

Kumulasi Probabilitas pada Distribusi Probabilitas Binomial

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 1																					
0	0,9500	0,9000	0,8500	0,8000	0,7500	0,7000	0,6667	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	0
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	1,0000	1
N = 2																					
0	0,9025	0,8100	0,7225	0,6400	0,5625	0,4900	0,4444	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	0
1	0,9975	0,9900	0,9775	0,9600	0,9375	0,9100	0,8889	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	1
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	1,0000	2
N = 3																					
0	0,8574	0,7290	0,6141	0,5120	0,4219	0,3430	0,2963	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	0
1	0,9928	0,9720	0,9393	0,8960	0,8438	0,7840	0,7407	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	1
2	0,9999	0,9990	0,9966	0,9920	0,9844	0,9730	0,9630	0,9751	0,9360	0,9089	0,8750	0,8336	0,7840	0,7254	0,6570	0,5781	0,4880	0,3859	0,2710	0,1426	2
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	1,0000	3
N = 4																					
0	0,8145	0,6561	0,5220	0,4096	0,3164	0,2401	0,1975	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	0
1	0,9860	0,9477	0,8905	0,8192	0,7383	0,6517	0,5926	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	1
2	0,9995	0,9963	0,9880	0,9728	0,9492	0,9163	0,8890	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	2
3	1,0000	0,9999	0,9995	0,9984	0,9961	0,9919	0,9877	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	3
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	1,0000	4
N = 5																					
0	0,7738	0,5905	0,4437	0,3277	0,2373	0,1681	0,1317	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	0
1	0,9774	0,9185	0,8352	0,7373	0,6328	0,5282	0,4609	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	1

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 10																					
0	0,5987	0,3487	0,1969	0,1074	0,0563	0,0282	0,0173	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	
1	0,9139	0,7361	0,5443	0,3758	0,2440	0,1493	0,1041	0,0860	0,0464	0,0233	0,0107	0,0045	0,0017	0,0005	0,0001	0,0000	0,0000	0,0000	0,0000	1	
2	0,9885	0,9298	0,8202	0,6778	0,5256	0,3828	0,2991	0,2616	0,1673	0,0996	0,0547	0,0274	0,0123	0,0048	0,0016	0,0004	0,0001	0,0000	0,0000	2	
3	0,9990	0,9872	0,9500	0,8791	0,7759	0,6496	0,5593	0,5138	0,3823	0,2660	0,1719	0,1020	0,0548	0,0260	0,0106	0,0035	0,0009	0,0001	0,0000	3	
4	0,9999	0,9984	0,9901	0,9672	0,9219	0,8497	0,7869	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	
5	1,0000	0,9999	0,9986	0,9936	0,9803	0,9527	0,9234	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	
6	1,0000	1,0000	0,9999	0,9991	0,9965	0,9894	0,9803	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	
7	1,0000	1,0000	1,0000	0,9999	0,9996	0,9984	0,9966	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	
8	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9996	0,9995	0,9933	0,9955	0,9893	0,9767	0,9536	0,9140	0,8507	0,7560	0,6242	0,4557	0,2639	0,0861	
9	1,0000	1,0000	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	
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	10	
N = 11																					
0	0,5688	0,3138	0,1673	0,0859	0,0422	0,0198	0,0116	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	
1	0,8981	0,6974	0,4922	0,3221	0,1971	0,1130	0,0752	0,0606	0,0302	0,0139	0,0059	0,0022	0,0007	0,0002	0,0000	0,0000	0,0000	0,0000	0,0000	1	
2	0,9848	0,9104	0,7788	0,6174	0,4552	0,3127	0,2341	0,2001	0,1189	0,0652	0,0327	0,0148	0,0059	0,0020	0,0006	0,0001	0,0000	0,0000	0,0000	2	
3	0,9984	0,9815	0,9306	0,8389	0,7133	0,5696	0,4726	0,4256	0,2963	0,1911	0,1133	0,0610	0,0293	0,0122	0,0043	0,0012	0,0002	0,0000	0,0000	3	
4	0,9999	0,9972	0,9841	0,9496	0,8854	0,7897	0,7110	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	
5	1,0000	0,9997	0,9973	0,9883	0,9657	0,9218	0,8779	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	
6	1,0000	1,0000	0,9997	0,9980	0,9924	0,9784	0,9614	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	
7	1,0000	1,0000	1,0000	0,9998	0,9988	0,9957	0,9912	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	
8	1,0000	1,0000	1,0000	1,0000	0,9999	0,9994	0,9986	0,9980	0,9941	0,9852	0,9673	0,9438	0,8811	0,7999	0,6873	0,5448	0,3826	0,2212	0,0896	0,0152	
9	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	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	

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 11																					
10	1,0000	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	10
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	1,0000	11
N = 12																					
0	0,5404	0,2824	0,1422	0,0687	0,0317	0,0138	0,0077	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	0
1	0,8816	0,6590	0,4435	0,2749	0,1584	0,0850	0,0540	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	1
2	0,9804	0,8891	0,7358	0,5583	0,3907	0,2528	0,1811	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	2
3	0,9978	0,9744	0,9078	0,7946	0,6488	0,4925	0,3931	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	3
4	0,9998	0,9957	0,9761	0,9274	0,8424	0,7237	0,6315	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	4
5	1,0000	0,9995	0,9954	0,9806	0,9456	0,8822	0,8223	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	5
6	1,0000	0,9999	0,9993	0,9961	0,9857	0,9614	0,9336	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	6
7	1,0000	1,0000	0,9999	0,9994	0,9972	0,9905	0,9812	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	7
8	1,0000	1,0000	1,0000	0,9999	0,9996	0,9983	0,9961	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	8
9	1,0000	1,0000	1,0000	1,0000	1,0000	0,9998	0,9995	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	9
10	1,0000	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	10
11	1,0000	1,0000	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	11
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	1,0000	12
N = 13																					
0	0,5133	0,2542	0,1209	0,0550	0,0238	0,0097	0,0051	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	0
1	0,8646	0,6213	0,3983	0,2336	0,1267	0,0637	0,0385	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	1
2	0,9755	0,8661	0,6920	0,5017	0,3326	0,2025	0,1387	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	2
3	0,9969	0,9658	0,8820	0,7473	0,5843	0,4206	0,3224	0,2783	0,1686	0,0929	0,0461	0,0203	0,0078	0,0025	0,0007	0,0001	0,0000	0,0000	0,0000	0,0000	3
4	0,9997	0,9935	0,9658	0,9009	0,7940	0,6543	0,5520	0,5005	0,3530	0,2279	0,1334	0,0698	0,0321	0,0126	0,0040	0,0010	0,0002	0,0000	0,0000	0,0000	4

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 13																					
5	1,0000	0,9991	0,9925	0,9700	0,9198	0,8346	0,7587	0,7159	0,5744	0,4268	0,2905	0,1788	0,0977	0,0462	0,0182	0,0056	0,0012	0,0002	0,0000	0,0000	
6	1,0000	0,9999	0,9987	0,9930	0,9757	0,9376	0,8965	0,8705	0,7712	0,6437	0,5000	0,3563	0,2288	0,1295	0,0624	0,0243	0,0070	0,0013	0,0001	0,0000	
7	1,0000	1,0000	0,9998	0,9988	0,9944	0,9818	0,9654	0,9538	0,9023	0,8212	0,7095	0,5732	0,4256	0,2841	0,1654	0,0802	0,0300	0,0075	0,0009	0,0000	
8	1,0000	1,0000	1,0000	0,9998	0,9990	0,9960	0,9912	0,9874	0,9679	0,9302	0,8666	0,7721	0,6470	0,4995	0,3457	0,2060	0,0991	0,0342	0,0065	0,0003	
9	1,0000	1,0000	1,0000	1,0000	0,9999	0,9993	0,9984	0,9975	0,9922	0,9797	0,9539	0,9071	0,8314	0,7217	0,5794	0,4157	0,2527	0,1180	0,0342	0,0031	
10	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9998	0,9997	0,9987	0,9959	0,9888	0,9371	0,9421	0,8868	0,7975	0,6674	0,4983	0,3080	0,1339	0,0245	
11	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9995	0,9983	0,9951	0,9874	0,9704	0,9363	0,8733	0,7664	0,6017	0,3787	0,1354	
12	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9996	0,9987	0,9963	0,9903	0,9762	0,9450	0,8791	0,7458	0,4867		
13	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		
N = 14																					
0	0,4877	0,2288	0,1028	0,0440	0,0178	0,0068	0,0034	0,0024	0,0008	0,0002	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0	
1	0,8470	0,5846	0,3567	0,1979	0,1010	0,0475	0,0274	0,0205	0,0081	0,0029	0,0009	0,0003	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	1	
2	0,9699	0,8416	0,6479	0,4481	0,2811	0,1608	0,1053	0,0839	0,0398	0,0170	0,0065	0,0022	0,0006	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	2	
3	0,9958	0,9559	0,8535	0,6982	0,5213	0,3552	0,2612	0,2205	0,1243	0,0632	0,0287	0,0114	0,0039	0,0011	0,0002	0,0000	0,0000	0,0000	0,0000	3	
4	0,9996	0,9908	0,9533	0,8702	0,7415	0,5842	0,4755	0,4227	0,2793	0,1672	0,0898	0,0426	0,0175	0,0060	0,0017	0,0003	0,0000	0,0000	0,0000	4	
5	1,0000	0,9985	0,9885	0,9561	0,8883	0,7805	0,6898	0,6405	0,4859	0,3373	0,2120	0,1189	0,0583	0,0243	0,0083	0,0022	0,0004	0,0000	0,0000	5	
6	1,0000	0,9998	0,9978	0,9884	0,9617	0,9067	0,8505	0,8164	0,6925	0,5461	0,3953	0,2586	0,1501	0,0753	0,0315	0,0103	0,0024	0,0003	0,0000	6	
7	1,0000	1,0000	0,9997	0,9976	0,9897	0,9785	0,9424	0,9247	0,8499	0,7414	0,6047	0,4539	0,3075	0,1836	0,0933	0,0383	0,0116	0,0022	0,0002	7	
8	1,0000	1,0000	1,0000	0,9996	0,9978	0,9917	0,9826	0,9757	0,9417	0,8811	0,7880	0,6627	0,5141	0,3595	0,2195	0,1117	0,0439	0,0115	0,0015	8	
9	1,0000	1,0000	1,0000	1,0000	0,9997	0,9983	0,9960	0,9940	0,9825	0,9574	0,9102	0,8328	0,7207	0,5773	0,4158	0,2585	0,1298	0,0467	0,0092	9	
10	1,0000	1,0000	1,0000	1,0000	1,0000	0,9998	0,9993	0,9989	0,9961	0,9886	0,9713	0,9368	0,8757	0,7795	0,6448	0,4787	0,3018	0,1465	0,0441	10	

