.0007	0.0006	0.0005	0.0005
2	0.0058	0.0053	0.0049	0.0045	0.0042	0.0038	0.0035	0.0033	0.0030	0.0028
3	0.0198	0.0184	0.0172	0.0160	0.0149	0.0138	0.0129	0.0120	0.0111	0.0103
4	0.0517	0.0486	0.0456	0.0429	0.0403	0.0378	0.0355	0.0333	0.0312	0.0293
5	0.1098	0.1041	0.0986	0.0935	0.0885	0.0838	0.0793	0.0750	0.0710	0.0671
6	0.1978	0.1892	0.1808	0.1727	0.1649	0.1574	0.1502	0.1433	0.1366	0.1301
7	0.3123	0.3010	0.2900	0.2792	0.2687	0.2584	0.2485	0.2388	0.2294	0.2202
8	0.4426	0.4296	0.4168	0.4042	0.3918	0.3796	0.3676	0.3558	0.3442	0.3328
9	0.5742	0.5611	0.5479	0.5349	0.5218	0.5089	0.4960	0.4832	0.4705	0.4579
10	0.6941	0.6820	0.6699	0.6576	0.6453	0.6329	0.6205	0.6080	0.5955	0.5830
11	0.7932	0.7832	0.7730	0.7626	0.7520	0.7412	0.7303	0.7193	0.7081	0.6968
12	0.8684	0.8607	0.8529	0.8448	0.8364	0.8279	0.8191	0.8101	0.8009	0.7916
13	0.9210	0.9156	0.9100	0.9042	0.8981	0.8919	0.8853	0.8786	0.8716	0.8645
14	0.9552	0.9517	0.9480	0.9441	0.9400	0.9357	0.9312	0.9265	0.9216	0.9165
15	0.9760	0.9738	0.9715	0.9691	0.9665	0.9638	0.9609	0.9579	0.9546	0.9513
16	0.9878	0.9865	0.9852	0.9838	0.9823	0.9806	0.9789	0.9770	0.9751	0.9730
17	0.9941	0.9934	0.9927	0.9919	0.9911	0.9902	0.9892	0.9881	0.9870	0.9857
18	0.9973	0.9969	0.9966	0.9962	0.9957	0.9952	0.9947	0.9941	0.9935	0.9928
19	0.9988	0.9986	0.9985	0.9983	0.9980	0.9978	0.9975	0.9972	0.9969	0.9965
20	0.9995	0.9994	0.9993	0.9992	0.9991	0.9990	0.9989	0.9987	0.9986	0.9984
21	0.9998	0.9998	0.9997	0.9997	0.9996	0.9996	0.9995	0.9995	0.9994	0.9993

x t	$\mu$									
	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10
22	0.9999	0.9999	0.9999	0.9999	0.9999	0.9998	0.9998	0.9998	0.9997	0.9997
23	1.0000	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
24	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

x t	$\mu$									
	11	12	13	14	15	16	17	18	19	20
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0012	0.0005	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0049	0.0023	0.0011	0.0005	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000
4	0.0151	0.0076	0.0037	0.0018	0.0009	0.0004	0.0002	0.0001	0.0000	0.0000
5	0.0375	0.0203	0.0107	0.0055	0.0028	0.0014	0.0007	0.0003	0.0002	0.0001
6	0.0786	0.0458	0.0259	0.0142	0.0076	0.0040	0.0021	0.0010	0.0005	0.0003
7	0.1432	0.0895	0.0540	0.0316	0.0180	0.0100	0.0054	0.0029	0.0015	0.0008
8	0.2320	0.1550	0.0998	0.0621	0.0374	0.0220	0.0126	0.0071	0.0039	0.0021
9	0.3405	0.2424	0.1658	0.1094	0.0699	0.0433	0.0261	0.0154	0.0089	0.0050
10	0.4599	0.3472	0.2517	0.1757	0.1185	0.0774	0.0491	0.0304	0.0183	0.0108
11	0.5793	0.4616	0.3532	0.2600	0.1848	0.1270	0.0847	0.0549	0.0347	0.0214
12	0.6887	0.5760	0.4631	0.3585	0.2676	0.1931	0.1350	0.0917	0.0606	0.0390
13	0.7813	0.6815	0.5730	0.4644	0.3632	0.2745	0.2009	0.1426	0.0984	0.0661
14	0.8540	0.7720	0.6751	0.5704	0.4657	0.3675	0.2808	0.2081	0.1497	0.1049
15	0.9074	0.8444	0.7636	0.6694	0.5681	0.4667	0.3715	0.2867	0.2148	0.1565
16	0.9441	0.8987	0.8355	0.7559	0.6641	0.5660	0.4677	0.3751	0.2920	0.2211
17	0.9678	0.9370	0.8905	0.8272	0.7489	0.6593	0.5640	0.4686	0.3784	0.2970
18	0.9823	0.9626	0.9302	0.8826	0.8195	0.7423	0.6550	0.5622	0.4695	0.3814
19	0.9907	0.9787	0.9573	0.9235	0.8752	0.8122	0.7363	0.6509	0.5606	0.4703
20	0.9953	0.9884	0.9750	0.9521	0.9170	0.8682	0.8055	0.7307	0.6472	0.5591
21	0.9977	0.9939	0.9859	0.9712	0.9469	0.9108	0.8615	0.7991	0.7255	0.6437
22	0.9990	0.9970	0.9924	0.9833	0.9673	0.9418	0.9047	0.8551	0.7931	0.7206
23	0.9995	0.9985	0.9960	0.9907	0.9805	0.9633	0.9367	0.8989	0.8490	0.7875
24	0.9998	0.9993	0.9980	0.9950	0.9888	0.9777	0.9594	0.9317	0.8933	0.8432
25	0.9999	0.9997	0.9990	0.9974	0.9938	0.9869	0.9748	0.9554	0.9269	0.8878
26	1.0000	0.9999	0.9995	0.9987	0.9967	0.9925	0.9848	0.9718	0.9514	0.9221
27	1.0000	0.9999	0.9998	0.9994	0.9983	0.9959	0.9912	0.9827	0.9687	0.9475
28	1.0000	1.0000	0.9999	0.9997	0.9991	0.9978	0.9950	0.9897	0.9805	0.9657
29	1.0000	1.0000	1.0000	0.9999	0.9996	0.9989	0.9973	0.9941	0.9882	0.9782
30	1.0000	1.0000	1.0000	0.9999	0.9998	0.9994	0.9986	0.9967	0.9930	0.9865
31	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9993	0.9982	0.9960	0.9919
32	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9996	0.9990	0.9978	0.9953
33	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9995	0.9988	0.9973
34	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9994	0.9985
35	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9997	0.9992
36	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998	0.9996
37	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.9998
38	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999
39	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999

標準常態分佈累積機率表(Cumulative standard normal distribution)

$$\Phi(z) = P(Z \leq z) = \int_{-\infty}^z \frac{1}{\sqrt{2\pi}} \times e^{-\frac{z^2}{2}} dz$$

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-3.5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005



z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
-0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
3.5	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998

*t* 分布之 *t* 值表(右單尾分布)

$$P(t > t_{\alpha}) = \alpha$$

<i>t</i> 值	信賴區間的顯著水準 $\alpha$					
	Critical values $t_{\alpha}$					
	$t_{0.250}$ 0.250	$t_{0.100}$ 0.100	$t_{0.050}$ 0.050	$t_{0.025}$ 0.025	$t_{0.010}$ 0.010	$t_{0.005}$ 0.005
自由度 $\nu$						
1	1.0000	3.0777	6.3138	12.7062	31.8205	63.6567
2	0.8165	1.8856	2.9200	4.3027	6.9646	9.9248
3	0.7649	1.6377	2.3534	3.1824	4.5407	5.8409
4	0.7407	1.5332	2.1318	2.7764	3.7469	4.6041
5	0.7267	1.4759	2.0150	2.5706	3.3649	4.0321
6	0.7176	1.4398	1.9432	2.4469	3.1427	3.7074
7	0.7111	1.4149	1.8946	2.3646	2.9980	3.4995
8	0.7064	1.3968	1.8595	2.3060	2.8965	3.3554
9	0.7027	1.3830	1.8331	2.2622	2.8214	3.2498
10	0.6998	1.3722	1.8125	2.2281	2.7638	3.1693
11	0.6974	1.3634	1.7959	2.2010	2.7181	3.1058
12	0.6955	1.3562	1.7823	2.1788	2.6810	3.0545
13	0.6938	1.3502	1.7709	2.1604	2.6503	3.0123
14	0.6924	1.3450	1.7613	2.1448	2.6245	2.9768
15	0.6912	1.3406	1.7531	2.1314	2.6025	2.9467
16	0.6901	1.3368	1.7459	2.1199	2.5835	2.9208
17	0.6892	1.3334	1.7396	2.1098	2.5669	2.8982
18	0.6884	1.3304	1.7341	2.1009	2.5524	2.8784
19	0.6876	1.3277	1.7291	2.0930	2.5395	2.8609
20	0.6870	1.3253	1.7247	2.0860	2.5280	2.8453
21	0.6864	1.3232	1.7207	2.0796	2.5176	2.8314
22	0.6858	1.3212	1.7171	2.0739	2.5083	2.8188
23	0.6853	1.3195	1.7139	2.0687	2.4999	2.8073
24	0.6848	1.3178	1.7109	2.0639	2.4922	2.7969
25	0.6844	1.3163	1.7081	2.0595	2.4851	2.7874
26	0.6840	1.3150	1.7056	2.0555	2.4786	2.7787
27	0.6837	1.3137	1.7033	2.0518	2.4727	2.7707
28	0.6834	1.3125	1.7011	2.0484	2.4671	2.7633
29	0.6830	1.3114	1.6991	2.0452	2.4620	2.7564
30	0.6828	1.3104	1.6973	2.0423	2.4573	2.7500
31	0.6825	1.3095	1.6955	2.0395	2.4528	2.7440
32	0.6822	1.3086	1.6939	2.0369	2.4487	2.7385
33	0.6820	1.3077	1.6924	2.0345	2.4448	2.7333
34	0.6818	1.3070	1.6909	2.0322	2.4411	2.7284
35	0.6816	1.3062	1.6896	2.0301	2.4377	2.7238
36	0.6814	1.3055	1.6883	2.0281	2.4345	2.7195

t 值	信賴區間的顯著水準 $\alpha$					
	Critical values $t_\alpha$					
	自由度 $\nu$	$t_{0.250}$ 0.250	$t_{0.100}$ 0.100	$t_{0.050}$ 0.050	$t_{0.025}$ 0.025	$t_{0.010}$ 0.010
37	0.6812	1.3049	1.6871	2.0262	2.4314	2.7154
38	0.6810	1.3042	1.6860	2.0244	2.4286	2.7116
39	0.6808	1.3036	1.6849	2.0227	2.4258	2.7079
40	0.6807	1.3031	1.6839	2.0211	2.4233	2.7045
41	0.6805	1.3025	1.6829	2.0195	2.4208	2.7012
42	0.6804	1.3020	1.6820	2.0181	2.4185	2.6981
43	0.6802	1.3016	1.6811	2.0167	2.4163	2.6951
44	0.6801	1.3011	1.6802	2.0154	2.4141	2.6923
45	0.6800	1.3006	1.6794	2.0141	2.4121	2.6896
46	0.6799	1.3002	1.6787	2.0129	2.4102	2.6870
47	0.6797	1.2998	1.6779	2.0117	2.4083	2.6846
48	0.6796	1.2994	1.6772	2.0106	2.4066	2.6822
49	0.6795	1.2991	1.6766	2.0096	2.4049	2.6800
50	0.6794	1.2987	1.6759	2.0086	2.4033	2.6778
51	0.6793	1.2984	1.6753	2.0076	2.4017	2.6757
52	0.6792	1.2980	1.6747	2.0066	2.4002	2.6737
53	0.6791	1.2977	1.6741	2.0057	2.3988	2.6718
54	0.6791	1.2974	1.6736	2.0049	2.3974	2.6700
55	0.6790	1.2971	1.6730	2.0040	2.3961	2.6682
56	0.6789	1.2969	1.6725	2.0032	2.3948	2.6665
57	0.6788	1.2966	1.6720	2.0025	2.3936	2.6649
58	0.6787	1.2963	1.6716	2.0017	2.3924	2.6633
59	0.6787	1.2961	1.6711	2.0010	2.3912	2.6618
60	0.6786	1.2958	1.6706	2.0003	2.3901	2.6603
70	0.6780	1.2938	1.6669	1.9944	2.3808	2.6479
80	0.6776	1.2922	1.6641	1.9901	2.3739	2.6387
90	0.6772	1.2910	1.6620	1.9867	2.3685	2.6316
100	0.6770	1.2901	1.6602	1.9840	2.3642	2.6259
110	0.6767	1.2893	1.6588	1.9818	2.3607	2.6213
120	0.6765	1.2886	1.6577	1.9799	2.3578	2.6174
$\infty$	0.6745	1.2816	1.6448	1.9600	2.3263	2.5758

四位數亂數表

Table of random digits

0352	1099	5767	7871	0971	8573	4213	3953	6394	6347
5857	7981	4481	3467	0674	2445	8553	2272	4456	3746
2692	1991	6379	4633	7775	9681	7080	9581	4746	1787
6053	6568	9644	7367	5848	6621	8915	6829	7048	0367
7235	7761	9371	7613	2724	3962	2719	0514	1246	5203
8862	6672	6914	8713	0860	4722	8252	9726	0680	8005
4088	3531	7236	0001	0736	2632	6195	1975	9909	6667
4371	4740	0893	0386	2089	1848	0140	5715	6836	4756
3234	7150	0030	8981	9702	3364	3524	5917	5603	0875
1540	3988	1778	2265	7159	2521	6583	4739	2349	3572
5475	4168	0868	6437	0051	6219	7230	5127	8304	9049
6826	3398	5381	3787	0714	3056	4747	4640	9081	0550
5688	3697	2941	9840	2194	1227	2822	4032	5675	2130
5755	2090	2460	7432	4359	5415	2540	4425	2726	8249
0610	1123	4347	4415	4777	1478	8554	7151	4921	8941
6054	2739	8509	9139	9657	1986	3856	7930	9625	7171
6336	2174	9303	5295	6326	3107	1263	2925	7647	5041
9928	5663	1559	6954	4005	6482	6899	1278	4237	3912
2927	3388	3102	7228	0213	4755	4264	9867	2253	5658

6612	3040	2643	4076	1552	3023	1764	8304	7388	0173
3329	6751	4498	2127	1384	8811	9946	681	5656	1142
0960	6281	7584	8754	5532	3956	6636	3332	7985	5329
0963	0029	3931	4261	0788	9754	7368	4988	4113	2100
3913	4736	3403	6424	2306	7487	0202	9366	6095	9137
3395	9314	4555	1995	0578	1163	4601	6143	0908	7743

卡方分布臨界值表

$$P(\chi^2 \geq \chi^2_{\alpha}) = \alpha \qquad P(\chi^2_{1-\frac{\alpha}{2}} \leq \chi^2 \leq \chi^2_{\frac{\alpha}{2}}) = 1 - \alpha$$