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 16																					
0	0,4401	0,1853	0,0743	0,0281	0,0100	0,0033	0,0015	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	
1	0,8108	0,5147	0,2839	0,1407	0,0635	0,0261	0,0137	0,0098	0,0033	0,0010	0,0003	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	1	
2	0,9571	0,7892	0,5614	0,3518	0,1971	0,0994	0,0594	0,0451	0,0183	0,0066	0,0021	0,0006	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	2	
3	0,9930	0,9316	0,7899	0,5981	0,4050	0,2459	0,1660	0,1339	0,0651	0,0281	0,0106	0,0035	0,0009	0,0002	0,0000	0,0000	0,0000	0,0000	0,0000	3	
4	0,9991	0,9830	0,9209	0,7982	0,6302	0,4499	0,3391	0,2892	0,1666	0,0853	0,0384	0,0149	0,0049	0,0013	0,0003	0,0000	0,0000	0,0000	0,0000	4	
5	0,9999	0,9967	0,9765	0,9183	0,8103	0,6598	0,5469	0,4900	0,3288	0,1976	0,1051	0,0486	0,0191	0,0062	0,0016	0,0003	0,0000	0,0000	0,0000	5	
6	1,0000	0,9995	0,9944	0,9733	0,9204	0,8247	0,7374	0,6881	0,5272	0,3660	0,2272	0,1241	0,0583	0,0229	0,0071	0,0016	0,0002	0,0000	0,0000	6	
7	1,0000	0,9999	0,9989	0,9930	0,9729	0,9256	0,8735	0,8406	0,7161	0,5629	0,4018	0,2559	0,1423	0,0671	0,0257	0,0075	0,0015	0,00302	0,0000	0,0000	
8	1,0000	1,0000	0,9998	0,9985	0,9925	0,9743	0,9500	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	
9	1,0000	1,0000	1,0000	0,9998	0,9984	0,9929	0,9841	0,9771	0,9417	0,8759	0,7728	0,6340	0,4728	0,3119	0,1753	0,0796	0,0367	0,0056	0,0005	0,0000	
10	1,0000	1,0000	1,0000	1,0000	0,9997	0,9984	0,9960	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	
11	1,0000	1,0000	1,0000	1,0000	1,0000	0,9997	0,9992	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	
12	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	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	
13	1,0000	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	13	
14	1,0000	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	14	
15	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9997	0,9990	0,9967	0,9900	0,9719	0,9257	0,8147	0,5599	
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	16	
N = 17																					
0	0,4181	0,1668	0,0631	0,0225	0,0075	0,0023	0,0010	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	
1	0,7922	0,4818	0,2525	0,1182	0,0501	0,0193	0,0096	0,0067	0,0021	0,0006	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	1	
2	0,9497	0,7618	0,5198	0,3096	0,1637	0,0774	0,0442	0,0327	0,0123	0,0041	0,0012	0,0003	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	2	
3	0,9912	0,9174	0,7556	0,5489	0,3530	0,2019	0,1304	0,1028	0,0464	0,0184	0,0064	0,0019	0,0005	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	3	

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 17																					
4	0,9988	0,9779	0,9013	0,7582	0,5739	0,3887	0,2814	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	4
5	0,9999	0,9953	0,9681	0,8943	0,7653	0,5968	0,4777	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	5
6	1,0000	0,9992	0,9917	0,9623	0,8929	0,7752	0,6739	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	6
7	1,0000	0,9999	0,9983	0,9891	0,9598	0,8954	0,8281	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	7
8	1,0000	1,0000	0,9997	0,9974	0,9876	0,9597	0,9245	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	8
9	1,0000	1,0000	1,0000	0,9995	0,9969	0,9873	0,9727	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	9
10	1,0000	1,0000	1,0000	0,9999	0,9994	0,9968	0,9920	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	10
11	1,0000	1,0000	1,0000	1,0000	0,9999	0,9993	0,9981	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	11
12	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9997	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	12
13	1,0000	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	13
14	1,0000	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	14
15	1,0000	1,0000	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	15
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		16
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	1,0000	17
N = 18																					
0	0,3972	0,1501	0,0536	0,0180	0,0056	0,0016	0,0007	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	0
1	0,7735	0,4503	0,2241	0,0991	0,0395	0,0142	0,0068	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	1
2	0,9419	0,7338	0,4797	0,2713	0,1353	0,0600	0,0327	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	2
3	0,9891	0,9018	0,7202	0,5010	0,3057	0,1646	0,1017	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	3
4	0,9985	0,9718	0,8794	0,7164	0,5187	0,3327	0,2311	0,1886	0,0942	0,0411	0,0154	0,0049	0,0013	0,0003	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	4
5	0,9998	0,9936	0,9581	0,8671	0,7175	0,5344	0,4122	0,3550	0,2088	0,1077	0,0481	0,0183	0,0058	0,0014	0,0003	0,0000	0,0000	0,0000	0,0000	0,0000	5

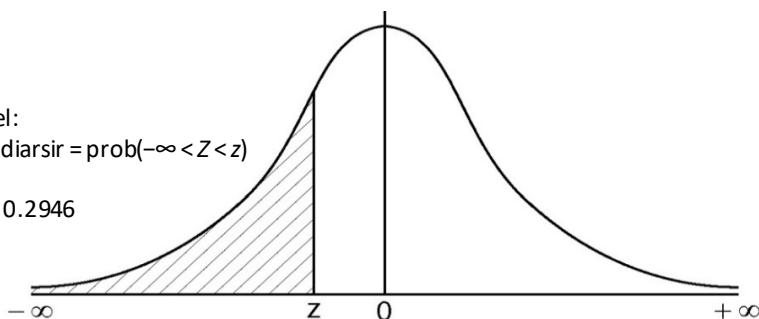
p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	0,35	0,40	0,45	0,50	0,55	0,60	0,65	0,70	0,75	0,80	0,85	0,90	0,95	p=
N = 18																					
6	1,0000	0,9988	0,9882	0,9487	0,8610	0,7217	0,6085	0,5491	0,3743	0,2258	0,1189	0,0537	0,0203	0,0062	0,0014	0,0002	0,0000	0,0000	0,0000	0,0000	
7	1,0000	0,9998	0,9973	0,9837	0,9431	0,8593	0,7767	0,7283	0,5634	0,3915	0,2403	0,1280	0,0576	0,0212	0,0061	0,0012	0,0002	0,0000	0,0000	0,0000	
8	1,0000	1,0000	0,9995	0,9957	0,9807	0,9404	0,8924	0,8609	0,7368	0,5778	0,4073	0,2527	0,1347	0,0597	0,0210	0,0054	0,0009	0,0001	0,0000	0,0000	
9	1,0000	1,0000	0,9999	0,9991	0,9946	0,9790	0,9567	0,9403	0,8653	0,7473	0,5927	0,4222	0,2632	0,1391	0,0596	0,0193	0,0043	0,0005	0,0000	0,0000	
10	1,0000	1,0000	1,0000	0,9998	0,9988	0,9939	0,9856	0,9788	0,9424	0,8720	0,7597	0,6085	0,4366	0,2717	0,1407	0,0569	0,0163	0,0027	0,0002	0,0000	
11	1,0000	1,0000	1,0000	1,0000	0,9998	0,9986	0,9961	0,9938	0,9797	0,9463	0,8811	0,7742	0,6257	0,4509	0,2783	0,1390	0,0513	0,0118	0,0012	0,0000	
12	1,0000	1,0000	1,0000	1,0000	1,0000	0,9997	0,9992	0,9986	0,9942	0,9817	0,9519	0,8923	0,7912	0,6450	0,4656	0,2825	0,1329	0,0419	0,0064	0,0002	
13	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9997	0,9987	0,9951	0,9846	0,9589	0,9058	0,8114	0,6673	0,4813	0,2836	0,1206	0,0282	0,0015	
14	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9998	0,9990	0,9962	0,9880	0,9672	0,9217	0,8354	0,6943	0,4990	0,2798	0,0982	0,0109	14	
15	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9993	0,9975	0,9918	0,9764	0,9400	0,8647	0,7287	0,5203	0,2662	0,0581	
16	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9997	0,9987	0,9954	0,9858	0,9605	0,9009	0,7759	0,5497	0,2265	16	
17	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9996	0,9984	0,9944	0,9820	0,9464	0,8499	0,6028		17	
18	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	
N = 19																					
0	0,3774	0,1351	0,0456	0,0144	0,0042	0,0011	0,0005	0,0003	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0	
1	0,7547	0,4203	0,1985	0,0829	0,0310	0,0104	0,0047	0,0031	0,0008	0,0002	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	1	
2	0,9335	0,7054	0,4413	0,2369	0,1113	0,0462	0,0240	0,0170	0,0055	0,0015	0,0004	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	2	
3	0,9868	0,8850	0,6841	0,4551	0,2631	0,1332	0,0787	0,0591	0,0230	0,0077	0,0022	0,0005	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	3	
4	0,9980	0,9648	0,8556	0,6733	0,4654	0,2822	0,1879	0,1500	0,0696	0,0280	0,0096	0,0028	0,0006	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	4	
5	0,9998	0,9914	0,9463	0,8369	0,6678	0,4739	0,3519	0,2968	0,1629	0,0777	0,0318	0,0109	0,0031	0,0007	0,0001	0,0000	0,0000	0,0000	0,0000	5	
6	1,0000	0,9983	0,9837	0,9324	0,8251	0,6655	0,5431	0,4812	0,3081	0,1727	0,0835	0,0342	0,0116	0,0031	0,0006	0,0001	0,0000	0,0000	0,0000	6	
7	1,0000	0,9997	0,9959	0,9767	0,9225	0,8180	0,7207	0,6656	0,4878	0,3169	0,1796	0,0871	0,0352	0,0114	0,0028	0,0005	0,0000	0,0000	0,0000	7	