自由度	右尾機率值 $\alpha$									
	0.995	0.990	0.975	0.950	0.900	0.100	0.050	0.025	0.010	0.005
1	0.0000	0.0002	0.0010	0.0039	0.0158	2.7055	3.8415	5.0239	6.6349	7.8794
2	0.0100	0.0201	0.0506	0.1026	0.2107	4.6052	5.9915	7.3778	9.2103	10.5966
3	0.0717	0.1148	0.2158	0.3518	0.5844	6.2514	7.8147	9.3484	11.3449	12.8382
4	0.2070	0.2971	0.4844	0.7107	1.0636	7.7794	9.4877	11.1433	13.2767	14.8603
5	0.4117	0.5543	0.8312	1.1455	1.6103	9.2364	11.0705	12.8325	15.0863	16.7496
6	0.6757	0.8721	1.2373	1.6354	2.2041	10.6446	12.5916	14.4494	16.8119	18.5476
7	0.9893	1.2390	1.6899	2.1673	2.8331	12.0170	14.0671	16.0128	18.4753	20.2777
8	1.3444	1.6465	2.1797	2.7326	3.4895	13.3616	15.5073	17.5345	20.0902	21.9550
9	1.7349	2.0879	2.7004	3.3251	4.1682	14.6837	16.9190	19.0228	21.6660	23.5894
10	2.1559	2.5582	3.2470	3.9403	4.8652	15.9872	18.3070	20.4832	23.2093	25.1882
11	2.6032	3.0535	3.8157	4.5748	5.5778	17.2750	19.6751	21.9200	24.7250	26.7568
12	3.0738	3.5706	4.4038	5.2260	6.3038	18.5493	21.0261	23.3367	26.2170	28.2995
13	3.5650	4.1069	5.0088	5.8919	7.0415	19.8119	22.3620	24.7356	27.6882	29.8195
14	4.0747	4.6604	5.6287	6.5706	7.7895	21.0641	23.6848	26.1189	29.1412	31.3193
15	4.6009	5.2293	6.2621	7.2609	8.5468	22.3071	24.9958	27.4884	30.5779	32.8013
16	5.1422	5.8122	6.9077	7.9616	9.3122	23.5418	26.2962	28.8454	31.9999	34.2672
17	5.6972	6.4078	7.5642	8.6718	10.0852	24.7690	27.5871	30.1910	33.4087	35.7185
18	6.2648	7.0149	8.2307	9.3905	10.8649	25.9894	28.8693	31.5264	34.8053	37.1565
19	6.8440	7.6327	8.9065	10.1170	11.6509	27.2036	30.1435	32.8523	36.1909	38.5823
20	7.4338	8.2604	9.5908	10.8508	12.4426	28.4120	31.4104	34.1696	37.5662	39.9968
21	8.0337	8.8972	10.2829	11.5913	13.2396	29.6151	32.6706	35.4789	38.9322	41.4011
22	8.6427	9.5425	10.9823	12.3380	14.0415	30.8133	33.9244	36.7807	40.2894	42.7957
23	9.2604	10.1957	11.6886	13.0905	14.8480	32.0069	35.1725	38.0756	41.6384	44.1813
24	9.8862	10.8564	12.4012	13.8484	15.6587	33.1962	36.4150	39.3641	42.9798	45.5585
25	10.5197	11.5240	13.1197	14.6114	16.4734	34.3816	37.6525	40.6465	44.3141	46.9279
26	11.1602	12.1981	13.8439	15.3792	17.2919	35.5632	38.8851	41.9232	45.6417	48.2899
27	11.8076	12.8785	14.5734	16.1514	18.1139	36.7412	40.1133	43.1945	46.9629	49.6449
28	12.4613	13.5647	15.3079	16.9279	18.9392	37.9159	41.3371	44.4608	48.2782	50.9934
29	13.1211	14.2565	16.0471	17.7084	19.7677	39.0875	42.5570	45.7223	49.5879	52.3356
30	13.7867	14.9535	16.7908	18.4927	20.5992	40.2560	43.7730	46.9792	50.8922	53.6720
40	20.7065	22.1643	24.4330	26.5093	29.0505	51.8051	55.7585	59.3417	63.6907	66.7660
50	27.9907	29.7067	32.3574	34.7643	37.6886	63.1671	67.5048	71.4202	76.1539	79.4900
60	35.5345	37.4849	40.4817	43.1880	46.4589	74.3970	79.0819	83.2977	88.3794	91.9517
70	43.2752	45.4417	48.7576	51.7393	55.3289	85.5270	90.5312	95.0232	100.4252	104.2149
80	51.1719	53.5401	57.1532	60.3915	64.2778	96.5782	101.8795	106.6286	112.3288	116.3211
90	59.1963	61.7541	65.6466	69.1260	73.2911	107.5650	113.1453	118.1359	124.1163	128.2989
100	67.3276	70.0649	74.2219	77.9295	82.3581	118.4980	124.3421	129.5612	135.8067	140.1695
110	75.5500	78.4583	82.8671	86.7916	91.4710	129.3851	135.4802	140.9166	147.4143	151.9485
120	83.8516	86.9233	91.5726	95.7046	100.6236	140.2326	146.5674	152.2114	158.9502	163.6482

F-分布臨界值表

$$P(F > F_{\alpha, v_1, v_2}) = \alpha = 0.10$$

$v_2 \backslash v_1$	1	2	3	4	5	6	7	8	9	10
1	39.8635	49.5000	53.5932	55.8330	57.2401	58.2044	58.9060	59.4390	59.8576	60.1950
2	8.5263	9.0000	9.1618	9.2434	9.2926	9.3255	9.3491	9.3668	9.3805	9.3916
3	5.5383	5.4624	5.3908	5.3426	5.3092	5.2847	5.2662	5.2517	5.2400	5.2304
4	4.5448	4.3246	4.1909	4.1072	4.0506	4.0097	3.9790	3.9549	3.9357	3.9199
5	4.0604	3.7797	3.6195	3.5202	3.4530	3.4045	3.3679	3.3393	3.3163	3.2974
6	3.7759	3.4633	3.2888	3.1808	3.1075	3.0546	3.0145	2.9830	2.9577	2.9369
7	3.5894	3.2574	3.0741	2.9605	2.8833	2.8274	2.7849	2.7516	2.7247	2.7025
8	3.4579	3.1131	2.9238	2.8064	2.7264	2.6683	2.6241	2.5893	2.5612	2.5380
9	3.3603	3.0065	2.8129	2.6927	2.6106	2.5509	2.5053	2.4694	2.4403	2.4163
10	3.2850	2.9245	2.7277	2.6053	2.5216	2.4606	2.4140	2.3772	2.3473	2.3226
11	3.2252	2.8595	2.6602	2.5362	2.4512	2.3891	2.3416	2.3040	2.2735	2.2482
12	3.1765	2.8068	2.6055	2.4801	2.3940	2.3310	2.2828	2.2446	2.2135	2.1878
13	3.1362	2.7632	2.5603	2.4337	2.3467	2.2830	2.2341	2.1953	2.1638	2.1376
14	3.1022	2.7265	2.5222	2.3947	2.3069	2.2426	2.1931	2.1539	2.1220	2.0954
15	3.0732	2.6952	2.4898	2.3614	2.2730	2.2081	2.1582	2.1185	2.0862	2.0593
16	3.0481	2.6682	2.4618	2.3327	2.2438	2.1783	2.1280	2.0880	2.0553	2.0281
17	3.0262	2.6446	2.4374	2.3077	2.2183	2.1524	2.1017	2.0613	2.0284	2.0009
18	3.0070	2.6239	2.4160	2.2858	2.1958	2.1296	2.0785	2.0379	2.0047	1.9770
19	2.9899	2.6056	2.3970	2.2663	2.1760	2.1094	2.0580	2.0171	1.9836	1.9557
20	2.9747	2.5893	2.3801	2.2489	2.1582	2.0913	2.0397	1.9985	1.9649	1.9367
21	2.9610	2.5746	2.3649	2.2333	2.1423	2.0751	2.0233	1.9819	1.9480	1.9197
22	2.9486	2.5613	2.3512	2.2193	2.1279	2.0605	2.0084	1.9668	1.9327	1.9043
23	2.9374	2.5493	2.3387	2.2065	2.1149	2.0472	1.9949	1.9531	1.9189	1.8903
24	2.9271	2.5383	2.3274	2.1949	2.1030	2.0351	1.9826	1.9407	1.9063	1.8775
25	2.9177	2.5283	2.3170	2.1842	2.0922	2.0241	1.9714	1.9292	1.8947	1.8658
26	2.9091	2.5191	2.3075	2.1745	2.0822	2.0139	1.9610	1.9188	1.8841	1.8550
27	2.9012	2.5106	2.2987	2.1655	2.0730	2.0045	1.9515	1.9091	1.8743	1.8451
28	2.8938	2.5028	2.2906	2.1571	2.0645	1.9959	1.9427	1.9001	1.8652	1.8359
29	2.8870	2.4955	2.2831	2.1494	2.0566	1.9878	1.9345	1.8918	1.8568	1.8274
30	2.8807	2.4887	2.2761	2.1422	2.0492	1.9803	1.9269	1.8841	1.8490	1.8195
40	2.8354	2.4404	2.2261	2.0909	1.9968	1.9269	1.8725	1.8289	1.7929	1.7627
50	2.8087	2.4120	2.1967	2.0608	1.9660	1.8954	1.8405	1.7963	1.7598	1.7291
60	2.7911	2.3933	2.1774	2.0410	1.9457	1.8747	1.8194	1.7748	1.7380	1.7070
70	2.7786	2.3800	2.1637	2.0269	1.9313	1.8600	1.8044	1.7596	1.7225	1.6913
80	2.7693	2.3701	2.1535	2.0165	1.9206	1.8491	1.7933	1.7483	1.7110	1.6796
90	2.7621	2.3625	2.1457	2.0084	1.9123	1.8406	1.7846	1.7395	1.7021	1.6705
100	2.7564	2.3564	2.1394	2.0019	1.9057	1.8339	1.7778	1.7324	1.6949	1.6632
110	2.7517	2.3515	2.1343	1.9967	1.9004	1.8284	1.7721	1.7267	1.6891	1.6573
120	2.7478	2.3473	2.1300	1.9923	1.8959	1.8238	1.7675	1.7220	1.6842	1.6524
$\infty$	2.7055	2.3026	2.0838	1.9449	1.8473	1.7741	1.7167	1.6702	1.6315	1.5987

F-分布臨界值表

$$P(F > F_{\alpha, v_1, v_2}) = \alpha = 0.10$$

$v_2 \backslash v_1$	10	12	15	20	24	30	40	50	60	120	$\infty$
1	60.1950	60.7052	61.2203	61.7403	62.0020	62.2650	62.5291	62.6881	62.7943	63.0606	63.3281
2	9.3916	9.4081	9.4247	9.4413	9.4496	9.4579	9.4662	9.4712	9.4746	9.4829	9.4912
3	5.2304	5.2156	5.2003	5.1845	5.1764	5.1681	5.1597	5.1546	5.1512	5.1425	5.1337
4	3.9199	3.8955	3.8704	3.8443	3.8310	3.8174	3.8036	3.7952	3.7896	3.7753	3.7607
5	3.2974	3.2682	3.2380	3.2067	3.1905	3.1741	3.1573	3.1471	3.1402	3.1228	3.1050
6	2.9369	2.9047	2.8712	2.8363	2.8183	2.8000	2.7812	2.7697	2.7620	2.7423	2.7222
7	2.7025	2.6681	2.6322	2.5947	2.5753	2.5555	2.5351	2.5226	2.5142	2.4928	2.4708
8	2.5380	2.5020	2.4642	2.4246	2.4041	2.3830	2.3614	2.3481	2.3391	2.3162	2.2926
9	2.4163	2.3789	2.3396	2.2983	2.2768	2.2547	2.2320	2.2180	2.2085	2.1843	2.1592
10	2.3226	2.2841	2.2435	2.2007	2.1784	2.1554	2.1317	2.1171	2.1072	2.0818	2.0554
11	2.2482	2.2087	2.1671	2.1230	2.1000	2.0762	2.0516	2.0364	2.0261	1.9997	1.9721
12	2.1878	2.1474	2.1049	2.0597	2.0360	2.0115	1.9861	1.9704	1.9597	1.9323	1.9036
13	2.1376	2.0966	2.0532	2.0070	1.9827	1.9576	1.9315	1.9153	1.9043	1.8759	1.8462
14	2.0954	2.0537	2.0095	1.9625	1.9377	1.9119	1.8852	1.8686	1.8572	1.8280	1.7973



$v_2 \backslash v_1$	10	12	15	20	24	30	40	50	60	120	$\infty$
15	2.0593	2.0171	1.9722	1.9243	1.8990	1.8728	1.8454	1.8284	1.8168	1.7867	1.7551
16	2.0281	1.9854	1.9399	1.8913	1.8656	1.8388	1.8108	1.7934	1.7816	1.7507	1.7182
17	2.0009	1.9577	1.9117	1.8624	1.8362	1.8090	1.7805	1.7628	1.7506	1.7191	1.6856
18	1.9770	1.9333	1.8868	1.8368	1.8103	1.7827	1.7537	1.7356	1.7232	1.6910	1.6567
19	1.9557	1.9117	1.8647	1.8142	1.7873	1.7592	1.7298	1.7114	1.6988	1.6659	1.6308
20	1.9367	1.8924	1.8449	1.7938	1.7667	1.7382	1.7083	1.6896	1.6768	1.6433	1.6074
21	1.9197	1.8750	1.8271	1.7756	1.7481	1.7193	1.6890	1.6700	1.6569	1.6228	1.5862
22	1.9043	1.8593	1.8111	1.7590	1.7312	1.7021	1.6714	1.6521	1.6389	1.6041	1.5668
23	1.8903	1.8450	1.7964	1.7439	1.7159	1.6864	1.6554	1.6358	1.6224	1.5871	1.5490
24	1.8775	1.8319	1.7831	1.7302	1.7019	1.6721	1.6407	1.6209	1.6073	1.5715	1.5327
25	1.8658	1.8200	1.7708	1.7175	1.6890	1.6589	1.6272	1.6072	1.5934	1.5570	1.5176
26	1.8550	1.8090	1.7596	1.7059	1.6771	1.6468	1.6147	1.5945	1.5805	1.5437	1.5036
27	1.8451	1.7989	1.7492	1.6951	1.6662	1.6356	1.6032	1.5827	1.5686	1.5313	1.4906
28	1.8359	1.7895	1.7395	1.6852	1.6560	1.6252	1.5925	1.5718	1.5575	1.5198	1.4784
29	1.8274	1.7808	1.7306	1.6759	1.6465	1.6155	1.5825	1.5617	1.5472	1.5090	1.4670
30	1.8195	1.7727	1.7223	1.6673	1.6377	1.6065	1.5732	1.5522	1.5376	1.4989	1.4564
40	1.7627	1.7146	1.6624	1.6052	1.5741	1.5411	1.5056	1.4830	1.4672	1.4248	1.3769
50	1.7291	1.6802	1.6269	1.5681	1.5361	1.5018	1.4648	1.4409	1.4242	1.3789	1.3267
60	1.7070	1.6574	1.6034	1.5435	1.5107	1.4755	1.4373	1.4126	1.3952	1.3476	1.2915
70	1.6913	1.6413	1.5866	1.5259	1.4926	1.4567	1.4176	1.3922	1.3742	1.3246	1.2652
80	1.6796	1.6292	1.5741	1.5128	1.4790	1.4426	1.4027	1.3767	1.3583	1.3071	1.2446
90	1.6705	1.6199	1.5644	1.5025	1.4684	1.4315	1.3911	1.3646	1.3457	1.2932	1.2280
100	1.6632	1.6124	1.5566	1.4943	1.4600	1.4227	1.3817	1.3548	1.3356	1.2819	1.2142
110	1.6573	1.6063	1.5503	1.4877	1.4530	1.4154	1.3740	1.3468	1.3273	1.2725	1.2026
120	1.6524	1.6012	1.5450	1.4821	1.4472	1.4094	1.3676	1.3400	1.3203	1.2646	1.1926
$\infty$	1.5987	1.5458	1.4871	1.4206	1.3832	1.3419	1.2951	1.2633	1.2399	1.1686	1.0000