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 19																					
8	1,0000	1,0000	0,9992	0,9933	0,9713	0,9161	0,8539	0,8145	0,6675	0,4940	0,3238	0,1841	0,0885	0,0347	0,0105	0,0023	0,0003	0,0000	0,0000	0,0000	
9	1,0000	1,0000	0,9999	0,9984	0,9911	0,9674	0,9352	0,9125	0,8139	0,6710	0,5000	0,3290	0,1861	0,0875	0,0326	0,0089	0,0016	0,0001	0,0000	0,0000	
10	1,0000	1,0000	1,0000	0,9997	0,9977	0,9895	0,9759	0,9653	0,9115	0,8159	0,6762	0,5060	0,3325	0,1855	0,0839	0,0287	0,0067	0,0008	0,0000	0,0000	
11	1,0000	1,0000	1,0000	1,0000	0,9995	0,9972	0,9926	0,9886	0,9648	0,9129	0,8204	0,6831	0,5122	0,3344	0,1820	0,0775	0,0233	0,0041	0,0003	0,0000	
12	1,0000	1,0000	1,0000	1,0000	0,9999	0,9994	0,9981	0,9969	0,9884	0,9658	0,9165	0,8273	0,6919	0,5188	0,3345	0,1749	0,0676	0,0163	0,0017	0,0000	
13	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9996	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	
14	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9999	0,9994	0,9972	0,9904	0,9720	0,9304	0,8500	0,7178	0,5436	0,3267	0,1444	0,0352	0,0020	
15	1,0000	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	
16	1,0000	1,0000	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	
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	0,9690	0,9171	0,8015	0,5797	0,2453	0,0000	
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	0,0000	0,0000	
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	1,0000	
N = 20																					
0	0,3585	0,1216	0,0388	0,0115	0,0032	0,0008	0,0003	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	
1	0,7358	0,3917	0,1756	0,0692	0,0243	0,0076	0,0033	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	
2	0,9245	0,6769	0,4049	0,2061	0,0913	0,0355	0,0176	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	
3	0,9841	0,8670	0,6477	0,4114	0,2252	0,1071	0,0604	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	
4	0,9974	0,9568	0,8298	0,6296	0,4148	0,2357	0,1515	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	
5	0,9997	0,9887	0,9327	0,8042	0,6172	0,4164	0,2972	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	
6	1,0000	0,9976	0,9781	0,9133	0,7858	0,6080	0,4793	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	
7	1,0000	0,9996	0,9941	0,9679	0,8982	0,7723	0,6615	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	

p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	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	p=
N = 24																					
0	0,2920	0,0798	0,0202	0,0047	0,0010	0,0002	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0	
1	0,6608	0,2925	0,1059	0,0331	0,0090	0,0022	0,0008	0,0005	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	1	
2	0,8841	0,5643	0,2798	0,1145	0,0398	0,0119	0,0049	0,0030	0,0007	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	2	
3	0,9702	0,7857	0,5049	0,2639	0,1150	0,0424	0,0199	0,0133	0,0035	0,0008	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	3	
4	0,9940	0,9149	0,7134	0,4599	0,2467	0,1111	0,0594	0,0422	0,0135	0,0036	0,0008	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	4	
5	0,9990	0,9723	0,8606	0,6559	0,4222	0,2288	0,1383	0,1044	0,0400	0,0127	0,0033	0,0007	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	5	
6	0,9999	0,9923	0,9428	0,8111	0,6074	0,3886	0,2632	0,2106	0,0960	0,0364	0,0113	0,0028	0,0005	0,0001	0,0000	0,0000	0,0000	0,0000	0,0000	6	
7	1,0000	0,9983	0,9801	0,9108	0,7662	0,5647	0,4238	0,3575	0,1920	0,0863	0,0320	0,0095	0,0022	0,0004	0,0000	0,0000	0,0000	0,0000	0,0000	7	
8	1,0000	0,9997	0,9941	0,9638	0,8787	0,7250	0,5945	0,5257	0,3279	0,1730	0,0758	0,0269	0,0075	0,0016	0,0002	0,0000	0,0000	0,0000	0,0000	8	
9	1,0000	1,0000	0,9985	0,9874	0,9453	0,8472	0,7462	0,6867	0,4891	0,2991	0,1537	0,0648	0,0217	0,0055	0,0010	0,0001	0,0000	0,0000	0,0000	9	
10	1,0000	1,0000	0,9997	0,9962	0,9787	0,9358	0,8599	0,8167	0,6502	0,4539	0,2706	0,1341	0,0535	0,0164	0,0036	0,0005	0,0000	0,0000	0,0000	10	
11	1,0000	1,0000	0,9999	0,9990	0,9928	0,9686	0,9323	0,9058	0,7870	0,6151	0,4194	0,2420	0,1143	0,0423	0,0115	0,0021	0,0002	0,0000	0,0000	11	
12	1,0000	1,0000	1,0000	0,9998	0,9979	0,9885	0,9716	0,9578	0,8857	0,7580	0,5806	0,3849	0,2130	0,0942	0,0314	0,0072	9,0010	0,0001	0,0000	12	
13	1,0000	1,0000	1,0000	1,0000	0,9995	0,9964	0,9897	0,9836	0,9465	0,8659	0,7294	0,5461	0,3498	0,1833	0,0742	0,0213	0,0038	0,0003	0,0000	13	
14	1,0000	1,0000	1,0000	1,0000	0,9999	0,9990	0,9968	0,9945	0,9783	0,9352	0,8463	0,7009	0,5109	0,3134	0,1528	0,0547	0,0126	0,0015	0,0001	14	
15	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9991	0,9984	0,9925	0,9731	0,9242	0,8270	0,6721	0,4743	0,2750	0,1213	0,0362	0,0059	0,0003	0,0000	15
16	1,0000	1,0000	1,0000	1,0000	1,0000	0,9998	0,9996	0,9978	0,9905	0,9680	0,9137	0,8081	0,6425	0,4353	0,2338	0,0892	0,0199	0,0017	0,0000	16	
17	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9995	0,9972	0,9887	0,9636	0,9040	0,7895	0,6114	0,3926	0,1889	0,0572	0,0075	0,0001	17	
18	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9993	0,9967	0,9873	0,9600	0,8956	0,7712	0,5778	0,3441	0,1394	0,0277	0,0010	18	
19	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9992	0,9964	0,9866	0,9578	0,8889	0,7534	0,5401	0,2866	0,0851	0,0060	19
20	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9992	0,9965	0,9867	0,9576	0,8850	0,7361	0,4951	0,2143	0,0298	20
21	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9993	0,9970	0,9881	0,9602	0,8855	0,7202	0,4357	0,1159	21	

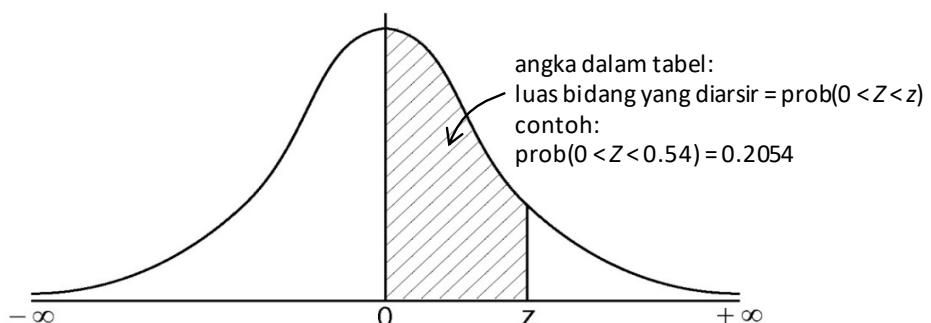
p=	0,05	0,10	0,15	0,20	0,25	0,30	1/3	0,35	0,40	0,45	0,50	0,55	0,60	0,65	0,70	0,75	0,80	0,85	0,90	0,95	p=
N = 24																					
22	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9999	0,9996	0,9978	0,9910	0,9669	0,8941	0,7075	0,3392	22	
23	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	0,9998	0,9990	0,9953	0,9798	0,9202	0,7080	23		
24	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	1,000	1,0000	1,0000	1,0000	24	

Luas di bawah kurva pdf distribusi normal dari $-\infty$ s.d. z



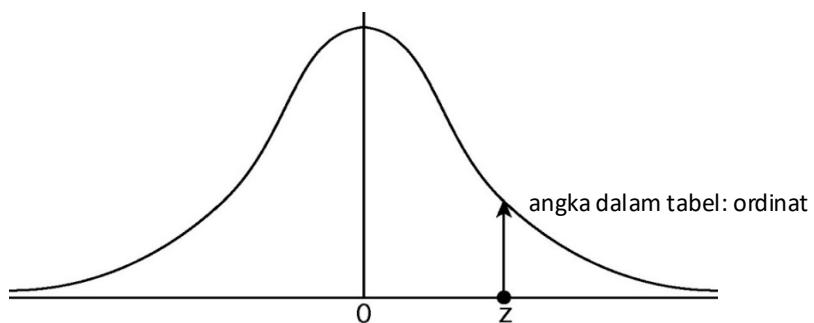
z	0	1	2	3	4	5	6	7	8	9
-0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
-3.6	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
-3.7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
-3.8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
-3.9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Luas di bawah kurva pdf distribusi normal dari 0 s.d. z



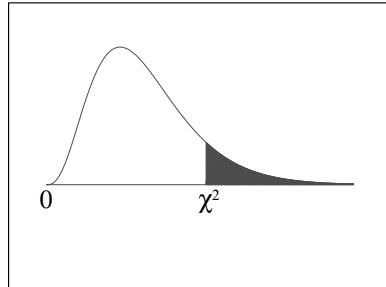
z	0	1	2	3	4	5	6	7	8	9
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3.1	0.4990	0.4991	0.4991	0.4991	0.4992	0.4992	0.4992	0.4992	0.4993	0.4993
3.2	0.4993	0.4993	0.4994	0.4994	0.4994	0.4994	0.4994	0.4995	0.4995	0.4995
3.3	0.4995	0.4995	0.4995	0.4996	0.4996	0.4996	0.4996	0.4996	0.4996	0.4997
3.4	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4998
3.5	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998
3.6	0.4998	0.4998	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.7	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.8	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.9	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000

Ordinat kurva pdf distribusi normal standar



z	0	1	2	3	4	5	6	7	8	9
0.0	0.3989	0.3989	0.3989	0.3988	0.3986	0.3984	0.3982	0.3980	0.3977	0.3973
0.1	0.3970	0.3965	0.3961	0.3956	0.3951	0.3945	0.3939	0.3932	0.3925	0.3918
0.2	0.3910	0.3902	0.3894	0.3885	0.3876	0.3867	0.3857	0.3847	0.3836	0.3825
0.3	0.3814	0.3802	0.3790	0.3778	0.3765	0.3752	0.3739	0.3725	0.3712	0.3697
0.4	0.3683	0.3668	0.3653	0.3637	0.3621	0.3605	0.3589	0.3572	0.3555	0.3538
0.5	0.3521	0.3503	0.3485	0.3467	0.3448	0.3429	0.3410	0.3391	0.3372	0.3352
0.6	0.3332	0.3312	0.3292	0.3271	0.3251	0.3230	0.3209	0.3187	0.3166	0.3144
0.7	0.3123	0.3101	0.3079	0.3056	0.3034	0.3011	0.2989	0.2966	0.2943	0.2920
0.8	0.2897	0.2874	0.2850	0.2827	0.2803	0.2780	0.2756	0.2732	0.2709	0.2685
0.9	0.2661	0.2637	0.2613	0.2589	0.2565	0.2541	0.2516	0.2492	0.2468	0.2444
1.0	0.2420	0.2396	0.2371	0.2347	0.2323	0.2299	0.2275	0.2251	0.2227	0.2203
1.1	0.2179	0.2155	0.2131	0.2107	0.2083	0.2059	0.2036	0.2012	0.1989	0.1965
1.2	0.1942	0.1919	0.1895	0.1872	0.1849	0.1826	0.1804	0.1781	0.1758	0.1736
1.3	0.1714	0.1691	0.1669	0.1647	0.1626	0.1604	0.1582	0.1561	0.1539	0.1518
1.4	0.1497	0.1476	0.1456	0.1435	0.1415	0.1394	0.1374	0.1354	0.1334	0.1315
1.5	0.1295	0.1276	0.1257	0.1238	0.1219	0.1200	0.1182	0.1163	0.1145	0.1127
1.6	0.1109	0.1092	0.1074	0.1057	0.1040	0.1023	0.1006	0.0989	0.0973	0.0957
1.7	0.0940	0.0925	0.0909	0.0893	0.0878	0.0863	0.0848	0.0833	0.0818	0.0804
1.8	0.0790	0.0775	0.0761	0.0748	0.0734	0.0721	0.0707	0.0694	0.0681	0.0669
1.9	0.0656	0.0644	0.0632	0.0620	0.0608	0.0596	0.0584	0.0573	0.0562	0.0551
2.0	0.0540	0.0529	0.0519	0.0508	0.0498	0.0488	0.0478	0.0468	0.0459	0.0449
2.1	0.0440	0.0431	0.0422	0.0413	0.0404	0.0396	0.0387	0.0379	0.0371	0.0363
2.2	0.0355	0.0347	0.0339	0.0332	0.0325	0.0317	0.0310	0.0303	0.0297	0.0290
2.3	0.0283	0.0277	0.0270	0.0264	0.0258	0.0252	0.0246	0.0241	0.0235	0.0229
2.4	0.0224	0.0219	0.0213	0.0208	0.0203	0.0198	0.0194	0.0189	0.0184	0.0180
2.5	0.0175	0.0171	0.0167	0.0163	0.0158	0.0154	0.0151	0.0147	0.0143	0.0139
2.6	0.0136	0.0132	0.0129	0.0126	0.0122	0.0119	0.0116	0.0113	0.0110	0.0107
2.7	0.0104	0.0101	0.0099	0.0096	0.0093	0.0091	0.0088	0.0086	0.0084	0.0081
2.8	0.0079	0.0077	0.0075	0.0073	0.0071	0.0069	0.0067	0.0065	0.0063	0.0061
2.9	0.0060	0.0058	0.0056	0.0055	0.0053	0.0051	0.0050	0.0048	0.0047	0.0046
3.0	0.0044	0.0043	0.0042	0.0040	0.0039	0.0038	0.0037	0.0036	0.0035	0.0034
3.1	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026	0.0025	0.0025
3.2	0.0024	0.0023	0.0022	0.0022	0.0021	0.0020	0.0020	0.0019	0.0018	0.0018
3.3	0.0017	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014	0.0013	0.0013
3.4	0.0012	0.0012	0.0012	0.0011	0.0011	0.0010	0.0010	0.0010	0.0009	0.0009
3.5	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007	0.0007	0.0007	0.0006
3.6	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004
3.7	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003	0.0003	0.0003
3.8	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002
3.9	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001

Chi-Square Distribution Table



The shaded area is equal to α for $\chi^2 = \chi_{\alpha}^2$.

df	$\chi^2_{.995}$	$\chi^2_{.990}$	$\chi^2_{.975}$	$\chi^2_{.950}$	$\chi^2_{.900}$	$\chi^2_{.100}$	$\chi^2_{.050}$	$\chi^2_{.025}$	$\chi^2_{.010}$	$\chi^2_{.005}$
1	0.000	0.000	0.001	0.004	0.016	2.706	3.841	5.024	6.635	7.879
2	0.010	0.020	0.051	0.103	0.211	4.605	5.991	7.378	9.210	10.597
3	0.072	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345	12.838
4	0.207	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277	14.860
5	0.412	0.554	0.831	1.145	1.610	9.236	11.070	12.833	15.086	16.750
6	0.676	0.872	1.237	1.635	2.204	10.645	12.592	14.449	16.812	18.548
7	0.989	1.239	1.690	2.167	2.833	12.017	14.067	16.013	18.475	20.278
8	1.344	1.646	2.180	2.733	3.490	13.362	15.507	17.535	20.090	21.955
9	1.735	2.088	2.700	3.325	4.168	14.684	16.919	19.023	21.666	23.589
10	2.156	2.558	3.247	3.940	4.865	15.987	18.307	20.483	23.209	25.188
11	2.603	3.053	3.816	4.575	5.578	17.275	19.675	21.920	24.725	26.757
12	3.074	3.571	4.404	5.226	6.304	18.549	21.026	23.337	26.217	28.300
13	3.565	4.107	5.009	5.892	7.042	19.812	22.362	24.736	27.688	29.819
14	4.075	4.660	5.629	6.571	7.790	21.064	23.685	26.119	29.141	31.319
15	4.601	5.229	6.262	7.261	8.547	22.307	24.996	27.488	30.578	32.801
16	5.142	5.812	6.908	7.962	9.312	23.542	26.296	28.845	32.000	34.267
17	5.697	6.408	7.564	8.672	10.085	24.769	27.587	30.191	33.409	35.718
18	6.265	7.015	8.231	9.390	10.865	25.989	28.869	31.526	34.805	37.156
19	6.844	7.633	8.907	10.117	11.651	27.204	30.144	32.852	36.191	38.582
20	7.434	8.260	9.591	10.851	12.443	28.412	31.410	34.170	37.566	39.997
21	8.034	8.897	10.283	11.591	13.240	29.615	32.671	35.479	38.932	41.401
22	8.643	9.542	10.982	12.338	14.041	30.813	33.924	36.781	40.289	42.796
23	9.260	10.196	11.689	13.091	14.848	32.007	35.172	38.076	41.638	44.181
24	9.886	10.856	12.401	13.848	15.659	33.196	36.415	39.364	42.980	45.559
25	10.520	11.524	13.120	14.611	16.473	34.382	37.652	40.646	44.314	46.928
26	11.160	12.198	13.844	15.379	17.292	35.563	38.885	41.923	45.642	48.290
27	11.808	12.879	14.573	16.151	18.114	36.741	40.113	43.195	46.963	49.645
28	12.461	13.565	15.308	16.928	18.939	37.916	41.337	44.461	48.278	50.993
29	13.121	14.256	16.047	17.708	19.768	39.087	42.557	45.722	49.588	52.336
30	13.787	14.953	16.791	18.493	20.599	40.256	43.773	46.979	50.892	53.672
40	20.707	22.164	24.433	26.509	29.051	51.805	55.758	59.342	63.691	66.766
50	27.991	29.707	32.357	34.764	37.689	63.167	67.505	71.420	76.154	79.490
60	35.534	37.485	40.482	43.188	46.459	74.397	79.082	83.298	88.379	91.952
70	43.275	45.442	48.758	51.739	55.329	85.527	90.531	95.023	100.425	104.215
80	51.172	53.540	57.153	60.391	64.278	96.578	101.879	106.629	112.329	116.321
90	59.196	61.754	65.647	69.126	73.291	107.565	113.145	118.136	124.116	128.299
100	67.328	70.065	74.222	77.929	82.358	118.498	124.342	129.561	135.807	140.169

Critical values of chi-square (right tail)

Degrees of freedom (df)	Significance level (α)							
	.99	.975	.95	.9	.1	.05	.025	.01
1	-----	0.001	0.004	0.016	2.706	3.841	5.024	6.635
2	0.020	0.051	0.103	0.211	4.605	5.991	7.378	9.210
3	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345
4	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277
5	0.554	0.831	1.145	1.610	9.236	11.070	12.833	15.086
6	0.872	1.237	1.635	2.204	10.645	12.592	14.449	16.812
7	1.239	1.690	2.167	2.833	12.017	14.067	16.013	18.475
8	1.646	2.180	2.733	3.490	13.362	15.507	17.535	20.090
9	2.088	2.700	3.325	4.168	14.684	16.919	19.023	21.666
10	2.558	3.247	3.940	4.865	15.987	18.307	20.483	23.209
11	3.053	3.816	4.575	5.578	17.275	19.675	21.920	24.725
12	3.571	4.404	5.226	6.304	18.549	21.026	23.337	26.217
13	4.107	5.009	5.892	7.042	19.812	22.362	24.736	27.688
14	4.660	5.629	6.571	7.790	21.064	23.685	26.119	29.141
15	5.229	6.262	7.261	8.547	22.307	24.996	27.488	30.578
16	5.812	6.908	7.962	9.312	23.542	26.296	28.845	32.000
17	6.408	7.564	8.672	10.085	24.769	27.587	30.191	33.409
18	7.015	8.231	9.390	10.865	25.989	28.869	31.526	34.805
19	7.633	8.907	10.117	11.651	27.204	30.144	32.852	36.191
20	8.260	9.591	10.851	12.443	28.412	31.410	34.170	37.566
21	8.897	10.283	11.591	13.240	29.615	32.671	35.479	38.932
22	9.542	10.982	12.338	14.041	30.813	33.924	36.781	40.289
23	10.196	11.689	13.091	14.848	32.007	35.172	38.076	41.638
24	10.856	12.401	13.848	15.659	33.196	36.415	39.364	42.980
25	11.524	13.120	14.611	16.473	34.382	37.652	40.646	44.314
26	12.198	13.844	15.379	17.292	35.563	38.885	41.923	45.642
27	12.879	14.573	16.151	18.114	36.741	40.113	43.195	46.963
28	13.565	15.308	16.928	18.939	37.916	41.337	44.461	48.278
29	14.256	16.047	17.708	19.768	39.087	42.557	45.722	49.588
30	14.953	16.791	18.493	20.599	40.256	43.773	46.979	50.892
40	22.164	24.433	26.509	29.051	51.805	55.758	59.342	63.691
50	29.707	32.357	34.764	37.689	63.167	67.505	71.420	76.154
60	37.485	40.482	43.188	46.459	74.397	79.082	83.298	88.379
70	45.442	48.758	51.739	55.329	85.527	90.531	95.023	100.425
80	53.540	57.153	60.391	64.278	96.578	101.879	106.629	112.329
100	61.754	65.647	69.126	73.291	107.565	113.145	118.136	124.116
1000	70.065	74.222	77.929	82.358	118.498	124.342	129.561	135.807