F-分布臨界值表

$$P(F > F_{\alpha, v_1, v_2}) = \alpha = 0.05$$

$v_2 \backslash v_1$	1	2	3	4	5	6	7	8	9	10
1	161.4476	199.5000	215.7073	224.5832	230.1619	233.9860	236.7684	238.8827	240.5433	241.8817
2	18.5128	19.0000	19.1643	19.2468	19.2964	19.3295	19.3532	19.3710	19.3848	19.3959
3	10.1280	9.5521	9.2766	9.1172	9.0135	8.9406	8.8867	8.8452	8.8123	8.7855
4	7.7086	6.9443	6.5914	6.3882	6.2561	6.1631	6.0942	6.0410	5.9988	5.9644
5	6.6079	5.7861	5.4095	5.1922	5.0503	4.9503	4.8759	4.8183	4.7725	4.7351
6	5.9874	5.1433	4.7571	4.5337	4.3874	4.2839	4.2067	4.1468	4.0990	4.0600
7	5.5914	4.7374	4.3468	4.1203	3.9715	3.8660	3.7870	3.7257	3.6767	3.6365
8	5.3177	4.4590	4.0662	3.8379	3.6875	3.5806	3.5005	3.4381	3.3881	3.3472
9	5.1174	4.2565	3.8625	3.6331	3.4817	3.3738	3.2927	3.2296	3.1789	3.1373
10	4.9646	4.1028	3.7083	3.4780	3.3258	3.2172	3.1355	3.0717	3.0204	2.9782
11	4.8443	3.9823	3.5874	3.3567	3.2039	3.0946	3.0123	2.9480	2.8962	2.8536
12	4.7472	3.8853	3.4903	3.2592	3.1059	2.9961	2.9134	2.8486	2.7964	2.7534
13	4.6672	3.8056	3.4105	3.1791	3.0254	2.9153	2.8321	2.7669	2.7144	2.6710
14	4.6001	3.7389	3.3439	3.1122	2.9582	2.8477	2.7642	2.6987	2.6458	2.6022
15	4.5431	3.6823	3.2874	3.0556	2.9013	2.7905	2.7066	2.6408	2.5876	2.5437
16	4.4940	3.6337	3.2389	3.0069	2.8524	2.7413	2.6572	2.5911	2.5377	2.4935
17	4.4513	3.5915	3.1968	2.9647	2.8100	2.6987	2.6143	2.5480	2.4943	2.4499
18	4.4139	3.5546	3.1599	2.9277	2.7729	2.6613	2.5767	2.5102	2.4563	2.4117
19	4.3807	3.5219	3.1274	2.8951	2.7401	2.6283	2.5435	2.4768	2.4227	2.3779
20	4.3512	3.4928	3.0984	2.8661	2.7109	2.5990	2.5140	2.4471	2.3928	2.3479
21	4.3248	3.4668	3.0725	2.8401	2.6848	2.5727	2.4876	2.4205	2.3660	2.3210
22	4.3009	3.4434	3.0491	2.8167	2.6613	2.5491	2.4638	2.3965	2.3419	2.2967
23	4.2793	3.4221	3.0280	2.7955	2.6400	2.5277	2.4422	2.3748	2.3201	2.2747
24	4.2597	3.4028	3.0088	2.7763	2.6207	2.5082	2.4226	2.3551	2.3002	2.2547
25	4.2417	3.3852	2.9912	2.7587	2.6030	2.4904	2.4047	2.3371	2.2821	2.2365
26	4.2252	3.3690	2.9752	2.7426	2.5868	2.4741	2.3883	2.3205	2.2655	2.2197
27	4.2100	3.3541	2.9604	2.7278	2.5719	2.4591	2.3732	2.3053	2.2501	2.2043
28	4.1960	3.3404	2.9467	2.7141	2.5581	2.4453	2.3593	2.2913	2.2360	2.1900

$v_1 \backslash v_2$	1	2	3	4	5	6	7	8	9	10
29	4.1830	3.3277	2.9340	2.7014	2.5454	2.4324	2.3463	2.2783	2.2229	2.1768
30	4.1709	3.3158	2.9223	2.6896	2.5336	2.4205	2.3343	2.2662	2.2107	2.1646
40	4.0847	3.2317	2.8387	2.6060	2.4495	2.3359	2.2490	2.1802	2.1240	2.0772
50	4.0343	3.1826	2.7900	2.5572	2.4004	2.2864	2.1992	2.1299	2.0734	2.0261
60	4.0012	3.1504	2.7581	2.5252	2.3683	2.2541	2.1665	2.0970	2.0401	1.9926
70	3.9778	3.1277	2.7355	2.5027	2.3456	2.2312	2.1435	2.0737	2.0166	1.9689
80	3.9604	3.1108	2.7188	2.4859	2.3287	2.2142	2.1263	2.0564	1.9991	1.9512
90	3.9469	3.0977	2.7058	2.4729	2.3157	2.2011	2.1131	2.0430	1.9856	1.9376
100	3.9361	3.0873	2.6955	2.4626	2.3053	2.1906	2.1025	2.0323	1.9748	1.9267
110	3.9274	3.0788	2.6871	2.4542	2.2969	2.1821	2.0939	2.0236	1.9661	1.9178
120	3.9201	3.0718	2.6802	2.4472	2.2899	2.1750	2.0868	2.0164	1.9588	1.9105
$\infty$	3.8415	2.9957	2.6049	2.3719	2.2141	2.0986	2.0096	1.9384	1.8799	1.8307

$\alpha = 0.05$

$v_1 \backslash v_2$	12	15	20	24	30	40	50	60	120	$\infty$
1	243.9060	245.9499	248.0131	249.0518	250.0951	251.1432	251.7742	252.1957	253.2529	254.3144
2	19.4125	19.4291	19.4458	19.4541	19.4624	19.4707	19.4757	19.4791	19.4874	19.4957
3	8.7446	8.7029	8.6602	8.6385	8.6166	8.5944	8.5810	8.5720	8.5494	8.5265
4	5.9117	5.8578	5.8025	5.7744	5.7459	5.7170	5.6995	5.6877	5.6581	5.6281
5	4.6777	4.6188	4.5581	4.5272	4.4957	4.4638	4.4444	4.4314	4.3985	4.3650
6	3.9999	3.9381	3.8742	3.8415	3.8082	3.7743	3.7537	3.7398	3.7047	3.6689
7	3.5747	3.5107	3.4445	3.4105	3.3758	3.3404	3.3189	3.3043	3.2674	3.2298
8	3.2839	3.2184	3.1503	3.1152	3.0794	3.0428	3.0204	3.0053	2.9669	2.9276
9	3.0729	3.0061	2.9365	2.9005	2.8637	2.8259	2.8028	2.7872	2.7475	2.7067
10	2.9130	2.8450	2.7740	2.7372	2.6996	2.6609	2.6371	2.6211	2.5801	2.5379
11	2.7876	2.7186	2.6464	2.6090	2.5705	2.5309	2.5066	2.4901	2.4480	2.4045
12	2.6866	2.6169	2.5436	2.5055	2.4663	2.4259	2.4010	2.3842	2.3410	2.2962
13	2.6037	2.5331	2.4589	2.4202	2.3803	2.3392	2.3138	2.2966	2.2524	2.2064
14	2.5342	2.4630	2.3879	2.3487	2.3082	2.2664	2.2405	2.2229	2.1778	2.1307
15	2.4753	2.4034	2.3275	2.2878	2.2468	2.2043	2.1780	2.1601	2.1141	2.0658
16	2.4247	2.3522	2.2756	2.2354	2.1938	2.1507	2.1240	2.1058	2.0589	2.0096
17	2.3807	2.3077	2.2304	2.1898	2.1477	2.1040	2.0769	2.0584	2.0107	1.9604
18	2.3421	2.2686	2.1906	2.1497	2.1071	2.0629	2.0354	2.0166	1.9681	1.9168
19	2.3080	2.2341	2.1555	2.1141	2.0712	2.0264	1.9986	1.9795	1.9302	1.8780
20	2.2776	2.2033	2.1242	2.0825	2.0391	1.9938	1.9656	1.9464	1.8963	1.8432
21	2.2504	2.1757	2.0960	2.0540	2.0102	1.9645	1.9360	1.9165	1.8657	1.8117
22	2.2258	2.1508	2.0707	2.0283	1.9842	1.9380	1.9092	1.8894	1.8380	1.7831
23	2.2036	2.1282	2.0476	2.0050	1.9605	1.9139	1.8848	1.8648	1.8128	1.7570
24	2.1834	2.1077	2.0267	1.9838	1.9390	1.8920	1.8625	1.8424	1.7896	1.7330
25	2.1649	2.0889	2.0075	1.9643	1.9192	1.8718	1.8421	1.8217	1.7684	1.7110
26	2.1479	2.0716	1.9898	1.9464	1.9010	1.8533	1.8233	1.8027	1.7488	1.6906
27	2.1323	2.0558	1.9736	1.9299	1.8842	1.8361	1.8059	1.7851	1.7306	1.6717
28	2.1179	2.0411	1.9586	1.9147	1.8687	1.8203	1.7898	1.7689	1.7138	1.6541
29	2.1045	2.0275	1.9446	1.9005	1.8543	1.8055	1.7748	1.7537	1.6981	1.6376
30	2.0921	2.0148	1.9317	1.8874	1.8409	1.7918	1.7609	1.7396	1.6835	1.6223
40	2.0035	1.9245	1.8389	1.7929	1.7444	1.6928	1.6600	1.6373	1.5766	1.5089
50	1.9515	1.8714	1.7841	1.7371	1.6872	1.6337	1.5995	1.5757	1.5115	1.4383
60	1.9174	1.8364	1.7480	1.7001	1.6491	1.5943	1.5590	1.5343	1.4673	1.3893
70	1.8932	1.8117	1.7223	1.6738	1.6220	1.5661	1.5300	1.5046	1.4351	1.3529
80	1.8753	1.7932	1.7032	1.6542	1.6017	1.5449	1.5081	1.4821	1.4107	1.3247
90	1.8613	1.7789	1.6883	1.6389	1.5859	1.5284	1.4910	1.4645	1.3914	1.3020
100	1.8503	1.7675	1.6764	1.6267	1.5733	1.5151	1.4772	1.4504	1.3757	1.2832
110	1.8412	1.7582	1.6667	1.6167	1.5630	1.5043	1.4660	1.4388	1.3628	1.2674
120	1.8337	1.7505	1.6587	1.6084	1.5543	1.4952	1.4565	1.4290	1.3519	1.2539
$\infty$	1.7522	1.6664	1.5705	1.5173	1.4591	1.3940	1.3501	1.3180	1.2214	1.0007

F-分布臨界值表

$$P(F > F_{\alpha, v_1, v_2}) = \alpha = 0.025$$

$v_2 \backslash v_1$	1	2	3	4	5	6	7	8	9	10	11	12
1	647.7890	799.5000	864.1630	899.5833	921.8479	937.1111	948.2169	956.6562	963.2846	968.6274	973.0252	976.7079
2	38.5063	39.0000	39.1655	39.2484	39.2982	39.3315	39.3552	39.3730	39.3869	39.3980	39.4071	39.4146
3	17.4434	4.6189	9.9792	4.7181	9.3645	4.3197	9.0741	4.1020	8.9047	4.2951	8.7935	4.1997
4	12.2179	10.6491	9.9792	9.6045	9.3645	9.1973	9.0741	8.9796	8.9047	8.8439	8.7935	8.7512
5	10.0070	8.4336	7.7636	7.3879	7.1464	6.9777	6.8531	6.7572	6.6811	6.6192	6.5678	6.5245
6	8.8131	7.2599	6.5988	6.2272	5.9876	5.8198	5.6955	5.5996	5.5234	5.4613	5.4098	5.3662
7	8.0727	6.5415	5.8898	5.5226	5.2852	5.1186	4.9949	4.8993	4.8232	4.7611	4.7095	4.6658
8	7.5709	6.0595	5.4160	5.0526	4.8173	4.6517	4.5286	4.4333	4.3572	4.2951	4.2434	4.1997
9	7.2093	5.7147	5.0781	4.7181	4.4844	4.3197	4.1970	4.1020	4.0260	3.9639	3.9121	3.8682
10	6.9367	5.4564	4.8256	4.4683	4.2361	4.0721	3.9498	3.8549	3.7790	3.7168	3.6649	3.6209
11	6.7241	5.2559	4.6300	4.2751	4.0440	3.8807	3.7586	3.6638	3.5879	3.5257	3.4737	3.4296
12	6.5538	5.0959	4.4742	4.1212	3.8911	3.7283	3.6065	3.5118	3.4358	3.3736	3.3215	3.2773
13	6.4143	4.9653	4.3472	3.9959	3.7667	3.6043	3.4827	3.3880	3.3120	3.2497	3.1975	3.1532
14	6.2979	4.8567	4.2417	3.8919	3.6634	3.5014	3.3799	3.2853	3.2093	3.1469	3.0946	3.0502
15	6.1995	4.7650	4.1528	3.8043	3.5764	3.4147	3.2934	3.1987	3.1227	3.0602	3.0078	2.9633
16	6.1151	4.6867	4.0768	3.7294	3.5021	3.3406	3.2194	3.1248	3.0488	2.9862	2.9337	2.8890
17	6.0420	4.6189	4.0112	3.6648	3.4379	3.2767	3.1556	3.0610	2.9849	2.9222	2.8696	2.8249
18	5.9781	4.5597	3.9539	3.6083	3.3820	3.2209	3.0999	3.0053	2.9291	2.8664	2.8137	2.7689
19	5.9216	4.5075	3.9034	3.5587	3.3327	3.1718	3.0509	2.9563	2.8801	2.8172	2.7645	2.7196
20	5.8715	4.4613	3.8587	3.5147	3.2891	3.1283	3.0074	2.9128	2.8365	2.7737	2.7209	2.6758
21	5.8266	4.4199	3.8188	3.4754	3.2501	3.0895	2.9686	2.8740	2.7977	2.7348	2.6819	2.6368
22	5.7863	4.3828	3.7829	3.4401	3.2151	3.0546	2.9338	2.8392	2.7628	2.6998	2.6469	2.6017
23	5.7498	4.3492	3.7505	3.4083	3.1835	3.0232	2.9023	2.8077	2.7313	2.6682	2.6152	2.5699
24	5.7166	4.3187	3.7211	3.3794	3.1548	2.9946	2.8738	2.7791	2.7027	2.6396	2.5865	2.5411
25	5.6864	4.2909	3.6943	3.3530	3.1287	2.9685	2.8478	2.7531	2.6766	2.6135	2.5603	2.5149
26	5.6586	4.2655	3.6697	3.3289	3.1048	2.9447	2.8240	2.7293	2.6528	2.5896	2.5363	2.4908
27	5.6331	4.2421	3.6472	3.3067	3.0828	2.9228	2.8021	2.7074	2.6309	2.5676	2.5143	2.4688
28	5.6096	4.2205	3.6264	3.2863	3.0626	2.9027	2.7820	2.6872	2.6106	2.5473	2.4940	2.4484
29	5.5878	4.2006	3.6072	3.2674	3.0438	2.8840	2.7633	2.6686	2.5919	2.5286	2.4752	2.4295
30	5.5675	4.1821	3.5894	3.2499	3.0265	2.8667	2.7460	2.6513	2.5746	2.5112	2.4577	2.4120
40	5.4239	4.0510	3.4633	3.1261	2.9037	2.7444	2.6238	2.5289	2.4519	2.3882	2.3343	2.2882
50	5.3403	3.9749	3.3902	3.0544	2.8327	2.6736	2.5530	2.4579	2.3808	2.3168	2.2627	2.2162
60	5.2856	3.9253	3.3425	3.0077	2.7863	2.6274	2.5068	2.4117	2.3344	2.2702	2.2159	2.1692
70	5.2470	3.8903	3.3090	2.9748	2.7537	2.5949	2.4743	2.3791	2.3017	2.2374	2.1829	2.1361
80	5.2184	3.8643	3.2841	2.9504	2.7295	2.5708	2.4502	2.3549	2.2775	2.2130	2.1584	2.1115
90	5.1962	3.8443	3.2649	2.9315	2.7109	2.5522	2.4316	2.3363	2.2588	2.1942	2.1395	2.0925
100	5.1786	3.8284	3.2496	2.9166	2.6961	2.5374	2.4168	2.3215	2.2439	2.1793	2.1245	2.0773
110	5.1642	3.8154	3.2372	2.9044	2.6840	2.5254	2.4048	2.3094	2.2318	2.1671	2.1123	2.0650
120	5.1523	3.8046	3.2269	2.8943	2.6740	2.5154	2.3948	2.2994	2.2217	2.1570	2.1021	2.0548
140	5.1337	3.7878	3.2108	2.8785	2.6583	2.4998	2.3792	2.2838	2.2060	2.1412	2.0862	2.0388
160	5.1198	3.7753	3.1988	2.8667	2.6467	2.4882	2.3675	2.2721	2.1943	2.1294	2.0744	2.0269
180	5.1090	3.7655	3.1894	2.8576	2.6376	2.4792	2.3585	2.2630	2.1852	2.1203	2.0652	2.0177
200	5.1004	3.7578	3.1820	2.8503	2.6304	2.4720	2.3513	2.2558	2.1780	2.1130	2.0578	2.0103
$\infty$	5.0239	3.6889	3.1161	2.7858	2.5665	2.4082	2.2875	2.1918	2.1136	2.0483	1.9927	1.9447

F-分布臨界值表

$$P(F > F_{\alpha, v_1, v_2}) = \alpha = 0.025$$

$v_2 \backslash v_1$	13	14	15	20	30	40	50	60	100	120	$\infty$
1	979.8368	982.5278	984.8668	993.1028	1001.4144	1005.5981	1008.1171	1009.8001	1013.1748	1014.0202	1018.2274
2	39.4210	39.4265	39.4313	39.4479	39.4646	39.4729	39.4779	39.4812	39.4879	39.4896	39.4977
3	8.7150	4.1297	8.6565	3.9995	14.0805	2.6742	39.4779	1.8133	1013.1748	1.2895	1018.2274
4	8.7150	8.6838	8.6565	8.5599	8.4613	8.4111	8.3808	8.3604	8.3195	8.3092	8.2573
5	6.4876	6.4556	6.4277	6.3286	6.2269	6.1750	6.1436	6.1225	6.0800	6.0693	6.0153
6	5.3290	5.2968	5.2687	5.1684	5.0652	5.0125	4.9804	4.9589	4.9154	4.9044	4.8491
7	4.6285	4.5961	4.5678	4.4667	4.3624	4.3089	4.2763	4.2544	4.2101	4.1989	4.1423
8	4.1622	4.1297	4.1012	3.9995	3.8940	3.8398	3.8067	3.7844	3.7393	3.7279	3.6702
9	3.8306	3.7980	3.7694	3.6669	3.5604	3.5055	3.4719	3.4493	3.4034	3.3918	3.3328
10	3.5832	3.5504	3.5217	3.4185	3.3110	3.2554	3.2214	3.1984	3.1517	3.1399	3.0798
11	3.3917	3.3588	3.3299	3.2261	3.1176	3.0613	3.0268	3.0035	2.9561	2.9441	2.8828
12	3.2393	3.2062	3.1772	3.0728	2.9633	2.9063	2.8714	2.8478	2.7996	2.7874	2.7249
13	3.1150	3.0819	3.0527	2.9477	2.8372	2.7797	2.7443	2.7204	2.6715	2.6590	2.5955
14	3.0119	2.9786	2.9493	2.8437	2.7324	2.6742	2.6384	2.6142	2.5646	2.5519	2.4872

$v_1 \backslash v_2$	13	14	15	20	30	40	50	60	100	120	$\infty$
15	2.9249	2.8915	2.8621	2.7559	2.6437	2.5850	2.5488	2.5242	2.4739	2.4611	2.3953
16	2.8506	2.8170	2.7875	2.6808	2.5678	2.5085	2.4719	2.4471	2.3961	2.3831	2.3163
17	2.7863	2.7526	2.7230	2.6158	2.5020	2.4422	2.4053	2.3801	2.3285	2.3153	2.2474
18	2.7302	2.6964	2.6667	2.5590	2.4445	2.3842	2.3468	2.3214	2.2692	2.2558	2.1869
19	2.6808	2.6469	2.6171	2.5089	2.3937	2.3329	2.2952	2.2696	2.2167	2.2032	2.1333
20	2.6369	2.6030	2.5731	2.4645	2.3486	2.2873	2.2493	2.2234	2.1699	2.1562	2.0853
21	2.5978	2.5638	2.5338	2.4247	2.3082	2.2465	2.2081	2.1819	2.1280	2.1141	2.0422
22	2.5626	2.5285	2.4984	2.3890	2.2718	2.2097	2.1710	2.1446	2.0901	2.0760	2.0032
23	2.5308	2.4966	2.4665	2.3567	2.2389	2.1763	2.1374	2.1107	2.0557	2.0415	1.9677
24	2.5019	2.4677	2.4374	2.3273	2.2090	2.1460	2.1067	2.0799	2.0243	2.0099	1.9353
25	2.4756	2.4413	2.4110	2.3005	2.1816	2.1183	2.0787	2.0516	1.9955	1.9811	1.9055
26	2.4515	2.4171	2.3867	2.2759	2.1565	2.0928	2.0530	2.0257	1.9691	1.9545	1.8781
27	2.4293	2.3949	2.3644	2.2533	2.1334	2.0693	2.0293	2.0018	1.9447	1.9299	1.8527
28	2.4089	2.3743	2.3438	2.2324	2.1121	2.0477	2.0073	1.9797	1.9221	1.9072	1.8291
29	2.3900	2.3554	2.3248	2.2131	2.0923	2.0276	1.9870	1.9591	1.9011	1.8861	1.8072
30	2.3724	2.3378	2.3072	2.1952	2.0739	2.0089	1.9681	1.9400	1.8816	1.8664	1.7867
40	2.2481	2.2130	2.1819	2.0677	1.9429	1.8752	1.8324	1.8028	1.7405	1.7242	1.6371
50	2.1758	2.1404	2.1090	1.9933	1.8659	1.7963	1.7520	1.7211	1.6558	1.6386	1.5452
60	2.1286	2.0929	2.0613	1.9445	1.8152	1.7440	1.6985	1.6668	1.5990	1.5810	1.4821
70	2.0953	2.0595	2.0277	1.9100	1.7792	1.7069	1.6604	1.6279	1.5581	1.5394	1.4357
80	2.0706	2.0346	2.0026	1.8843	1.7523	1.6790	1.6318	1.5987	1.5271	1.5079	1.3997
90	2.0515	2.0154	1.9833	1.8644	1.7315	1.6574	1.6095	1.5758	1.5028	1.4831	1.3710
100	2.0363	2.0001	1.9679	1.8486	1.7148	1.6401	1.5917	1.5575	1.4833	1.4631	1.3473
110	2.0239	1.9876	1.9554	1.8356	1.7013	1.6259	1.5771	1.5425	1.4671	1.4466	1.3274
120	2.0136	1.9773	1.9450	1.8249	1.6899	1.6141	1.5649	1.5299	1.4536	1.4327	1.3104
140	1.9975	1.9611	1.9287	1.8081	1.6722	1.5956	1.5456	1.5101	1.4321	1.4106	1.2828
160	1.9855	1.9490	1.9165	1.7955	1.6589	1.5817	1.5312	1.4952	1.4158	1.3938	1.2611
180	1.9762	1.9396	1.9071	1.7858	1.6485	1.5708	1.5199	1.4835	1.4030	1.3806	1.2436
200	1.9688	1.9322	1.8996	1.7780	1.6403	1.5621	1.5108	1.4742	1.3927	1.3700	1.2290
$\infty$	1.9027	1.8656	1.8326	1.7085	1.5660	1.4835	1.4284	1.3883	1.2956	1.2684	1.0009

F-分布臨界值表

$$P(F > F_{\alpha, v_1, v_2}) = \alpha = 0.01$$

$v_1 \backslash v_2$	1	2	3	4	5	6	7	8	9	10
1	4052.1807	4999.5000	5403.3520	5624.5833	5763.6496	5858.9861	5928.3557	5981.0703	6022.4732	6055.8467
2	98.5025	99.0000	99.1662	99.2494	99.2993	99.3326	99.3564	99.3742	99.3881	99.3992
3	34.1162	30.8165	29.4567	28.7099	28.2371	27.9107	27.6717	27.4892	27.3452	27.2287
4	21.1977	18.0000	16.6944	15.9770	15.5219	15.2069	14.9758	14.7989	14.6591	14.5459
5	16.2582	13.2739	12.0600	11.3919	10.9670	10.6723	10.4555	10.2893	10.1578	10.0510
6	13.7450	10.9248	9.7795	9.1483	8.7459	8.4661	8.2600	8.1017	7.9761	7.8741
7	12.2464	9.5466	8.4513	7.8466	7.4604	7.1914	6.9928	6.8400	6.7188	6.6201
8	11.2586	8.6491	7.5910	7.0061	6.6318	6.3707	6.1776	6.0289	5.9106	5.8143
9	10.5614	8.0215	6.9919	6.4221	6.0569	5.8018	5.6129	5.4671	5.3511	5.2565
10	10.0443	7.5594	6.5523	5.9943	5.6363	5.3858	5.2001	5.0567	4.9424	4.8491
11	9.6460	7.2057	6.2167	5.6683	5.3160	5.0692	4.8861	4.7445	4.6315	4.5393
12	9.3302	6.9266	5.9525	5.4120	5.0643	4.8206	4.6395	4.4994	4.3875	4.2961
13	9.0738	6.7010	5.7394	5.2053	4.8616	4.6204	4.4410	4.3021	4.1911	4.1003
14	8.8616	6.5149	5.5639	5.0354	4.6950	4.4558	4.2779	4.1399	4.0297	3.9394
15	8.6831	6.3589	5.4170	4.8932	4.5556	4.3183	4.1415	4.0045	3.8948	3.8049
16	8.5310	6.2262	5.2922	4.7726	4.4374	4.2016	4.0259	3.8896	3.7804	3.6909
17	8.3997	6.1121	5.1850	4.6690	4.3359	4.1015	3.9267	3.7910	3.6822	3.5931
18	8.2854	6.0129	5.0919	4.5790	4.2479	4.0146	3.8406	3.7054	3.5971	3.5082
19	8.1849	5.9259	5.0103	4.5003	4.1708	3.9386	3.7653	3.6305	3.5225	3.4338
20	8.0960	5.8489	4.9382	4.4307	4.1027	3.8714	3.6987	3.5644	3.4567	3.3682
21	8.0166	5.7804	4.8740	4.3688	4.0421	3.8117	3.6396	3.5056	3.3981	3.3098
22	7.9454	5.7190	4.8166	4.3134	3.9880	3.7583	3.5867	3.4530	3.3458	3.2576
23	7.8811	5.6637	4.7649	4.2636	3.9392	3.7102	3.5390	3.4057	3.2986	3.2106
24	7.8229	5.6136	4.7181	4.2184	3.8951	3.6667	3.4959	3.3629	3.2560	3.1681
25	7.7698	5.5680	4.6755	4.1774	3.8550	3.6272	3.4568	3.3239	3.2172	3.1294
26	7.7213	5.5263	4.6366	4.1400	3.8183	3.5911	3.4210	3.2884	3.1818	3.0941
27	7.6767	5.4881	4.6009	4.1056	3.7848	3.5580	3.3882	3.2558	3.1494	3.0618
28	7.6356	5.4529	4.5681	4.0740	3.7539	3.5276	3.3581	3.2259	3.1195	3.0320
29	7.5977	5.4204	4.5378	4.0449	3.7254	3.4995	3.3303	3.1982	3.0920	3.0045
30	7.5625	5.3903	4.5097	4.0179	3.6990	3.4735	3.3045	3.1726	3.0665	2.9791