Critical Values for the Runs Test
Taken from Zar, 1981 Table B.28

n_1	n_2	$\alpha(2)$: $\alpha(1)$:	0.50	0.20	0.10	0.05	0.02	0.01	0.005	0.002	0.001	0.0005
2	3		2 _p	4	-	5	-	7 _p	-	7 _p	-	7 _p
4	5		2 _p	5	-	7 _p						
5	6		2 _p	2	-	7 _p						
6	7		2 _p	-	-	7 _p						
8	9		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
9	10		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
10	11		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
11	12		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
13	14		3 _p	-	2 _p	-	2 _p	-	2 _p	-	7 _p	-
14	15		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
15	16		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
16	17		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
18	19		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
19	20		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
20	21		3 _p	-	2 _p	-	2 _p	-	7 _p	-	7 _p	-
21	22		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
22	23		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
24	25		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
25	26		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
26	27		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
27	28		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
28	29		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
29	30		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
3	4		2 _p	6	2 _p	6	-	7 _p	-	7 _p	-	7 _p
4	5		3 _p	6	2 _p	7	-	7 _p	-	7 _p	-	7 _p
5	6		3 _p	7	2 _p	7	-	7 _p	-	7 _p	-	7 _p
6	7		3 _p	7	2 _p	2 _p	-	7 _p	-	7 _p	-	7 _p
7	8		3 _p	7	2 _p	2 _p	-	7 _p	-	7 _p	-	7 _p
8	9		4 _p	7	3 _p	-	2 _p	-	7 _p	-	7 _p	-
9	10		4 _p	7	3 _p	-	2 _p	-	7 _p	-	7 _p	-
10	11		4 _p	7	3 _p	-	2 _p	-	7 _p	-	7 _p	-
11	12		4 _p	7	3 _p	-	2 _p	-	7 _p	-	7 _p	-
12	13		4 _p	7	3 _p	-	2 _p	-	7 _p	-	7 _p	-
13	14		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
14	15		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
15	16		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
16	17		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
17	18		4 _p	-	3 _p	-	2 _p	-	7 _p	-	7 _p	-
18	19		4 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
19	20		4 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
20	21		4 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
21	22		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
22	23		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
23	24		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
24	25		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
25	26		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
26	27		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
27	28		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
28	29		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
29	30		5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p	-
3	4		3 _p	7	2 _p	8	2 _p	8	-	7 _p	-	7 _p
4	5		3 _p	6	3 _p	8	2 _p	9	-	7 _p	-	7 _p
5	6		4 _p	8	3 _p	9	3 _p	9	2 _p	-	7 _p	-
6	7		4 _p	8	3 _p	9	3 _p	9	2 _p	-	7 _p	-
7	8		4 _p	8	3 _p	9	3 _p	9	2 _p	-	7 _p	-
8	9		4 _p	8	3 _p	9	3 _p	9	2 _p	-	7 _p	-
9	10		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
10	11		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
11	12		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
12	13		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-

n_1	n_2	$\alpha(2)$: $\alpha(1)$:	0.50	0.20	0.10	0.05	0.02	0.01	0.005	0.002	0.001	0.0005
14		5 _p	9	4 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p
15		6 _p	-	4 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p
16		6 _p	-	5 _p	-	4 _p	-	4 _p	-	2 _p	-	7 _p
17		6 _p	-	5 _p	-	4 _p	-	4 _p	-	2 _p	-	7 _p
18		6 _p	-	5 _p	-	4 _p	-	4 _p	-	2 _p	-	7 _p
19		6 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p
20		6 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p
21		6 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p
22		6 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p
23		6 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p	-	7 _p
24		6 _p	-	5 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p
25		6 _p	-	5 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p
26		6 _p	-	5 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p
27		6 _p	-	5 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p
28		6 _p	-	6 _p	-	5 _p	-	4 _p	-	3 _p	-	2 _p
29	30		6 _p	-	7 _p	-	6 _p	-	5 _p	-	4 _p	-
3	4		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
4	5		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
5	6		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
6	7		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
7	8		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
8	9		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
9	10		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
10	11		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
11	12		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
12	13		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
13	30		5 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
14	15		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
15	16		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
16	17		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
17	18		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
18	19		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
19	20		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
20	21		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
21	22		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
22	23		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
23	24		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
24	25		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
25	26		6 _p	9	4 _p	9	3 _p	-	2 _p	-	7 _p	-
26	27		6 _p	9	4 _p	9	3 _p	-	2 _p	-		

Critical Values for the Runs Test (cont.)

Taken from Zar, 1981 Table B.28

n_1	n_2	$\alpha(2)$: 0.50	0.20	0.10	0.05	0.02	0.01	0.005	0.0025	0.001	0.0005
		$\alpha(1)$: 0.25	0.10	0.05	0.025	0.01	0.005	0.0025	0.001	0.0005	
28		9, 13	8, -	/, -	b, -	6, -	5, -	5, -	4, -	4, -	
29		9, 13	8, -	7, -	6, -	6, -	5, -	5, -	4, -	4, -	
6	30	9, 13	8, -	7, -	6, -	6, -	5, -	5, -	4, -	4, -	
7	7	6, 10	5, 11	4, 12	3, 13	3, 13	3, 13	2, 14	2, 14	-	-
8		6, 11	5, 12	4, 13	4, 13	3, 14	3, 14	3, 14	2, 15	2, 15	
9		7, 11	5, 12	5, 13	4, 14	4, 14	3, 15	3, 15	2, 15	2, -	
10		7, 12	6, 13	5, 13	5, 14	4, 15	3, 15	3, 15	3, -	2, -	
11		7, 12	6, 13	5, 13	5, 14	4, 15	3, 15	3, 15	3, -	2, -	
12		8, 12	6, 13	6, 14	5, 14	4, 15	4, -	3, -	3, -	3, -	
13		8, 12	7, 14	6, 14	5, 15	5, -	4, -	3, -	3, -	3, -	
14		8, 13	7, 14	6, 14	5, 15	5, -	4, -	3, -	3, -	3, -	
15		8, 13	7, 14	6, 15	6, 15	5, -	4, -	4, -	3, -	3, -	
16		8, 13	7, 14	6, 15	6, 15	6, -	5, -	4, -	3, -	3, -	
17		9, 13	7, 14	7, 15	6, -	5, -	5, -	4, -	4, -	3, -	
18		9, 14	7, 14	7, 15	6, -	5, -	5, -	4, -	4, -	4, -	
19		9, 14	8, 15	7, 15	6, -	6, -	5, -	5, -	4, -	4, -	
20		9, 14	8, 15	7, -	6, -	5, -	5, -	5, -	4, -	4, -	
21		9, 14	8, 15	7, -	7, -	6, -	5, -	5, -	4, -	4, -	
22		9, 14	8, 15	7, -	7, -	6, -	5, -	5, -	4, -	4, -	
7	23	10, 14	8, 15	8, -	7, -	6, -	5, -	5, -	5, -	4, -	
7	24	10, 14	8, 15	8, -	7, -	6, -	5, -	5, -	5, -	4, -	
25		10, 14	8, -	8, -	7, -	6, -	6, -	5, -	5, -	4, -	
26		10, 14	8, -	8, -	7, -	6, -	6, -	5, -	5, -	4, -	
27		10, 14	9, -	8, -	7, -	6, -	6, -	6, -	5, -	5, -	
28		10, 14	9, -	8, -	7, -	6, -	6, -	6, -	5, -	5, -	
29		10, 14	9, -	8, -	8, -	7, -	6, -	6, -	5, -	5, -	
7	30	10, 14	9, -	8, -	8, -	7, -	6, -	6, -	5, -	5, -	
8	8	7, 11	5, 13	5, 13	4, 14	4, 14	3, 15	3, 15	2, 16	2, 16	
9		7, 10	6, 15	5, 14	5, 14	4, 15	3, 15	3, 16	3, 16	2, 17	
10		7, 12	6, 15	6, 14	5, 15	4, 15	4, 16	3, 16	3, 17	3, 17	
11		8, 13	7, 14	6, 15	5, 15	5, 16	4, 16	4, 17	3, 17	3, -	
12		8, 13	7, 14	6, 15	6, 16	5, 16	4, 17	4, 17	3, -	3, -	
13		8, 13	7, 15	6, 15	6, 16	5, 17	5, 17	4, 17	4, -	3, -	
14		9, 14	7, 15	7, 16	6, 16	5, 17	5, 17	4, -	4, -	3, -	
15		9, 14	8, 15	7, 16	6, 16	5, 17	5, -	5, -	4, -	4, -	
16		9, 14	8, 15	7, 16	6, 17	5, -	5, -	4, -	4, -	4, -	
17		9, 14	8, 16	7, 16	7, 17	6, -	5, -	5, -	4, -	4, -	
18		10, 14	8, 16	8, 16	7, 17	6, -	5, -	4, -	4, -	4, -	
20		10, 15	9, 16	8, 17	7, 17	6, -	5, -	5, -	4, -	4, -	
21		10, 15	9, 16	8, 17	7, -	6, -	6, -	5, -	5, -	4, -	
22		10, 15	9, 16	8, 17	8, -	7, -	6, -	6, -	5, -	5, -	
23		10, 15	9, 16	8, 17	8, -	7, -	6, -	6, -	5, -	5, -	
24		11, 16	9, 16	8, 17	8, -	7, -	6, -	6, -	5, -	5, -	
25		11, 16	9, 17	8, 17	8, -	7, -	6, -	6, -	5, -	5, -	
26		11, 16	10, 17	9, -	8, -	7, -	6, -	6, -	5, -	5, -	
27		11, 16	10, 17	9, -	8, -	7, -	6, -	6, -	5, -	5, -	
28		11, 16	10, 17	9, -	8, -	8, -	7, -	6, -	6, -	5, -	
29		11, 16	10, 17	9, -	8, -	8, -	7, -	6, -	6, -	5, -	
8	30	11, 16	10, 17	9, -	8, -	8, -	7, -	6, -	6, -	5, -	
9	9	8, 12	6, 14	6, 14	5, 15	4, 16	4, 16	3, 17	3, 17	3, 17	
10		8, 13	7, 14	6, 15	5, 16	5, 16	4, 17	4, 17	3, 18	3, 18	
11		8, 13	7, 15	6, 15	6, 16	5, 17	5, 17	4, 18	3, 18	3, 19	
12		9, 14	7, 15	7, 16	6, 16	5, 17	5, 17	4, 18	4, 19	3, 19	
13		9, 14	8, 15	7, 16	6, 16	5, 18	5, 18	4, 18	4, 19	3, 19	
14		9, 14	8, 16	8, 16	7, 17	6, 18	5, 18	5, 19	4, 19	4, -	
15		10, 15	8, 16	8, 17	7, 18	6, 18	5, 19	5, 19	4, -	4, -	
16		10, 15	9, 16	8, 17	7, 18	6, 18	5, 19	5, 19	4, -	4, -	
17		10, 15	9, 17	8, 17	7, 18	6, 19	5, 19	5, -	4, -	4, -	
18		10, 16	9, 17	8, 18	7, 19	6, 19	5, -	5, -	4, -	4, -	
19		11, 16	9, 17	8, 18	8, 18	7, 19	6, -	5, -	5, -	5, -	
20		11, 16	10, 17	9, -	8, -	8, -	7, -	6, -	6, -	5, -	
21		11, 16	10, 17	9, -	8, -	8, -	7, -	6, -	6, -	5, -	
22		11, 16	10, 18	9, 18	8, 19	7, -	6, -	6, -	5, -	5, -	
23		12, 16	10, 18	9, 18	8, 19	8, -	7, -	6, -	6, -	5, -	