$v_1 \backslash v_2$	1	2	3	4	5	6	7	8	9	10
40	7.3141	5.1785	4.3126	3.8283	3.5138	3.2910	3.1238	2.9930	2.8876	2.8005
50	7.1706	5.0566	4.1993	3.7195	3.4077	3.1864	3.0202	2.8900	2.7850	2.6981
60	7.0771	4.9774	4.1259	3.6490	3.3389	3.1187	2.9530	2.8233	2.7185	2.6318
70	7.0114	4.9219	4.0744	3.5996	3.2907	3.0712	2.9060	2.7765	2.6719	2.5852
80	6.9627	4.8807	4.0363	3.5631	3.2550	3.0361	2.8713	2.7420	2.6374	2.5508
90	6.9251	4.8491	4.0070	3.5350	3.2276	3.0091	2.8445	2.7154	2.6109	2.5243
100	6.8953	4.8239	3.9837	3.5127	3.2059	2.9877	2.8233	2.6943	2.5898	2.5033
110	6.8710	4.8035	3.9648	3.4946	3.1882	2.9703	2.8061	2.6771	2.5727	2.4862
120	6.8509	4.7865	3.9491	3.4795	3.1735	2.9559	2.7918	2.6629	2.5586	2.4721
$\infty$	6.6349	4.6052	3.7816	3.3192	3.0173	2.8020	2.6393	2.5113	2.4073	2.3209

$\alpha = 0.01$

$v_1 \backslash v_2$	12	15	20	24	30	40	50	60	120	$\infty$
1	6106.3207	6157.2846	6208.7302	6234.6309	6260.6486	6286.7821	6302.5172	6313.0301	6339.3913	6365.8641
2	99.4159	99.4325	99.4492	99.4575	99.4658	99.4742	99.4792	99.4825	99.4908	99.4992
3	27.0518	26.8722	26.6898	26.5975	26.5045	26.4108	26.3542	26.3164	26.2211	26.1252
4	14.3736	14.1982	14.0196	13.9291	13.8377	13.7454	13.6896	13.6522	13.5581	13.4631
5	9.8883	9.7222	9.5526	9.4665	9.3793	9.2912	9.2378	9.2020	9.1118	9.0204
6	7.7183	7.5590	7.3958	7.3127	7.2285	7.1432	7.0915	7.0567	6.9690	6.8800
7	6.4691	6.3143	6.1554	6.0743	5.9920	5.9084	5.8577	5.8236	5.7373	5.6495
8	5.6667	5.5151	5.3591	5.2793	5.1981	5.1156	5.0654	5.0316	4.9461	4.8588
9	5.1114	4.9621	4.8080	4.7290	4.6486	4.5666	4.5167	4.4831	4.3978	4.3106
10	4.7059	4.5581	4.4054	4.3269	4.2469	4.1653	4.1155	4.0819	3.9965	3.9090
11	4.3974	4.2509	4.0990	4.0209	3.9411	3.8596	3.8097	3.7761	3.6904	3.6024
12	4.1553	4.0096	3.8584	3.7805	3.7008	3.6192	3.5692	3.5355	3.4494	3.3608
13	3.9603	3.8154	3.6646	3.5868	3.5070	3.4253	3.3752	3.3413	3.2548	3.1654
14	3.8001	3.6557	3.5052	3.4274	3.3476	3.2656	3.2153	3.1813	3.0942	3.0040
15	3.6662	3.5222	3.3719	3.2940	3.2141	3.1319	3.0814	3.0471	2.9595	2.8684
16	3.5527	3.4089	3.2587	3.1808	3.1007	3.0182	2.9675	2.9330	2.8447	2.7528
17	3.4552	3.3117	3.1615	3.0835	3.0032	2.9205	2.8694	2.8348	2.7459	2.6530
18	3.3706	3.2273	3.0771	2.9990	2.9185	2.8354	2.7841	2.7493	2.6597	2.5660
19	3.2965	3.1533	3.0031	2.9249	2.8442	2.7608	2.7093	2.6742	2.5839	2.4893
20	3.2311	3.0880	2.9377	2.8594	2.7785	2.6947	2.6430	2.6077	2.5168	2.4212
21	3.1730	3.0300	2.8796	2.8010	2.7200	2.6359	2.5838	2.5484	2.4568	2.3603
22	3.1209	2.9779	2.8274	2.7488	2.6675	2.5831	2.5308	2.4951	2.4029	2.3055
23	3.0740	2.9311	2.7805	2.7017	2.6202	2.5355	2.4829	2.4471	2.3542	2.2559
24	3.0316	2.8887	2.7380	2.6591	2.5773	2.4923	2.4395	2.4035	2.3100	2.2107
25	2.9931	2.8502	2.6993	2.6203	2.5383	2.4530	2.3999	2.3637	2.2696	2.1694
26	2.9578	2.8150	2.6640	2.5848	2.5026	2.4170	2.3637	2.3273	2.2325	2.1315
27	2.9256	2.7827	2.6316	2.5522	2.4699	2.3840	2.3304	2.2938	2.1985	2.0965
28	2.8959	2.7530	2.6017	2.5223	2.4397	2.3535	2.2997	2.2629	2.1670	2.0642
29	2.8685	2.7256	2.5742	2.4946	2.4118	2.3253	2.2714	2.2344	2.1379	2.0342
30	2.8431	2.7002	2.5487	2.4689	2.3860	2.2992	2.2450	2.2079	2.1108	2.0062
40	2.6648	2.5216	2.3689	2.2880	2.2034	2.1142	2.0581	2.0194	1.9172	1.8047
50	2.5625	2.4190	2.2652	2.1835	2.0976	2.0066	1.9490	1.9090	1.8026	1.6831
60	2.4961	2.3523	2.1978	2.1154	2.0285	1.9360	1.8772	1.8363	1.7263	1.6006
70	2.4496	2.3055	2.1504	2.0674	1.9797	1.8861	1.8263	1.7846	1.6717	1.5404
80	2.4151	2.2709	2.1153	2.0318	1.9435	1.8489	1.7883	1.7459	1.6305	1.4942
90	2.3886	2.2442	2.0882	2.0044	1.9155	1.8201	1.7588	1.7158	1.5982	1.4574
100	2.3676	2.2230	2.0666	1.9826	1.8933	1.7972	1.7353	1.6918	1.5723	1.4273
110	2.3505	2.2058	2.0491	1.9648	1.8751	1.7784	1.7160	1.6721	1.5509	1.4020
120	2.3363	2.1915	2.0346	1.9500	1.8600	1.7628	1.7000	1.6557	1.5330	1.3805
$\infty$	2.1847	2.0385	1.8783	1.7908	1.6964	1.5923	1.5231	1.4730	1.3246	1.0010

F-分布臨界值表

$P(F > F_{\alpha, v_1, v_2}) = \alpha = 0.005$

$v_1 \backslash v_2$	1	2	3	4	5	6	7	8	9	10
1	16210.7227	19999.5000	21614.7414	22499.5833	23055.7982	23437.1111	23714.5658	23925.4062	24091.0041	24224.4868
2	198.5013	199.0000	199.1664	199.2497	199.2996	199.3330	199.3568	199.3746	199.3885	199.3996
3	55.5520	49.7993	47.4672	46.1946	45.3916	44.8385	44.4341	44.1256	43.8824	43.6858
4	31.3328	26.2843	24.2591	23.1545	22.4564	21.9746	21.6217	21.3520	21.1391	20.9667
5	22.7848	18.3138	16.5298	15.5561	14.9396	14.5133	14.2004	13.9610	13.7716	13.6182
6	18.6350	14.5441	12.9166	12.0275	11.4637	11.0730	10.7859	10.5658	10.3915	10.2500



v1 \ v2	1	2	3	4	5	6	7	8	9	10
7	16.2356	12.4040	10.8824	10.0505	9.5221	9.1553	8.8854	8.6781	8.5138	8.3803
8	14.6882	11.0424	9.5965	8.8051	8.3018	7.9520	7.6941	7.4959	7.3386	7.2106
9	13.6136	10.1067	8.7171	7.9559	7.4712	7.1339	6.8849	6.6933	6.5411	6.4172
10	12.8265	9.4270	8.0807	7.3428	6.8724	6.5446	6.3025	6.1159	5.9676	5.8467
11	12.2263	8.9122	7.6004	6.8809	6.4217	6.1016	5.8648	5.6821	5.5368	5.4183
12	11.7542	8.5096	7.2258	6.5211	6.0711	5.7570	5.5245	5.3451	5.2021	5.0855
13	11.3735	8.1865	6.9258	6.2335	5.7910	5.4819	5.2529	5.0761	4.9351	4.8199
14	11.0603	7.9216	6.6804	5.9984	5.5623	5.2574	5.0313	4.8566	4.7173	4.6034
15	10.7980	7.7008	6.4760	5.8029	5.3721	5.0708	4.8473	4.6744	4.5364	4.4235
16	10.5755	7.5138	6.3034	5.6378	5.2117	4.9134	4.6920	4.5207	4.3838	4.2719
17	10.3842	7.3536	6.1556	5.4967	5.0746	4.7789	4.5594	4.3894	4.2535	4.1424
18	10.2181	7.2148	6.0278	5.3746	4.9560	4.6627	4.4448	4.2759	4.1410	4.0305
19	10.0725	7.0935	5.9161	5.2681	4.8526	4.5614	4.3448	4.1770	4.0428	3.9329
20	9.9439	6.9865	5.8177	5.1743	4.7616	4.4721	4.2569	4.0900	3.9564	3.8470
30	9.1797	6.3547	5.2388	4.6234	4.2276	3.9492	3.7416	3.5801	3.4505	3.3440
40	8.8279	6.0664	4.9758	4.3738	3.9860	3.7129	3.5088	3.3498	3.2220	3.1167
50	8.6258	5.9016	4.8259	4.2316	3.8486	3.5785	3.3765	3.2189	3.0920	2.9875
60	8.4946	5.7950	4.7290	4.1399	3.7599	3.4918	3.2911	3.1344	3.0083	2.9042
80	8.3346	5.6652	4.6113	4.0285	3.6524	3.3867	3.1876	3.0320	2.9066	2.8031
100	8.2406	5.5892	4.5424	3.9634	3.5895	3.3252	3.1271	2.9722	2.8472	2.7440
120	8.1788	5.5393	4.4972	3.9207	3.5482	3.2849	3.0874	2.9330	2.8083	2.7052
200	8.0572	5.4412	4.4084	3.8368	3.4674	3.2059	3.0097	2.8560	2.7319	2.6292
∞	7.8794	5.2983	4.2794	3.7151	3.3499	3.0913	2.8968	2.7444	2.6210	2.5188

$\alpha = 0.005$

v1 \ v2	12	13	15	20	40	60	80	100	120	∞
1	24426.3662	24504.5356	24630.2051	24835.9709	25148.1532	25253.1369	25305.7989	25337.4502	25358.5734	25464.4604
2	199.4163	199.4227	199.4329	199.4496	199.4746	199.4829	199.4871	199.4896	199.4912	199.4996
3	43.3874	43.2715	43.0847	42.7775	42.3082	42.1494	42.0696	42.0216	41.9895	41.8283
4	20.7047	20.6027	20.4383	20.1673	19.7518	19.6107	19.5397	19.4970	19.4684	19.3247
5	13.3845	13.2934	13.1463	12.9035	12.5297	12.4024	12.3383	12.2996	12.2737	12.1435
6	10.0343	9.9501	9.8140	9.5888	9.2408	9.1219	9.0619	9.0257	9.0015	8.8793
7	8.1764	8.0967	7.9678	7.7540	7.4224	7.3088	7.2513	7.2165	7.1933	7.0760
8	7.0149	6.9384	6.8143	6.6082	6.2875	6.1772	6.1213	6.0875	6.0649	5.9506
9	6.2274	6.1530	6.0325	5.8318	5.5186	5.4104	5.3555	5.3223	5.3001	5.1875
10	5.6613	5.5887	5.4707	5.2740	4.9659	4.8592	4.8050	4.7721	4.7501	4.6385
11	5.2363	5.1649	5.0489	4.8552	4.5508	4.4450	4.3912	4.3585	4.3367	4.2255
12	4.9062	4.8358	4.7213	4.5299	4.2282	4.1229	4.0693	4.0368	4.0149	3.9039
13	4.6429	4.5733	4.4600	4.2703	3.9704	3.8655	3.8120	3.7795	3.7577	3.6465
14	4.4281	4.3591	4.2468	4.0585	3.7600	3.6552	3.6017	3.5692	3.5473	3.4359
15	4.2497	4.1813	4.0698	3.8826	3.5850	3.4803	3.4267	3.3941	3.3722	3.2602
16	4.0994	4.0314	3.9205	3.7342	3.4372	3.3324	3.2787	3.2460	3.2240	3.1115
17	3.9709	3.9033	3.7929	3.6073	3.3108	3.2058	3.1520	3.1192	3.0971	2.9839
18	3.8599	3.7926	3.6827	3.4977	3.2014	3.0962	3.0422	3.0093	2.9871	2.8732
19	3.7631	3.6961	3.5866	3.4020	3.1058	3.0004	2.9462	2.9131	2.8908	2.7762
20	3.6779	3.6111	3.5020	3.3178	3.0215	2.9159	2.8614	2.8282	2.8058	2.6904
30	3.1787	3.1132	3.0057	2.8230	2.5241	2.4151	2.3584	2.3234	2.2998	2.1760
40	2.9531	2.8880	2.7811	2.5984	2.2958	2.1838	2.1249	2.0884	2.0636	1.9318
50	2.8247	2.7599	2.6531	2.4702	2.1644	2.0499	1.9891	1.9512	1.9254	1.7863
60	2.7419	2.6771	2.5705	2.3872	2.0789	1.9622	1.8998	1.8609	1.8341	1.6885
80	2.6413	2.5767	2.4700	2.2862	1.9739	1.8540	1.7892	1.7484	1.7203	1.5634
100	2.5825	2.5180	2.4113	2.2270	1.9119	1.7896	1.7231	1.6809	1.6516	1.4853
120	2.5439	2.4794	2.3727	2.1881	1.8709	1.7469	1.6789	1.6357	1.6055	1.4311
200	2.4683	2.4038	2.2970	2.1116	1.7897	1.6614	1.5902	1.5442	1.5118	1.3137
∞	2.3583	2.2938	2.1868	1.9998	1.6691	1.5325	1.4540	1.4017	1.3637	1.0005

鄧肯法(Duncan method)臨界值表或鄧氏多變域臨界值表

$Q_{\alpha, k, v} = n_t - k$  ( $k$  = 欲檢定的母體(平均值)之數量,  $v = df$  = 誤差項自由度;  $\alpha = 0.05$ )

$df \backslash k$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969	17.969
2	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085
3	4.501	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516	4.516
4	3.926	4.013	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033	4.033
5	3.635	3.749	3.796	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814	3.814
6	3.460	3.586	3.649	3.680	3.694	3.697	3.697	3.697	3.697	3.697	3.697	3.697	3.697	3.697	3.697	3.697	3.697	3.697	3.697
7	3.344	3.477	3.548	3.588	3.611	3.622	3.625	3.625	3.625	3.625	3.625	3.625	3.625	3.625	3.625	3.625	3.625	3.625	3.625
8	3.261	3.398	3.475	3.521	3.549	3.566	3.575	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579	3.579
9	3.199	3.339	3.420	3.470	3.502	3.523	3.536	3.544	3.547	3.547	3.547	3.547	3.547	3.547	3.547	3.547	3.547	3.547	3.547
10	3.151	3.293	3.376	3.430	3.465	3.489	3.505	3.516	3.522	3.525	3.525	3.525	3.525	3.525	3.525	3.525	3.525	3.525	3.525
11	3.113	3.256	3.341	3.397	3.435	3.462	3.480	3.493	3.501	3.506	3.509	3.510	3.510	3.510	3.510	3.510	3.510	3.510	3.510
12	3.081	3.225	3.312	3.370	3.410	3.439	3.459	3.474	3.484	3.491	3.495	3.498	3.498	3.498	3.498	3.498	3.498	3.498	3.498

$df \backslash k$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
13	3.055	3.200	3.288	3.348	3.389	3.419	3.441	3.458	3.470	3.478	3.484	3.488	3.490	3.490	3.490	3.490	3.490	3.490	3.490
14	3.033	3.178	3.268	3.328	3.371	3.403	3.426	3.444	3.457	3.467	3.474	3.479	3.482	3.484	3.484	3.484	3.484	3.484	3.484
15	3.014	3.160	3.250	3.312	3.356	3.389	3.413	3.432	3.446	3.457	3.465	3.471	3.476	3.478	3.480	3.480	3.480	3.480	3.480
16	2.998	3.144	3.235	3.297	3.343	3.376	3.402	3.422	3.437	3.449	3.458	3.465	3.470	3.473	3.476	3.477	3.477	3.477	3.477
17	2.984	3.130	3.222	3.285	3.331	3.365	3.392	3.412	3.429	3.441	3.451	3.459	3.465	3.469	3.472	3.474	3.475	3.475	3.475
18	2.971	3.117	3.210	3.274	3.320	3.356	3.383	3.404	3.421	3.435	3.445	3.454	3.460	3.465	3.469	3.472	3.473	3.474	3.474
19	2.960	3.106	3.199	3.264	3.311	3.347	3.375	3.397	3.415	3.429	3.440	3.449	3.456	3.462	3.466	3.469	3.472	3.473	3.474
20	2.950	3.097	3.190	3.255	3.303	3.339	3.368	3.390	3.409	3.423	3.435	3.445	3.452	3.459	3.463	3.467	3.470	3.472	3.473
21	2.941	3.088	3.181	3.247	3.295	3.332	3.361	3.385	3.403	3.418	3.431	3.441	3.449	3.456	3.461	3.465	3.469	3.471	3.473
22	2.933	3.080	3.173	3.239	3.288	3.326	3.355	3.379	3.398	3.414	3.427	3.437	3.446	3.453	3.459	3.464	3.467	3.470	3.472
23	2.926	3.072	3.166	3.233	3.282	3.320	3.350	3.374	3.394	3.410	3.423	3.434	3.443	3.451	3.457	3.462	3.466	3.469	3.472
24	2.919	3.066	3.160	3.226	3.276	3.315	3.345	3.370	3.390	3.406	3.420	3.431	3.441	3.449	3.455	3.461	3.465	3.469	3.472
25	2.913	3.059	3.154	3.221	3.271	3.310	3.341	3.366	3.386	3.403	3.417	3.429	3.439	3.447	3.454	3.459	3.464	3.468	3.471
26	2.907	3.054	3.149	3.216	3.266	3.305	3.336	3.362	3.382	3.400	3.414	3.426	3.436	3.445	3.452	3.458	3.463	3.468	3.471
27	2.902	3.049	3.144	3.211	3.262	3.301	3.332	3.358	3.379	3.397	3.412	3.424	3.434	3.443	3.451	3.457	3.463	3.467	3.471
28	2.897	3.044	3.139	3.206	3.257	3.297	3.329	3.355	3.376	3.394	3.409	3.422	3.433	3.442	3.450	3.456	3.462	3.467	3.470
29	2.892	3.039	3.135	3.202	3.253	3.293	3.326	3.352	3.373	3.392	3.407	3.420	3.431	3.440	3.448	3.455	3.461	3.466	3.470
30	2.888	3.035	3.131	3.199	3.250	3.290	3.322	3.349	3.371	3.389	3.405	3.418	3.429	3.439	3.447	3.454	3.460	3.466	3.470
31	2.884	3.031	3.127	3.195	3.246	3.287	3.319	3.346	3.368	3.387	3.403	3.416	3.428	3.438	3.446	3.454	3.460	3.466	3.470
32	2.881	3.028	3.124	3.192	3.243	3.284	3.317	3.344	3.366	3.385	3.401	3.415	3.426	3.436	3.445	3.453	3.459	3.465	3.470
33	2.877	3.024	3.120	3.188	3.240	3.281	3.314	3.341	3.364	3.383	3.399	3.413	3.425	3.435	3.444	3.452	3.459	3.465	3.470
34	2.874	3.021	3.117	3.185	3.238	3.279	3.312	3.339	3.362	3.381	3.398	3.412	3.424	3.434	3.443	3.451	3.458	3.464	3.469
35	2.871	3.018	3.114	3.183	3.235	3.276	3.309	3.337	3.360	3.379	3.396	3.410	3.423	3.433	3.443	3.451	3.458	3.464	3.469
36	2.868	3.015	3.111	3.180	3.232	3.274	3.307	3.335	3.358	3.378	3.395	3.409	3.421	3.432	3.442	3.450	3.457	3.464	3.469
37	2.865	3.013	3.109	3.178	3.230	3.272	3.305	3.333	3.356	3.376	3.393	3.408	3.420	3.431	3.441	3.449	3.457	3.463	3.469
38	2.863	3.010	3.106	3.175	3.228	3.270	3.303	3.331	3.355	3.375	3.392	3.407	3.419	3.431	3.440	3.449	3.456	3.463	3.469
39	2.861	3.008	3.104	3.173	3.226	3.268	3.301	3.330	3.353	3.373	3.391	3.406	3.418	3.430	3.440	3.448	3.456	3.463	3.469
40	2.858	3.005	3.102	3.171	3.224	3.266	3.300	3.328	3.352	3.372	3.389	3.404	3.418	3.429	3.439	3.448	3.456	3.463	3.469
48	2.843	2.991	3.087	3.157	3.211	3.253	3.288	3.318	3.342	3.363	3.382	3.398	3.412	3.424	3.435	3.445	3.453	3.461	3.468
60	2.829	2.976	3.073	3.143	3.198	3.241	3.277	3.307	3.333	3.355	3.374	3.391	3.406	3.419	3.431	3.441	3.451	3.460	3.468
80	2.814	2.961	3.059	3.130	3.185	3.229	3.266	3.297	3.323	3.346	3.366	3.384	3.400	3.414	3.427	3.438	3.449	3.458	3.467
120	2.800	2.947	3.045	3.116	3.172	3.217	3.254	3.286	3.313	3.337	3.358	3.377	3.394	3.409	3.423	3.435	3.446	3.457	3.466
240	2.786	2.933	3.031	3.103	3.159	3.205	3.243	3.276	3.304	3.329	3.350	3.370	3.388	3.404	3.418	3.432	3.444	3.455	3.466
$\infty$	2.772	2.918	3.017	3.089	3.146	3.193	3.232	3.265	3.294	3.320	3.343	3.363	3.382	3.399	3.414	3.428	3.442	3.454	3.466

鄧肯法(Duncan method)臨界值表或鄧氏多變域臨界值表

$Q_{\alpha,k,v} = n_t - k$  ( $k =$  欲檢定的母體(平均值)之數量  $\cdot v = df =$  誤差項自由度;  $\alpha = 0.01$ )

$df \backslash k$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024	90.024
2	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036	14.036
3	8.260	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321	8.321
4	6.511	6.677	6.740	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755	6.755
5	5.722	5.893	5.989	6.040	6.065	6.074	6.074	6.074	6.074	6.074	6.074	6.074	6.074	6.074	6.074	6.074	6.074	6.074	6.074
6	5.243	5.439	5.549	5.614	5.655	5.680	5.694	5.701	5.703	5.703	5.703	5.703	5.703	5.703	5.703	5.703	5.703	5.703	5.703
7	4.949	5.145	5.260	5.333	5.383	5.416	5.439	5.454	5.464	5.470	5.472	5.472	5.472	5.472	5.472	5.472	5.472	5.472	5.472
8	4.745	4.939	5.056	5.134	5.189	5.227	5.256	5.276	5.291	5.302	5.309	5.313	5.316	5.317	5.317	5.317	5.317	5.317	5.317
9	4.596	4.787	4.906	4.986	5.043	5.086	5.117	5.142	5.160	5.174	5.185	5.193	5.199	5.202	5.205	5.206	5.206	5.206	5.206
10	4.482	4.671	4.789	4.871	4.931	4.975	5.010	5.036	5.058	5.074	5.087	5.098	5.106	5.112	5.117	5.120	5.122	5.123	5.124
11	4.392	4.579	4.697	4.780	4.841	4.887	4.923	4.952	4.975	4.994	5.009	5.021	5.031	5.039	5.045	5.050	5.054	5.057	5.059
12	4.320	4.504	4.622	4.705	4.767	4.815	4.852	4.882	4.904	4.927	4.944	4.957	4.969	4.978	4.986	4.993	4.998	5.002	5.005
13	4.260	4.442	4.560	4.643	4.706	4.754	4.793	4.824	4.850	4.871	4.889	4.904	4.917	4.927	4.936	4.944	4.950	4.955	4.960
14	4.210	4.391	4.508	4.591	4.654	4.703	4.743	4.775	4.802	4.824	4.843	4.859	4.872	4.884	4.894	4.902	4.909	4.916	4.921
15	4.167	4.346	4.463	4.547	4.610	4.660	4.700	4.733	4.760	4.783	4.803	4.820	4.834	4.846	4.857	4.866	4.874	4.881	4.887
16	4.131	4.308	4.425	4.508	4.572	4.622	4.662	4.696	4.724	4.748	4.768	4.785	4.800	4.813	4.825	4.835	4.843	4.851	4.858
17	4.099	4.275	4.391	4.474	4.538	4.589	4.630	4.664	4.692	4.717	4.737	4.755	4.771	4.785	4.797	4.807	4.816	4.824	4.832
18	4.071	4.246	4.361	4.445	4.509	4.559	4.601	4.635	4.664	4.689	4.710	4.729	4.745	4.759	4.771	4.782	4.792	4.801	4.808
19	4.046	4.220	4.335	4.418	4.483	4.533	4.575	4.610	4.639	4.664	4.686	4.705	4.722	4.736	4.749	4.760	4.771	4.780	4.788
20	4.024	4.197	4.312	4.395	4.459	4.510	4.552	4.587	4.617	4.642	4.664	4.684	4.701	4.716	4.729	4.741	4.751	4.761	4.769
21	4.004	4.177	4.291	4.374	4.438	4.489	4.531	4.567	4.597	4.622	4.645	4.664	4.682	4.697	4.711	4.723	4.734	4.743	4.752
22	3.986	4.158	4.272	4.355	4.419	4.470	4.513	4.548	4.578	4.604	4.627	4.647	4.664	4.680	4.694	4.706	4.718	4.728	4.737
23	3.970	4.141	4.255	4.337	4.402	4.453	4.496	4.531	4.562	4.588	4.611	4.631	4.649	4.665	4.679	4.692	4.703	4.713	4.723
24	3.955	4.126	4.239	4.322	4.386	4.437	4.480	4.516	4.546	4.573	4.596	4.616	4.634	4.651	4.665	4.678	4.690	4.7	

## 杜凱表(Tukey method table)

 $Q_{\alpha,k,v=n_t-k}$  臨界值：上層  $\alpha = 0.05$ ；下層  $\alpha = 0.01$ 。

df 誤差項 自由度	k = 欲檢定的母體(平均值)之數量(處理數)								
	2	3	4	5	6	7	8	9	10
1	18.0 90	27.0 135	32.8 164	37.1 186	40.4 202	43.1 216	45.4 227	47.4 237	49.1 246
2	6.08 13.90	8.33 19.02	9.80 22.56	10.88 25.37	11.73 27.76	12.43 29.86	13.03 31.73	13.54 33.41	13.99 34.93
3	4.50 8.26	5.91 10.62	6.82 12.17	7.50 13.32	8.04 14.24	8.48 15.00	8.85 15.65	9.18 16.21	9.46 16.71
4	3.93 6.51	5.04 8.12	5.76 9.17	6.29 9.96	6.71 10.58	7.05 11.10	7.35 11.54	7.60 11.92	7.83 12.26
5	3.64 5.70	4.60 6.98	5.22 7.80	5.67 8.42	6.03 8.91	6.33 9.32	6.58 9.67	6.80 9.97	6.99 10.24
6	3.46 5.24	4.34 6.33	4.90 7.03	5.30 7.56	5.63 7.97	5.90 8.32	6.12 8.61	6.32 8.87	6.49 9.10
7	3.34 4.95	4.16 5.92	4.68 6.54	5.06 7.01	5.36 7.37	5.61 7.68	5.82 7.94	6.00 8.17	6.16 8.37
8	3.26 4.75	4.04 5.64	4.53 6.20	4.89 6.62	5.17 6.96	5.40 7.24	5.60 7.47	5.77 7.68	5.92 7.86
9	3.20 4.60	3.95 5.43	4.41 5.96	4.76 6.35	5.02 6.66	5.24 6.91	5.43 7.13	5.59 7.33	5.74 7.49
10	3.15 4.48	3.88 5.27	4.33 5.77	4.65 6.14	4.91 6.43	5.12 6.67	5.30 6.87	5.46 7.05	5.60 7.21
11	3.11 4.39	3.82 5.15	4.26 5.62	4.57 5.97	4.82 6.25	5.03 6.48	5.20 6.67	5.35 6.84	5.49 6.99
12	3.08 4.32	3.77 5.05	4.20 5.50	4.51 5.84	4.75 6.10	4.95 6.32	5.12 6.51	5.27 6.67	5.39 6.81
13	3.06 4.26	3.73 4.96	4.15 5.40	4.45 5.73	4.69 5.98	4.88 6.19	5.05 6.37	5.19 6.53	5.32 6.67
14	3.03 4.21	3.70 4.89	4.11 5.32	4.41 5.63	4.64 5.88	4.83 6.08	4.99 6.26	5.13 6.41	5.25 6.54
15	3.01 4.17	3.67 4.84	4.08 5.25	4.37 5.56	4.59 5.80	4.78 5.99	4.94 6.16	5.08 6.31	5.20 6.44
16	3.00 4.13	3.65 4.79	4.05 5.19	4.33 5.49	4.56 5.72	4.74 5.92	4.90 6.08	5.03 6.22	5.15 6.35
17	2.98 4.10	3.63 4.74	4.02 5.14	4.30 5.43	4.52 5.66	4.70 5.85	4.86 6.01	4.99 6.15	5.11 6.27
18	2.97 4.07	3.61 4.70	4.00 5.09	4.28 5.38	4.49 5.60	4.67 5.79	4.82 5.94	4.96 6.08	5.07 6.20
19	2.96 4.05	3.59 4.67	3.98 5.05	4.25 5.33	4.47 5.55	4.65 5.73	4.79 5.89	4.92 6.02	5.04 6.14
20	2.95 4.02	3.58 4.64	3.96 5.02	4.23 5.29	4.45 5.51	4.62 5.69	4.77 5.84	4.90 5.97	5.01 6.09
24	2.92 3.96	3.53 4.55	3.90 4.91	4.17 5.17	4.37 5.37	4.54 5.54	4.68 5.69	4.81 5.81	4.92 5.92
30	2.89 3.89	3.49 4.45	3.85 4.80	4.10 5.05	4.30 5.24	4.46 5.40	4.60 5.54	4.72 5.65	4.82 5.76
40	2.86 3.82	3.44 4.37	3.79 4.70	4.04 4.93	4.23 5.11	4.39 5.26	4.52 5.39	4.63 5.50	4.73 5.60
60	2.83 3.76	3.40 4.28	3.74 4.59	3.98 4.82	4.16 4.99	4.31 5.13	4.44 5.25	4.55 5.36	4.65 5.45
120	2.80 3.70	3.36 4.20	3.68 4.50	3.92 4.71	4.10 4.87	4.24 5.01	4.36 5.12	4.47 5.21	4.56 5.30
$\infty$	2.77 3.64	3.31 4.12	3.63 4.40	3.86 4.60	4.03 4.76	4.17 4.88	4.29 4.99	4.39 5.08	4.47 5.16