n_1	n_2	$\alpha(2)$: 0.50	0.20	0.10	0.05	0.02	0.01	0.005	0.0025	0.001	0.0005
		$\alpha(1)$: 0.25	0.10	0.05	0.025	0.01	0.005	0.0025	0.001	0.0005	
24		12, 17	10, 18	9, 18	9, 19	8, -	7, -	7, -	6, -	6, -	
25		12, 17	10, 18	10, 19	9, 19	8, -	7, -	7, -	6, -	6, -	
26		12, 17	10, 18	10, 19	10, 19	9, -	8, -	7, -	6, -	6, -	
27		12, 17	11, 18	10, 19	10, 19	9, -	8, -	7, -	6, -	6, -	
28		12, 17	11, 18	11, 18	10, 19	9, -	8, -	7, -	6, -	6, -	
29		12, 17	11, 19	10, 18	9, 19	9, -	8, -	7, -	6, -	6, -	
30		10, 30	14, 18	12, 20	11, 20	10, 21	9, -	9, -	8, -	7, -	
10	30	14, 18	12, 20	11, 20	10, 21	9, -	9, -	8, -	7, -	7, -	
11	11	9, 15	8, 16	7, 17	7, 17	6, 18	5, 19	5, 19	5, 19	4, 20	
12		10, 15	9, 16	8, 17	8, 17	7, 18	6, 19	6, 19	5, 20	4, 21	
13		10, 16	9, 17	8, 18	8, 18	7, 19	6, 20	5, 20	5, 21	4, 21	
14		11, 16	9, 17	8, 18	8, 19	8, 19	7, 20	6, 20	5, 21	5, 22	
15		11, 16	10, 18	9, 19	8, 20	8, 20	7, 21	6, 21	5, 22	5, 22	
16		12, 17	10, 19	10, 20	9, 19	8, 19	7, 20	6, 20	5, 21	5, 22	
17		12, 18	11, 19	10, 20	9, 20	9, 21	8, 22	7, 21	6, 21	5, 22	
18		12, 18	11, 19	10, 20	9, 21	8, 22	8, 22	7, 23	6, 22	6, 23	
19		13, 18	11, 20	10, 21	9, 22	9, 23	8, 23	7, 24	7, 24	6, 25	
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21		14, 19	12, 21	11, 22	10, 22	9, 23	9, 24	8, 24	8, 24	7, 25	
22		14, 19	12, 21	11, 22	10, 22	9, 23	9, 24	8, 24	8, 24	7, 25	
23		14, 20	12, 21	11, 22	11, 23	10, 24	9, 24	9, 24	8, 25	8, 25	
24		14, 20	12, 22	11, 22	11, 23	10, 24	9, 24	9, 25	8, -	8, -	
25		14, 20	13, 22	12, 22	11, 23	10, 24	9, 24	9, 25	8, -	8, -	
26		15, 20	13, 22	12, 23	11, 23	10, 24	10, 25	9, 25	8, -	8, -	
27		15, 20	13, 22	12, 23	11, 24	10, 24	10, 25	9, 25	8, -	8, -	
28		15, 21	13, 22	13, 23	12, 24	11, 24	10, 25	10, 25	10, -	9, -	
29		15, 21	14, 22	13, 23	12, 24	11, 25	10, 25	10, 25	10, -	9, -	
12	30	15, 21	14, 22	13, 23	12, 24	11, 25	10, 25	10, 25	10, -	9, -	

Critical Values for the Runs Test (cont.)

Taken from Zar, 1981 Table B.28

n_1	n_2	$\alpha(2):$	0.50	0.20	0.10	0.05	0.02	0.01	0.005	0.002	0.001	$\alpha(1):$	0.25	0.10	0.05	0.025	0.01	0.005	0.0025	0.001	0.0005
13	13	11, 17	10, 18	9, 19	8, 20	7, 21	7, 21	6, 22	5, 23	5, 23	5, 23	15, 21	13, 23	12, 24	11, 25	10, 26	10, 26	9, 27	8, 28	8, 28	
	14	12, 17	10, 19	9, 20	9, 20	8, 21	7, 22	7, 22	6, 23	5, 24	5, 24	16, 21	14, 23	13, 24	12, 25	11, 26	10, 27	9, 27	9, 28	8, 29	
	15	12, 18	11, 19	10, 20	9, 21	8, 22	7, 22	7, 23	6, 24	6, 24	6, 24	16, 22	14, 24	13, 25	12, 26	11, 27	10, 27	10, 28	9, 29	8, 29	
	16	13, 18	11, 20	10, 21	9, 21	8, 22	8, 23	7, 23	6, 24	6, 25	6, 25	16, 22	15, 24	13, 25	13, 26	11, 27	11, 28	10, 29	9, 29	9, 30	
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	19	14, 19	12, 21	11, 22	10, 23	9, 24	9, 24	8, 25	7, 25	7, 26	7, 26	18, 24	16, 26	15, 27	14, 28	13, 29	12, 30	11, 31	11, 31	10, 32	
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	21	14, 20	13, 22	12, 22	11, 23	10, 24	9, 25	9, 25	8, 26	7, 26	7, 26	18, 24	16, 26	15, 27	14, 28	13, 29	12, 30	12, 31	11, 31	10, 32	
	22	15, 20	13, 22	12, 23	11, 24	10, 24	9, 25	9, 26	8, 26	7, 27	7, 27	18, 25	17, 26	15, 28	14, 29	13, 30	13, 30	12, 31	11, 32	10, 32	
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	25	15, 21	14, 23	13, 24	12, 24	11, 25	10, 26	10, 26	9, 27	9, 27	9, 27	19, 26	17, 27	16, 28	15, 29	14, 30	13, 31	12, 32	11, 33		
	26	16, 21	14, 23	13, 24	12, 24	11, 25	10, 26	10, 26	9, 27	8, -	-	20, 26	18, 26	17, 28	16, 30	14, 31	14, 32	15, 32	12, 33		
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	28	16, 22	14, 23	13, 24	12, 25	11, 26	11, 26	11, 26	10, 27	9, -	-	18, 18	16, 22	14, 24	13, 25	12, 26	11, 27	10, 28	9, 29		
	29	16, 22	14, 24	13, 24	13, 25	12, 26	11, 26	11, 26	10, 27	10, -	-	18, 19	16, 20	14, 24	13, 25	12, 26	11, 27	10, 28	9, 30		
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	22	15, 21	14, 23	13, 24	12, 24	11, 25	10, 26	10, 26	9, 27	9, 27	9, 27	14, 25	13, 26	12, 27	11, 28	10, 28	9, 29	8, 29	7, 29		
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	21	15, 21	16, 23	13, 24	12, 25	11, 26	10, 27	10, 27	9, 28	8, 28	8, 28	14, 21	13, 23	12, 24	11, 25	10, 26	9, 27	8, 28	7, 28		
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	23	16, 21	16, 24	13, 25	12, 26	11, 27	11, 28	11, 28	11, 29	10, 30	10, 30	10, 30	14, 21	13, 23	12, 24	11, 25	10, 26	9, 27	8, 28		
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	26	17, 24	16, 24	13, 26	12, 27	11, 28	12, 29	11, 30	11, 31	10, 31	10, 31	10, 31	14, 21	13, 23	12, 24	11, 25	10, 26	9, 27	8, 28		
	27	17, 24	16, 24	13, 26	12, 27	11, 28	12, 28	11, 29	10, 30	10, 30	10, 30	14, 21	13, 23	12, 24	11, 25	10, 26	9, 27	8, 28	7, 28		
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	15	30	18, 24	16, 26	15, 27	14, 28	13, 28	12, 29	12, 30	11, 30	10, 31	14, 21	13, 23	12, 2							

Critical Values for the Runs Test (cont.)

Taken from Zar, 1981 Table B.28

n_1	n_2	$\alpha(2):$	0.50	0.20	0.10	0.05	0.02	0.01	0.005	0.002	0.001
		$\alpha(1):$	0.25	0.10	0.05	0.025	0.01	0.005	0.0025	0.001	0.0005
27	27	22, 29	20, 31	19, 32	18, 33	16, 34	15, 35	15, 36	14, 37	13, 37	
28	28	22, 29	20, 31	19, 32	18, 33	17, 35	16, 35	15, 36	14, 37	13, 38	
29	29	23, 29	21, 31	19, 33	18, 34	17, 35	16, 36	15, 37	14, 38	14, 38	
22	30	23, 30	21, 32	20, 33	19, 34	17, 35	16, 36	16, 37	15, 38	14, 39	
23	23	21, 27	19, 29	17, 31	16, 32	15, 33	14, 34	14, 34	13, 35	12, 36	
24	24	21, 28	19, 30	18, 31	17, 32	16, 33	15, 34	14, 35	13, 36	13, 36	
25	22, 28	20, 30	18, 32	17, 33	16, 34	15, 35	14, 35	14, 36	13, 37		
26	22, 29	20, 31	19, 32	18, 33	16, 34	16, 35	15, 36	14, 37	13, 38		
23	27	23, 29	20, 31	19, 33	18, 34	17, 35	16, 36	15, 36	14, 37	14, 38	
23	28	23, 30	21, 32	20, 33	18, 34	17, 35	16, 36	16, 37	15, 38	14, 39	
29	29	23, 30	21, 32	20, 33	19, 35	17, 36	17, 37	16, 37	15, 38	14, 39	
23	30	24, 30	21, 33	20, 34	19, 35	18, 36	17, 37	16, 38	15, 39	15, 39	
24	24	22, 28	20, 30	18, 32	17, 33	16, 34	15, 35	15, 35	14, 36	13, 37	
25	25	22, 26	20, 31	19, 32	18, 33	17, 34	16, 35	15, 36	14, 37	13, 38	
26	23, 29	20, 31	19, 33	18, 34	17, 35	16, 36	15, 37	14, 38	14, 38		
27	23, 30	21, 32	20, 33	19, 34	17, 36	16, 36	16, 37	15, 38	14, 39		
28	23, 30	21, 32	20, 34	19, 35	18, 36	17, 37	16, 38	15, 39	14, 39		
29	29	24, 31	22, 33	20, 34	19, 35	18, 36	17, 37	16, 38	15, 39	15, 40	
24	30	24, 31	22, 33	21, 35	20, 36	18, 37	17, 38	17, 39	16, 40	15, 40	
25	25	23, 29	21, 31	19, 33	18, 34	17, 35	16, 36	15, 37	14, 38	14, 38	
26	25, 30	21, 32	20, 33	19, 34	17, 36	16, 37	16, 37	15, 38	14, 39		
27	24, 30	21, 33	20, 34	19, 35	18, 36	17, 37	16, 38	15, 39	14, 39		
28	24, 31	22, 33	21, 34	19, 35	18, 37	17, 38	16, 38	15, 39	15, 40		
29	24, 31	22, 33	21, 35	20, 36	18, 37	17, 38	17, 39	16, 40	15, 41		
25	30	25, 32	23, 34	21, 35	20, 36	19, 38	18, 39	17, 39	16, 40	15, 41	
26	26	24, 30	21, 33	20, 34	19, 35	18, 36	17, 37	16, 38	15, 39	14, 40	
27	27	24, 28	22, 33	21, 34	19, 36	18, 37	17, 38	16, 39	15, 39	15, 40	
28	25, 31	22, 34	21, 35	20, 36	19, 37	18, 38	17, 39	16, 40	15, 41		
29	25, 32	23, 34	21, 35	20, 37	19, 38	18, 39	17, 40	16, 41	16, 41		
26	30	25, 32	23, 35	22, 36	21, 37	19, 38	18, 39	18, 40	17, 41	16, 42	
27	27	25, 31	22, 34	21, 35	20, 36	19, 37	18, 38	17, 39	16, 40	15, 41	
28	25, 32	23, 34	21, 36	20, 37	19, 38	18, 39	17, 40	16, 41	16, 41		
29	25, 32	23, 35	22, 36	21, 37	19, 39	19, 39	18, 40	17, 41	16, 42		
27	30	26, 33	24, 35	22, 37	21, 38	20, 39	19, 40	18, 41	17, 42	16, 43	
28	28	25, 33	23, 35	22, 36	21, 37	19, 39	19, 39	18, 40	17, 41	16, 42	
29	26, 30	24, 35	22, 37	21, 38	20, 39	19, 40	18, 41	17, 42	16, 43		
28	30	26, 34	24, 36	23, 37	22, 38	20, 40	19, 41	19, 41	17, 42	17, 43	
29	29	26, 34	24, 36	23, 37	22, 38	20, 40	19, 41	19, 41	17, 43	17, 44	
29	30	27, 34	25, 36	23, 38	22, 39	21, 40	20, 41	19, 42	18, 43	17, 44	
30	30	27, 35	25, 37	24, 38	23, 39	21, 41	20, 42	19, 43	18, 44	18, 44	

This table was prepared using the procedure described by Brownlee (1965: 225–226) and Swed and Eisenhart (1943).

Example:

$$u_{0.05(2), 24, 30} = 20 \text{ and } 36.$$

Tabel Run

Tabel Run Kecil r_a

Tabel 4.1. Harga-harga kritis r dalam *Run Test* satu sampel untuk $\alpha = 5\%$.

n_1	n_2																			
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
2										2	2	2	2	2	2	2	2	2	2	
3			2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	
4			2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	
5			2	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5	
6			2	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6	6	
7			2	2	3	3	4	4	4	5	5	5	5	6	6	6	6	6	6	
8			2	3	3	3	4	4	5	5	5	6	6	6	6	7	7	7	7	
9			2	3	3	4	4	5	5	5	6	6	7	7	7	7	8	8	8	
10			2	3	3	4	5	5	5	6	7	7	7	8	8	8	8	9	9	
11			2	3	4	4	5	5	6	6	7	7	8	8	8	9	9	9	9	
12			2	2	3	4	4	5	6	6	7	7	8	8	8	9	9	10	10	
13			2	2	3	4	5	5	6	6	7	7	8	9	9	9	10	10	10	
14			2	2	3	4	5	5	6	7	7	8	8	9	9	10	10	10	11	
15			2	3	3	4	5	6	6	7	7	8	8	9	9	10	10	11	11	
16			2	3	4	4	5	6	6	7	8	8	9	9	10	10	11	11	12	
17			2	3	4	4	5	6	7	7	8	9	9	10	10	11	11	12	12	
18			2	3	4	5	5	6	7	8	8	9	9	10	10	11	11	12	13	
19			2	3	4	5	6	6	7	8	8	9	10	10	11	11	12	13	13	
20			2	3	4	5	6	6	7	8	9	9	10	10	11	12	12	13	13	

Tabel Run Besar r_b

Tabel 4.2. Harga-harga kritis r dalam *Run Test* dua sampel untuk $\alpha = 5\%$.

n_1	n_2																			
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
2																				
3																				
4			9	9																
5			9	10	10	11	11													
6			9	10	11	12	12	13	13	13	13									
7			11	12	13	13	14	14	14	14	14	15	15	15	15					
8			11	12	13	14	14	15	15	15	16	16	15	16	17	17	17	17	17	
9			13	14	14	15	16	16	16	17	17	17	18	18	18	18	18	18	18	
10			13	14	15	16	16	17	17	17	18	18	18	19	19	19	19	20	20	
11			13	14	15	16	17	17	17	18	19	19	19	20	20	20	20	21	21	
12			13	14	16	16	17	18	19	19	19	20	20	21	21	21	21	22	22	
13			15	16	16	18	19	19	19	20	20	20	21	21	22	22	22	23	23	
14			15	16	17	18	19	20	20	20	21	21	22	22	22	23	23	23	24	
15			15	16	18	18	19	20	21	21	22	22	23	23	23	24	24	24	25	
16			17	18	19	20	21	21	21	22	22	23	23	24	24	25	25	25	25	
17			17	18	19	20	21	22	22	23	23	23	24	24	25	25	26	26	26	
18			17	18	19	20	21	22	22	23	23	24	24	25	25	26	26	26	27	
19			17	18	20	21	22	23	23	24	24	25	25	26	26	26	27	26	26	
20			17	18	20	21	22	23	24	25	25	25	26	26	27	27	27	28		

Nilai Kritis Untuk Wilcoxon Signed Rank Test (w_{α^*})

n	α			
	0,10	0,05	0,02	0,01
	0,05	0,025	0,01	0,005
4				
5	0			
6	2	0		
7	3	2	0	0
8	5	3	1	
9	8	5	3	1
10	10	8	5	3
11	13	10	7	5
12	17	13	9	7
13	21	17	12	9
14	25	21	15	12
15	30	25	19	15
16	35	29	23	19
17	41	34	27	23
18	47	40	32	27
19	53	46	37	32
20	60	59	43	37
21	67	58	49	42
22	75	65	55	48
23	83	73	62	54
24	91	81	69	61
25	100	89	76	68
26	110	98	84	75
27	119	107	92	83
28	130	116	101	91
29	140	126	110	100
30	151	137	120	109
31	163	147	130	118
32	175	159	140	128
33	187	170	151	138
34	200	182	162	148
35	213	195	173	159
36	227	208	185	171
37	241	221	198	182
38	256	235	211	194
39	271	249	224	207
40	286	264	238	220
41	302	279	252	233
42	319	294	266	247
43	336	310	281	261
44	353	327	296	276
45	371	343	312	291

→ untuk uji dua sisi ($H_1 : \neq$)

→ untuk uji satu sisi ($H_1 : \leq$ atau \geq)

Untuk $n > 50$, w mendekati Normal dengan rataan

46	389	361	328	307
47	407	378	345	322
48	426	396	362	339
49	446	415	379	355
50	466	434	397	373