魏克森(Wilcoxon)符號等級檢定臨界值表-配對母體

單尾 $\alpha =$	雙尾 $\alpha =$	$n = 5$	$n = 6$	$n = 7$	$n = 8$	$n = 9$	$n = 10$	$n = 11$	$n = 12$
0.05	0.10	1	2	4	6	8	11	14	17
0.025	0.05		1	2	4	6	8	11	14
0.01	0.02			0	2	3	5	7	10
0.005	0.01				0	2	3	5	7
單尾 $\alpha =$	雙尾 $\alpha =$	$n = 13$	$n = 14$	$n = 15$	$n = 16$	$n = 17$	$n = 18$	$n = 19$	$n = 20$
0.05	0.10	21	26	30	36	41	47	54	60
0.025	0.05	17	21	25	30	35	40	46	52
0.01	0.02	13	16	20	24	28	33	38	43
0.005	0.01	10	13	16	19	23	28	32	37
單尾 $\alpha =$	雙尾 $\alpha =$	$n = 21$	$n = 22$	$n = 23$	$n = 24$	$n = 25$	$n = 26$	$n = 27$	$n = 28$
0.05	0.10	68	75	83	92	101	110	120	130
0.025	0.05	59	66	73	81	90	98	107	117
0.01	0.02	49	56	62	69	77	85	93	102
0.005	0.01	43	49	55	68	68	76	84	92
單尾 $\alpha =$	雙尾 $\alpha =$	$n = 29$	$n = 30$	$n = 31$	$n = 32$	$n = 33$	$n = 34$	$n = 35$	$n = 36$
0.05	0.10	141	152	163	175	188	201	214	228
0.025	0.05	127	137	148	159	171	183	195	208
0.01	0.02	111	120	130	141	151	162	174	186
0.005	0.01	100	109	118	128	138	149	160	171
單尾 $\alpha =$	雙尾 $\alpha =$	$n = 37$	$n = 38$	$n = 39$	$n = 40$	$n = 41$	$n = 42$	$n = 43$	$n = 44$
0.05	0.10	242	256	271	287	303	319	336	353
0.025	0.05	222	235	250	264	279	295	311	327
0.01	0.02	198	211	224	238	252	267	281	297
0.005	0.01	183	195	208	221	234	248	262	277

魏克森等級和檢定表(Wilcoxon rank sum table)

較低樣本數 $n_1$	較高樣本數 $n_2$	下臨界值 Lower tail (雙尾機率) $W_L$						上臨界值 Upper tail (雙尾機率) $W_H$					
		0.005	0.01	0.025	0.05	0.10	0.20	0.20	0.10	0.05	0.025	0.01	0.005
3	3				5	6			15	16			
	4				6	7			17	18			
	5				6	7			20	21			
	6				7	8			22	23			
	7				7	9			24	26			
	8				8	9			27	28			
	9				8	10			29	31			
4	10				9	11			31	33			
	4			10	11	13	14	22	23	25	26		
	5		10	11	12	14	15	25	26	28	29	30	
	6	10	11	12	13	15	17	27	29	31	32	33	34
	7	10	11	13	14	16	18	30	32	34	35	37	38
	8	11	12	14	15	17	20	32	35	37	38	40	41
	9	11	13	14	16	19	21	35	37	40	42	43	45
	10	12	13	15	17	20	23	37	40	43	45	47	48
5	11	12	14	16	18	21	24	40	43	46	48	50	52
	12	13	15	17	19	22	26	42	46	49	51	53	55
	5	15	16	17	19	20	22	33	35	36	38	39	40
	6	16	17	18	20	22	24	36	38	40	42	43	44
	7	16	18	20	21	23	26	39	42	44	45	47	49
	8	17	19	21	23	25	28	42	45	47	49	51	53
	9	18	20	22	24	27	30	45	48	51	53	55	57
10	19	21	23	26	28	32	48	52	54	57	59	61	
11	20	22	24	27	30	34	51	55	58	61	63	65	

較低樣本數 $n_1$	較高樣本數 $n_2$	下臨界值Lower tail(雙尾機率) $W_L$						上臨界值Upper tail(雙尾機率) $W_H$					
		0.005	0.01	0.025	0.05	0.10	0.20	0.20	0.10	0.05	0.025	0.01	0.005
	12	21	23	26	28	32	36	54	58	62	64	67	69
6	6	23	24	26	28	30	33	45	48	50	52	54	55
	7	24	25	27	29	32	35	49	52	55	57	59	60
	8	25	27	29	31	34	37	53	56	59	61	63	65
	9	26	28	31	33	36	40	56	60	63	65	68	70
	10	27	29	32	35	38	42	60	64	67	70	73	75
	11	28	30	34	37	40	44	64	68	71	74	78	80
7	12	30	32	35	38	42	47	67	72	76	79	82	84
	7	32	34	36	39	41	45	60	64	66	69	71	73
	8	34	35	38	41	44	48	64	68	71	74	77	78
	9	35	37	40	43	46	50	69	73	76	79	82	84
	10	37	39	42	45	49	53	73	77	81	74	87	89
	11	38	40	44	47	51	56	77	82	86	89	93	95
8	12	40	42	46	49	54	59	81	86	91	94	98	100
	8	43	45	49	51	55	59	77	81	85	87	91	93
	9	45	47	51	54	58	62	82	86	90	93	97	99
	10	47	49	53	56	60	65	87	92	96	99	103	105
	11	49	51	55	59	63	69	91	97	101	105	109	111
9	12	51	53	58	62	66	72	96	102	106	110	115	117
	9	56	59	62	66	70	75	96	101	105	109	112	115
	10	58	61	65	69	73	78	102	107	111	115	119	122
	11	61	63	68	72	76	82	107	113	117	121	126	128
10	12	63	66	71	75	80	86	112	118	123	127	132	135
	10	71	74	78	82	87	93	117	123	128	132	136	139
	11	73	77	81	86	91	97	123	129	134	139	143	147
11	12	76	79	84	89	94	101	129	136	141	146	151	154
	11	87	91	96	100	106	112	141	147	153	157	162	166
12	12	90	94	99	104	110	117	147	154	160	165	170	174
	12	105	109	115	120	127	134	166	173	180	185	191	195

曼-懷特尼 U 檢定統計機率表

Cumulative distribution function of the Mann-Whitney U statistic:  $P(U \leq u)$  for  $n_1 \leq n_2$  and  $3 \leq n_2 \leq 10$

$u$	$n_2$	3			4			
		1	2	3	1	2	3	4
0		0.2500	0.1000	0.0500	0.2000	0.0667	0.0286	0.0143
1		0.5000	0.2000	0.1000	0.4000	0.1333	0.0571	0.0286
2			0.4000	0.2000	0.6000	0.2667	0.1143	0.0571
3			0.6000	0.3500		0.4000	0.2000	0.1000
4				0.5000		0.6000	0.3143	0.1714
5							0.4286	0.2429
6							0.5714	0.3429
7								0.4429
8								0.5571

$u$	$n_2$	5				
		1	2	3	4	5
0		0.1667	0.0476	0.0179	0.0079	0.0040
1		0.3333	0.0952	0.0357	0.0159	0.0079
2		0.5000	0.1905	0.0714	0.0317	0.0159
3			0.2857	0.1250	0.0556	0.0278
4			0.4286	0.1964	0.0952	0.0476
5			0.5714	0.2857	0.1429	0.0754



	$n_2$	5				
$u$	$n_1$	1	2	3	4	5
6				0.3929	0.2063	0.1111
7				0.5000	0.2778	0.1548
8					0.3651	0.2103
9					0.4524	0.2738
10					0.5476	0.3452
11						0.4206
12						0.5000

	$n_2$	6					
$u$	$n_1$	1	2	3	4	5	6
0		0.1429	0.0357	0.0119	0.0048	0.0022	0.0011
1		0.2857	0.0714	0.0238	0.0095	0.0043	0.0022
2		0.4286	0.1429	0.0476	0.0190	0.0087	0.0043
3		0.5714	0.2143	0.0833	0.0333	0.0152	0.0076
4			0.3214	0.1310	0.0571	0.0260	0.0130
5			0.4286	0.1905	0.0857	0.0411	0.0206
6			0.5714	0.2738	0.1286	0.0628	0.0325
7				0.3571	0.1762	0.0887	0.0465
8				0.4524	0.2381	0.1234	0.0660
9				0.5476	0.3048	0.1645	0.0898
10					0.3810	0.2143	0.1201
11					0.4571	0.2684	0.1548
12					0.5429	0.3312	0.1970
13						0.3961	0.2424
14						0.4654	0.2944
15						0.5346	0.3496
16							0.4091
17							0.4686
18							0.5314

	$n_2$	7						
$u$	$n_1$	1	2	3	4	5	6	7
0		0.1250	0.0278	0.0083	0.0030	0.0013	0.0006	0.0003
1		0.2500	0.0556	0.0167	0.0061	0.0025	0.0012	0.0006
2		0.3750	0.1111	0.0333	0.0121	0.0051	0.0023	0.0012
3		0.5000	0.1667	0.0583	0.0212	0.0088	0.0041	0.0020
4			0.2500	0.0917	0.0364	0.0152	0.0070	0.0035
5			0.3333	0.1333	0.0545	0.0240	0.0111	0.0055
6			0.4444	0.1917	0.0818	0.0366	0.0175	0.0087
7			0.5556	0.2583	0.1152	0.0530	0.0256	0.0131
8				0.3333	0.1576	0.0745	0.0367	0.0189
9				0.4167	0.2061	0.1010	0.0507	0.0265
10				0.5000	0.2636	0.1338	0.0688	0.0364
11					0.3242	0.1717	0.0903	0.0487
12					0.3939	0.2159	0.1171	0.0641
13					0.4636	0.2652	0.1474	0.0825
14					0.5364	0.3194	0.1830	0.1043
15						0.3775	0.2226	0.1297
16						0.4381	0.2669	0.1588
17						0.5000	0.3141	0.1914
18							0.3654	0.2279
19							0.4178	0.2675
20							0.4726	0.3100
21							0.5274	0.3552

	$n_2$	7						
$u$	$n_1$	1	2	3	4	5	6	7
22								0.4024
23								0.4508
24								0.5000

	$n_2$	8							
$u$	$n_1$	1	2	3	4	5	6	7	8
0		0.1111	0.0222	0.0061	0.0020	0.0008	0.0003	0.0002	0.0001
1		0.2222	0.0444	0.0121	0.0040	0.0016	0.0007	0.0003	0.0002
2		0.3333	0.0889	0.0242	0.0081	0.0031	0.0013	0.0006	0.0003
3		0.4444	0.1333	0.0424	0.0141	0.0054	0.0023	0.0011	0.0005
4		0.5556	0.2000	0.0667	0.0242	0.0093	0.0040	0.0019	0.0009
5			0.2667	0.0970	0.0364	0.0148	0.0063	0.0030	0.0015
6			0.3556	0.1394	0.0545	0.0225	0.0100	0.0047	0.0023
7			0.4444	0.1879	0.0768	0.0326	0.0147	0.0070	0.0035
8			0.5556	0.2485	0.1071	0.0466	0.0213	0.0103	0.0052
9				0.3152	0.1414	0.0637	0.0296	0.0145	0.0074
10				0.3879	0.1838	0.0855	0.0406	0.0200	0.0103
11				0.4606	0.2303	0.1111	0.0539	0.0270	0.0141
12				0.5394	0.2848	0.1422	0.0709	0.0361	0.0190
13					0.3414	0.1772	0.0906	0.0469	0.0249
14					0.4040	0.2176	0.1142	0.0603	0.0325
15					0.4667	0.2618	0.1412	0.0760	0.0415
16					0.5333	0.3108	0.1725	0.0946	0.0524
17						0.3621	0.2068	0.1159	0.0652
18						0.4165	0.2454	0.1405	0.0803
19						0.4716	0.2864	0.1678	0.0974
20						0.5284	0.3310	0.1984	0.1172
21							0.3773	0.2317	0.1393
22							0.4259	0.2679	0.1641
23							0.4749	0.3063	0.1911
24							0.5251	0.3472	0.2209
25								0.3894	0.2527
26								0.4333	0.2869
27								0.4775	0.3227
28								0.5225	0.3605
29									0.3992
30									0.4392
31									0.4796
32									0.5204

	$n_2$	9								
$u$	$n_1$	1	2	3	4	5	6	7	8	9
0		0.1000	0.0182	0.0045	0.0014	0.0005	0.0002	0.0001	0.0000	0.0000
1		0.2000	0.0364	0.0091	0.0028	0.0010	0.0004	0.0002	0.0001	0.0000
2		0.3000	0.0727	0.0182	0.0056	0.0020	0.0008	0.0003	0.0002	0.0001
3		0.4000	0.1091	0.0318	0.0098	0.0035	0.0014	0.0006	0.0003	0.0001
4		0.5000	0.1636	0.0500	0.0168	0.0060	0.0024	0.0010	0.0005	0.0002
5			0.2182	0.0727	0.0252	0.0095	0.0038	0.0017	0.0008	0.0004
6			0.2909	0.1045	0.0378	0.0145	0.0060	0.0026	0.0012	0.0006
7			0.3636	0.1409	0.0531	0.0210	0.0088	0.0039	0.0019	0.0009
8			0.4545	0.1864	0.0741	0.0300	0.0128	0.0058	0.0028	0.0014
9			0.5455	0.2409	0.0993	0.0415	0.0180	0.0082	0.0039	0.0020
10				0.3000	0.1301	0.0599	0.0248	0.0115	0.0056	0.0028
11				0.3636	0.1650	0.0734	0.0332	0.0156	0.0076	0.0039