• rata-rata $n(n+1)/4$ dan variansi $n(n+1)(2n+1)/24$

Tabel T (Uji Wilcoxon)

alpha values								alpha values							
n	0.001	0.005	0.01	0.025	0.05	0.10	0.20	n	0.001	0.005	0.01	0.025	0.05	0.10	0.20
5	--	--	--	--	--	0	2	28	64	82	91	105	116	130	145
6	--	--	--	--	0	2	3	29	71	90	100	114	126	140	157
7	--	--	--	0	2	3	5	30	78	98	109	124	137	151	169
8	--	--	0	2	3	5	8	31	86	107	118	134	147	163	181
9	--	0	1	3	5	8	10	32	94	116	128	144	159	175	194
10	--	1	3	5	8	10	14	33	102	126	138	155	170	187	207
11	0	3	5	8	10	13	17	34	111	136	148	167	182	200	221
12	1	5	7	10	13	17	21	35	120	146	159	178	195	213	235
13	2	7	9	13	17	21	26	36	130	157	171	191	208	227	250
14	4	9	12	17	21	25	31	37	140	168	182	203	221	241	265
15	6	12	15	20	25	30	36	38	150	180	194	216	235	256	281
16	8	15	19	25	29	35	42	39	161	192	207	230	249	271	297
17	11	19	23	29	34	41	48	40	172	204	220	244	264	286	313
18	14	23	27	34	40	47	55	41	183	217	233	258	279	302	330
19	18	27	32	39	46	53	62	42	195	230	247	273	294	319	348
20	21	32	37	45	52	60	69	43	207	244	261	288	310	336	365
21	25	37	42	51	58	67	77	44	220	258	276	303	327	353	384
22	30	42	48	57	65	75	86	45	233	272	291	319	343	371	402
23	35	48	54	64	73	83	94	46	246	287	307	336	361	389	422
24	40	54	61	72	81	91	104	47	260	302	322	353	378	407	441
25	45	60	68	79	89	100	113	48	274	318	339	370	396	426	462
26	51	67	75	87	98	110	124	49	289	334	355	388	415	446	482
27	57	74	83	96	107	119	134	50	304	350	373	406	434	466	503

Standard Normal Probabilities

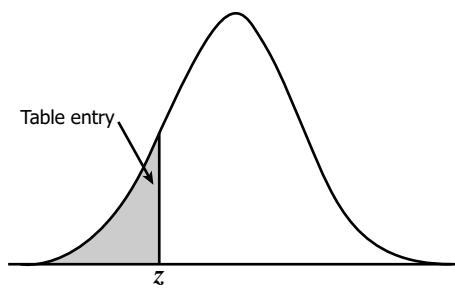


Table entry for z is the area under the standard normal curve to the left of z .

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
-3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002
-3.3	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003
-3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005
-3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007
-3.0	.0013	.0013	.0013	.0012	.0012	.0011	.0011	.0011	.0010	.0010
-2.9	.0019	.0018	.0018	.0017	.0016	.0016	.0015	.0015	.0014	.0014
-2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020	.0019
-2.7	.0035	.0034	.0033	.0032	.0031	.0030	.0029	.0028	.0027	.0026
-2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037	.0036
-2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049	.0048
-2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066	.0064
-2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087	.0084
-2.2	.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113	.0110
-2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
-2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
-1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239	.0233
-1.8	.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301	.0294
-1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
-1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
-1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
-1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
-1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
-1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
-1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
-1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
-0.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
-0.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
-0.7	.2420	.2389	.2358	.2327	.2296	.2266	.2236	.2206	.2177	.2148
-0.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
-0.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
-0.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
-0.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
-0.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
-0.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
-0.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641

Standard Normal Probabilities

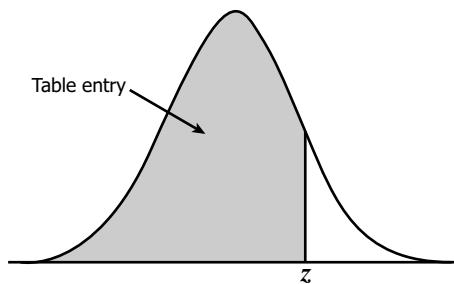


Table entry for z is the area under the standard normal curve to the left of z .

Tabel U/Mann Whitney

Alpha = .001 (two-tailed) Yg dipakai Bu Selfi

$n_1 \backslash n^2$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2																	0	0	0
3																	0	0	0
4																	1	1	1
5																	2	2	3
6																	4	4	4
7																	5	5	5
8																	6	7	7
9																	8	9	9
10																	10	11	11
11																	12	13	13
12																	15	16	16
13																	18	19	20
14																	22	23	24
15																	26	27	28
16																	30	32	34
17																	36	38	40
18																	41	44	47
19																	50	53	53
20																	56	60	65
	2	5	9	14	18	23	28	33	38	43	49	54	59	65	70	76	81	87	93

21	0	2	6	10	15	20	25	30	35	41	46	52	58	63	69	75	81	87
22	0	3	6	11	16	21	26	32	38	44	49	55	61	67	74	80	86	92
23	0	3	7	12	17	22	28	34	40	46	52	59	65	72	78	85	91	98
24	0	3	7	12	18	24	30	36	42	49	56	62	69	76	83	89	96	103
25	0	3	8	13	19	25	32	38	45	52	59	66	73	80	87	94	102	109
26	0	4	9	14	20	27	33	40	47	54	62	69	77	84	92	99	107	115
27	1	4	9	15	21	28	35	42	50	57	65	72	80	88	96	104	112	120
28	1	4	10	16	22	29	37	44	52	60	68	76	84	92	101	109	117	126
29	1	5	10	17	24	31	39	46	54	63	71	79	88	97	105	114	123	131
30	1	5	11	17	25	32	40	48	57	65	74	83	92	101	110	119	128	137
31	1	5	11	18	26	34	42	51	59	68	77	86	96	105	114	124	133	143
32	1	6	12	19	27	35	44	53	62	71	80	90	99	109	119	129	139	148
33	1	6	12	20	28	37	46	55	64	74	83	93	103	113	123	134	144	154
34	1	6	13	21	29	38	47	57	67	76	87	97	107	117	128	139	149	160
35	2	7	14	22	30	39	49	59	69	79	90	100	111	122	133	143	154	166
36	2	7	14	22	31	41	51	61	71	82	93	104	115	126	137	148	160	171
37	2	7	15	23	32	42	53	63	74	85	96	107	119	130	142	153	165	177
38	2	8	15	24	34	44	54	65	76	88	99	111	122	134	146	158	170	183
39	2	8	16	25	35	45	56	67	79	90	102	114	126	139	151	163	176	188
40	2	8	16	26	36	47	58	69	81	93	105	118	130	143	155	168	181	194

Alpha = .02 (two-tailed)

$n_1 \backslash n^2$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2																0	0	0	1
3																0	0	0	1
4																0	1	1	1
5																0	1	2	3
6																1	2	3	4
7																1	2	3	4
8																1	2	3	4
9																1	2	3	4
10																1	2	3	4
11																1	2	3	4
12																1	2	3	4
13																1	2	3	4
14																1	2	3	4
15																1	2	3	4
16																1	2	3	4
17																1	2	3	4
18																1	2	3	4
19																1	2	3	4
20																1	2	3	4
21	1	5	11	17	23	30	36	43	50	57	64	71	78	85	92	99	106	113	121
22	1	5	11	18	24	31	38	45	53	60	67	75	82	90	97	105	112	120	127
23	1	6	12	19	26	33	40	48	55	63	71	79	87	94	102	110	118	126	134
24	1	6	13	20	27	35	42	50	58	66	75	83	91	99	108	116	124	133	141
25	1	7	13	21	29	36	45	53	61	70	78	87	95	104	113	122	130	139	148
26	1	7	14	22	30	38	47	55	64	73	82	91	100	109	118	127	136	145	155
27	2	7	15	23	31	39	47	55	64	73	82	91	100	109	118	127	136	145	154
28	2	8	16	24	33	42	51	60	70	79	89	99	109	119	129	139	149	159	169
29	2	8	16	25	34	43	53	63	73	83	93	103	113	123	134	144	155	165	176
30	2	9	17	26	35	45	55	65	76	86	96	107	118	128	139	150	161	172	182
31	2	9	18	27	37	47	57	68	78	89	100	111	122	133	144	156	167	178	189
32	2	9	18	28	38	49	59	70	81	92	104	115	127	138	150	161	173	185	196
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34	3	10	20	30	41	52	64	75	87	99	111	123	135	148	160	173	185	198	210
35	3	11	20	31	42	54	66	78	90	102	115	127	140	153	165	178	191	204	217
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37	3	11	22	33	45	57	70	83	96	109	122	135	149	162	176	190	203	217	231
38	3	12	22	34	46	59	72	85	99	112	126	139	153	167	181	195	209	224	238
39	3	12	23	35	48	61	74	88	101	115	129	144	158	172	187	201	216	230	245
40	3	13	24	36	49	63	76	90	104	119	133	148	162	177	192	207	222	237	252

Alpha = .05 (two-tailed)

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16	1	6	11	15	21	26	31	37	42	47	53	59	64	70	75	81	86	92	98
17	2	6	11	17	22	28	34	39	45	51	57	63	69	75	81	87	93	99	105
18	2	7	12	18	24	30	36	42	48	55	61	67	74	80	86	93	99	106	112
19	2	7	13	19	25	32	38	45	52	58	65	72	78	85	92	99	106	113	119
20	2	8	14	20	27	34	41	48	55	62	69	76	83	90	98	105	112	119	127

21	3	8	15	22	29	36	43	50	58	65	73	80	88	96	103	111	119	126	134
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23	3	9	17	24	32	40	48	56	64	73	81	89	98	106	115	123	132	140	149
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25	3	10	18	27	35	44	53	62	71	80	89	98	107	117	126	135	145	154	163
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27	4	11	20	29	38	48	57	67	77	87	97	107	117	127	137	147	158	168	178
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37	6	17	29	41	55	68	81	95	109	123	137	151	165	180	194	209	223	238	252
38	6	17	30	43	56	70	84	98	112	127	141	156	170	185	200	215	230	245	259
39	7	18	31	44	58	72	86	101	115	130	145	160	175	190	206	221	236	252	267
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Alpha = .10 (two-tailed)

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3		0	1	2	2	3	3	4	4	5	5	6	6	7	7	8	9	9	10
4	0	1	2	3	4	4	5	6	7	8	9	10	11	12	14	15	16	17	18
5	0	1	2	4	5	6	7	8	9	11	12	13	14	15	16	18	19	22	25
6	0	2	3	5	7	8	10	11	13	14	16	17	19	21	22	25	28	30	32
7	0	2	4	6	8	11	13	15	17	19	21	24	26	28	30	33	35	37	39
8	1	3	5	8	10	13	15	18	20	23	26	28	31	33	36	39	41	44	47
9	1	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
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16	3	8	14	19	25	30	36	42	48	54	60	65	71	77	83	89	95	101	107
17	3	9	15	20	26	33	39	45	51	57	64	70	77	83	89	96	102	109	115
18	4	9	16	22	28	35	41	48	55	61	68	75	82	88	95	102	109	116	123
19	4	10	17	23	30	37	44	51	58	65	72	80	87	94	101	109	116	123	130
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21	5	11	19	26	34	41	49	57	65	73	81	89	97	105	113	121	130	138	146
22	5	12	20	28	36	44	52	60	68	77	85	94	102	111	119	128	136	145	154
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