	$n_2$	9								
$u$	$n_1$	1	2	3	4	5	6	7	8	9
12				0.4318	0.2070	0.0949	0.0440	0.0209	0.0103	0.0053
13				0.5000	0.2517	0.1199	0.0567	0.0274	0.0137	0.0071
14					0.3021	0.1489	0.0723	0.0356	0.0180	0.0094
15					0.3552	0.1818	0.0905	0.0454	0.0232	0.0122
16					0.4126	0.2188	0.1119	0.0571	0.0296	0.0157
17					0.4699	0.2592	0.1361	0.0708	0.0372	0.0200
18					0.5301	0.3032	0.1638	0.0869	0.0464	0.0252
19						0.3497	0.1924	0.1052	0.0570	0.0313
20						0.3986	0.2280	0.1261	0.0694	0.0385
21						0.4491	0.2643	0.1496	0.0836	0.0470
22						0.5000	0.3035	0.1755	0.0998	0.0567
23							0.3445	0.2039	0.1179	0.0680
24							0.3878	0.2349	0.1383	0.0807
25							0.4320	0.2680	0.1606	0.0951
26							0.4773	0.3032	0.1852	0.1112
27							0.5227	0.3403	0.2117	0.1290
28								0.3788	0.2404	0.1487
29								0.4185	0.2707	0.1701
30								0.4591	0.3029	0.1933
31								0.5000	0.3365	0.2181
32									0.3715	0.2447
33									0.4074	0.2729
34									0.4442	0.3024
35									0.4813	0.3332
36									0.5187	0.3652
37										0.3981
38										0.4317
39										0.4657
40										0.5000

	$n_2$	10									
$u$	$n_1$	1	2	3	4	5	6	7	8	9	10
0		0.0909	0.0152	0.0035	0.0010	0.0003	0.0001	0.0001	0.0000	0.0000	0.0000
1		0.1818	0.0303	0.0070	0.0020	0.0007	0.0002	0.0001	0.0000	0.0000	0.0000
2		0.2727	0.0606	0.0140	0.0040	0.0013	0.0005	0.0002	0.0001	0.0000	0.0000
3		0.3636	0.0909	0.0245	0.0070	0.0023	0.0009	0.0004	0.0002	0.0001	0.0000
4		0.4545	0.1364	0.0385	0.0120	0.0040	0.0015	0.0006	0.0003	0.0001	0.0001
5		0.5455	0.1818	0.0559	0.0180	0.0063	0.0024	0.0010	0.0004	0.0002	0.0001
6			0.2424	0.0804	0.0270	0.0097	0.0037	0.0015	0.0007	0.0003	0.0002
7			0.3030	0.1084	0.0380	0.0140	0.0055	0.0023	0.0010	0.0005	0.0002
8			0.3788	0.1434	0.0529	0.0200	0.0080	0.0034	0.0015	0.0007	0.0004
9			0.4545	0.1853	0.0709	0.0276	0.0112	0.0048	0.0022	0.0011	0.0005
10			0.5455	0.2343	0.0939	0.0376	0.0156	0.0068	0.0031	0.0015	0.0008
11				0.2867	0.1199	0.0496	0.0210	0.0093	0.0043	0.0021	0.0010
12				0.3462	0.1518	0.0646	0.0280	0.0125	0.0058	0.0028	0.0014
13				0.4056	0.1868	0.0823	0.0363	0.0165	0.0078	0.0038	0.0019
14				0.4685	0.2268	0.1032	0.0467	0.0215	0.0103	0.0051	0.0026
15				0.5315	0.2697	0.1272	0.0589	0.0277	0.0133	0.0066	0.0034
16					0.3177	0.1548	0.0736	0.0351	0.0171	0.0086	0.0045
17					0.3666	0.1855	0.0903	0.0439	0.0217	0.0110	0.0057
18					0.4196	0.2198	0.1099	0.0544	0.0273	0.0140	0.0073
19					0.4725	0.2567	0.1317	0.0665	0.0338	0.0175	0.0093
20					0.5275	0.2970	0.1566	0.0806	0.0416	0.0217	0.0116
21						0.3393	0.1838	0.0966	0.0506	0.0267	0.0144
22						0.3839	0.2139	0.1148	0.0610	0.0326	0.0177

	$n_2$	10									
$u$	$n_1$	1	2	3	4	5	6	7	8	9	10
23						0.4296	0.2461	0.1349	0.0729	0.0394	0.0216
24						0.4765	0.2811	0.1574	0.0864	0.0474	0.0262
25						0.5235	0.3177	0.1819	0.1015	0.0564	0.0315
26							0.3564	0.2087	0.1185	0.0667	0.0376
27							0.3962	0.2374	0.1371	0.0782	0.0446
28							0.4374	0.2681	0.1577	0.0912	0.0526
29							0.4789	0.3004	0.1800	0.1055	0.0615
30							0.5211	0.3345	0.2041	0.1214	0.0716
31								0.3698	0.2299	0.1388	0.0827
32								0.4063	0.2574	0.1577	0.0952
33								0.4434	0.2863	0.1781	0.1088
34								0.4811	0.3167	0.2001	0.1237
35								0.5189	0.3482	0.2235	0.1399
36									0.3809	0.2483	0.1575
37									0.4143	0.2745	0.1763
38									0.4484	0.3019	0.1965
39									0.4827	0.3304	0.2179
40									0.5173	0.3598	0.2406
41										0.3901	0.2644
42										0.4211	0.2894
43										0.4524	0.3153
44										0.4841	0.3421
45										0.5159	0.3697
46											0.3980
47											0.4267
48											0.4559
49											0.4853
50											0.5147

連檢定累計機率表  $P(R \leq r)$

Cumulative distribution function:  $F(r)$  for the total numbers of runs  $R$  in samples of size  $n_1$  and  $n_2$

		$r$								
$n_1$	$n_2$	2	3	4	5	6	7	8	9	10
2	3	0.200	0.500	0.900	1.000					
	4	0.133	0.400	0.800	1.000					
	5	0.095	0.333	0.714	1.000					
	6	0.071	0.286	0.643	1.000					
	7	0.056	0.250	0.583	1.000					
	8	0.044	0.222	0.533	1.000					
	9	0.036	0.200	0.491	1.000					
	10	0.030	0.182	0.455	1.000					
3	3	0.100	0.300	0.700	0.900	1.000				
	4	0.057	0.200	0.543	0.800	0.971	1.000			
	5	0.036	0.143	0.429	0.714	0.929	1.000			
	6	0.024	0.107	0.345	0.643	0.881	1.000			
	7	0.017	0.083	0.283	0.583	0.833	1.000			
	8	0.012	0.067	0.236	0.533	0.788	1.000			
	9	0.009	0.055	0.200	0.491	0.745	1.000			
	10	0.007	0.045	0.171	0.455	0.706	1.000			
4	4	0.029	0.114	0.371	0.629	0.886	0.971	1.000		
	5	0.016	0.071	0.262	0.500	0.786	0.929	0.992	1.000	
	6	0.010	0.048	0.190	0.405	0.690	0.881	0.976	1.000	
	7	0.006	0.033	0.142	0.333	0.606	0.833	0.954	1.000	

		<i>r</i>								
<i>n</i> <sub>1</sub>	<i>n</i> <sub>2</sub>	2	3	4	5	6	7	8	9	10
	8	0.004	0.024	0.109	0.279	0.533	0.788	0.929	1.000	
	9	0.003	0.018	0.085	0.236	0.471	0.745	0.902	1.000	
	10	0.002	0.014	0.068	0.203	0.419	0.706	0.874	1.000	
5	5	0.008	0.040	0.167	0.357	0.643	0.833	0.960	0.992	1.000
	6	0.004	0.024	0.110	0.262	0.522	0.738	0.911	0.976	0.998
	7	0.003	0.015	0.076	0.197	0.424	0.652	0.854	0.955	0.992
	8	0.002	0.010	0.054	0.152	0.347	0.576	0.793	0.929	0.984
	9	0.001	0.007	0.039	0.119	0.287	0.510	0.734	0.902	0.972
	10	0.001	0.005	0.029	0.095	0.239	0.455	0.678	0.874	0.958
6	6	0.002	0.013	0.067	0.175	0.392	0.608	0.825	0.933	0.987
	7	0.001	0.008	0.043	0.121	0.296	0.500	0.733	0.879	0.966
	8	0.001	0.005	0.028	0.086	0.226	0.413	0.646	0.821	0.937
	9	0.000	0.003	0.019	0.063	0.175	0.343	0.566	0.762	0.902
	10	0.000	0.002	0.013	0.047	0.137	0.288	0.497	0.706	0.864
7	7	0.001	0.004	0.025	0.078	0.209	0.383	0.617	0.791	0.922
	8	0.000	0.002	0.015	0.051	0.149	0.296	0.514	0.704	0.867
	9	0.000	0.001	0.010	0.035	0.108	0.231	0.427	0.622	0.806
	10	0.000	0.001	0.006	0.024	0.080	0.182	0.355	0.549	0.743
8	8	0.000	0.001	0.009	0.032	0.100	0.214	0.405	0.595	0.786
	9	0.000	0.001	0.005	0.020	0.069	0.157	0.319	0.500	0.702
	10	0.000	0.000	0.003	0.013	0.048	0.117	0.251	0.419	0.621
9	9	0.000	0.000	0.003	0.012	0.044	0.109	0.238	0.399	0.601
	10	0.000	0.000	0.002	0.008	0.029	0.077	0.179	0.319	0.510
10	10	0.000	0.000	0.001	0.004	0.019	0.051	0.128	0.242	0.414

		<i>r</i>										
<i>n</i> <sub>1</sub>	<i>n</i> <sub>2</sub>	11	12	13	14	15	16	17	18	19	20	
2	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	3	3										
		4										
5												
6												
7												
8												
10												
4	4											
	5											
	6											
	7											
	8											
	10											
5	5											
	6	1.000										
	7	1.000										

		r									
$n_1$	$n_2$	11	12	13	14	15	16	17	18	19	20
	8	1.000									
	9	1.000									
	10	1.000									
6	6	0.998	1.000								
	7	0.922	0.999	1.000							
	8	0.984	0.998	1.000							
	9	0.972	0.994	1.000							
	10	0.958	0.990	1.000							
7	7	0.975	0.996	0.999	1.000						
	8	0.949	0.988	0.998	1.000	1.000					
	9	0.916	0.975	0.994	0.999	1.000					
	10	0.879	0.957	0.990	0.998	1.000					
8	8	0.900	0.968	0.991	0.999	1.000	1.000				
	9	0.843	0.939	0.980	0.996	0.999	1.000	1.000			
	10	0.782	0.903	0.964	0.990	0.998	1.000	1.000			
9	9	0.762	0.891	0.956	0.988	0.997	1.000	1.000	1.000		
	10	0.681	0.834	0.923	0.974	0.992	0.999	1.000	1.000	1.000	
10	10	0.586	0.758	0.872	0.949	0.981	0.996	0.999	1.000	1.000	1.000

Spearman 等級相關係數臨界值表

Critical values of Spearman's rank correlation coefficient

$n$	$\alpha = 0.05$	$\alpha = 0.025$	$\alpha = 0.01$	$\alpha = 0.005$
5	0.900	—	—	—
6	0.829	0.886	0.943	—
7	0.714	0.786	0.893	—
8	0.643	0.738	0.833	0.881
9	0.600	0.683	0.783	0.833
10	0.564	0.648	0.745	0.794
11	0.523	0.623	0.736	0.818
12	0.497	0.591	0.703	0.780
13	0.475	0.566	0.673	0.745
14	0.457	0.545	0.646	0.716
15	0.441	0.525	0.623	0.689
16	0.425	0.507	0.601	0.666
17	0.412	0.490	0.582	0.645
18	0.399	0.476	0.564	0.625
19	0.388	0.462	0.549	0.608
20	0.377	0.450	0.534	0.591
21	0.368	0.438	0.521	0.576
22	0.359	0.428	0.508	0.562
23	0.351	0.418	0.496	0.549
24	0.343	0.409	0.485	0.537
25	0.336	0.400	0.475	0.526
26	0.329	0.392	0.465	0.515
27	0.323	0.385	0.456	0.505
28	0.317	0.377	0.448	0.496
29	0.311	0.370	0.440	0.487
30	0.305	0.364	0.432	0.478

Kolmogorov-Smirnov 檢定臨界值表

Critical values for the Kolmogorov-Smirnov test

LEVEL OF SIGNIFICANCE FOR $D = \text{MAXIMUM} [ F_0(X) - S_n(X) ]$
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SAMPLE SIZE $n$	單尾 $\alpha = 0.10$	0.075	0.05	0.025	0.01	0.005
	雙尾 $\alpha = 0.20$	0.150	0.10	0.050	0.02	0.01
1	0.9000	0.925	0.9500	0.9750	0.9900	0.9950
2	0.6838	0.726	0.7764	0.8419	0.9000	0.9293
3	0.5648	0.597	0.6360	0.7076	0.7846	0.8290
4	0.4927	0.525	0.5652	0.6239	0.6889	0.7342
5	0.4470	0.474	0.5095	0.5633	0.6272	0.6685
6	0.4104	0.436	0.4680	0.5193	0.5774	0.6166
7	0.3815	0.405	0.4361	0.4834	0.5384	0.5758
8	0.3583	0.381	0.4096	0.4543	0.5065	0.5418
9	0.3391	0.360	0.3875	0.4300	0.4796	0.5133
10	0.3226	0.342	0.3687	0.4092	0.4566	0.4889
11	0.3083	0.326	0.3524	0.3912	0.4367	0.4677
12	0.2958	0.313	0.3382	0.3754	0.4192	0.4490
13	0.2847	0.302	0.3255	0.3614	0.4036	0.4325
14	0.2748	0.292	0.3142	0.3489	0.3897	0.4176
15	0.2659	0.283	0.3040	0.3376	0.3771	0.4042
16	0.2578	0.274	0.2947	0.3273	0.3657	0.3920
17	0.2504	0.266	0.2863	0.3180	0.3553	0.3809
18	0.2436	0.259	0.2785	0.3094	0.3457	0.3706
19	0.2373	0.252	0.2714	0.3014	0.3369	0.3612
20	0.2316	0.246	0.2647	0.2941	0.3287	0.3524
21	0.2262		0.2586	0.2872	0.3210	0.3443
22	0.2212		0.2528	0.2809	0.3139	0.3367
23	0.2165		0.2475	0.2749	0.3073	0.3295
24	0.2020		0.2424	0.2693	0.3010	0.3229
25	0.2079	0.220	0.2377	0.2640	0.2952	0.3166
26	0.2040		0.2332	0.2591	0.2896	0.3106
27	0.2003		0.2290	0.2544	0.2844	0.3050
28	0.1968		0.2250	0.2499	0.2794	0.2997
29	0.1935		0.2212	0.2457	0.2747	0.2947
30	0.1903	0.200	0.2176	0.2417	0.2702	0.2899
35	0.1766	0.190	0.2018	0.2242	0.2507	0.2690
> 5	$\frac{1.07}{\sqrt{n}}$	$\frac{1.14}{\sqrt{n}}$	$\frac{1.22}{\sqrt{n}}$	$\frac{1.36}{\sqrt{n}}$	$\frac{1.52}{\sqrt{n}}$	$\frac{1.63}{\sqrt{n}}$