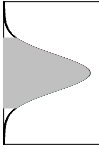
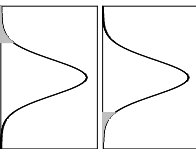
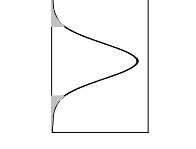
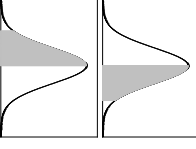


# Appendix A: Statistical Tables

Table 1: Standard Normal Distribution Tables (z-Tables)

Column 1	Column 2	Column 3	Column 4	Column 5	
					
$z$	$P(Z \leq x) = \Phi(x)$	$P(Z \geq -z)$ or $P(Z \leq z)$	$P(Z \leq -z \text{ or } x \geq +z)$	$P(0 < Z \leq +z)$ or $P(0 > Z \geq -z)$	
0.00	0.0000	0.5000	1.0000	0.0000	
0.01	0.0080	0.4920	0.9920	0.0040	
0.02	0.0160	0.4840	0.9840	0.0080	
0.03	0.0239	0.4780	0.9761	0.0120	
0.04	0.0319	0.4840	0.9681	0.0160	
0.05	0.0399	0.4801	0.9601	0.0199	
0.06	0.0478	0.4761	0.9522	0.0239	
0.07	0.0558	0.4721	0.9442	0.0279	
0.08	0.0638	0.4681	0.9362	0.0319	
0.09	0.0717	0.4641	0.9283	0.0359	
0.10	0.0797	0.4602	0.9203	0.0398	
0.11	0.0876	0.4562	0.9124	0.0438	
0.12	0.0955	0.4522	0.9045	0.0478	
0.13	0.1034	0.4483	0.8966	0.0517	
0.14	0.1113	0.4443	0.8887	0.0557	
0.15	0.1192	0.4404	0.8808	0.0596	
0.16	0.1271	0.4364	0.8729	0.0636	
0.17	0.1350	0.4325	0.8650	0.0675	
0.18	0.1428	0.4286	0.8572	0.0714	
0.19	0.1507	0.4247	0.8493	0.0753	
0.20	0.1585	0.4207	0.8415	0.0793	
0.21	0.1663	0.4168	0.8337	0.0832	
0.22	0.1741	0.4129	0.8259	0.0871	
0.23	0.1819	0.4090	0.8181	0.0910	
0.24	0.1897	0.4052	0.8103	0.0948	
0.25	0.1974	0.4013	0.8026	0.0987	
0.26	0.2051	0.3974	0.7949	0.1026	
0.27	0.2128	0.3936	0.7872	0.1064	
0.28	0.2205	0.3897	0.7795	0.1103	
0.29	0.2282	0.3859	0.7718	0.1141	
0.30	0.2358	0.3821	0.7642	0.1179	
0.31	0.2434	0.3783	0.7566	0.1217	
0.32	0.2510	0.3745	0.7490	0.1255	
0.33	0.2586	0.3707	0.7414	0.1293	
0.34	0.2661	0.3669	0.7339	0.1331	
0.35	0.2737	0.3632	0.7263	0.1368	
0.36	0.2812	0.3595	0.7188	0.1406	
0.37	0.2886	0.3557	0.7114	0.1443	
0.38	0.2961	0.3520	0.7039	0.1480	
0.39	0.3035	0.3483	0.6965	0.1517	
0.40	0.3108	0.3446	0.6892	0.1554	
0.41	0.3182	0.3409	0.6818	0.1591	
0.42	0.3255	0.3372	0.6745	0.1628	

Column 1	Column 2	Column 3	Column 4	Column 5
0.43	0.3328	0.3300	0.6599	0.1700
0.44	0.3401	0.3264	0.6527	0.1736
0.45	0.3473	0.3264	0.6452	0.1776
0.46	0.3545	0.3228	0.6455	0.1772
0.47	0.3616	0.3192	0.6384	0.1808
0.48	0.3688	0.3156	0.6312	0.1844
0.49	0.3759	0.3121	0.6241	0.1879
0.50	0.3829	0.3085	0.6171	0.1915
0.51	0.3899	0.3050	0.6101	0.1950
0.52	0.3969	0.3015	0.6031	0.1985
0.53	0.4039	0.2981	0.5961	0.2019
0.54	0.4108	0.2946	0.5892	0.2054
0.55	0.4177	0.2912	0.5823	0.2088
0.56	0.4245	0.2877	0.5755	0.2123
0.57	0.4313	0.2843	0.5687	0.2157
0.58	0.4381	0.2810	0.5619	0.2190
0.59	0.4448	0.2776	0.5552	0.2224
0.60	0.4515	0.2743	0.5485	0.2257
0.61	0.4581	0.2709	0.5419	0.2291
0.62	0.4647	0.2676	0.5353	0.2324
0.63	0.4713	0.2643	0.5287	0.2357
0.64	0.4778	0.2611	0.5222	0.2389
0.65	0.4843	0.2578	0.5157	0.2422
0.66	0.4907	0.2546	0.5093	0.2454
0.67	0.4971	0.2514	0.5029	0.2486
0.68	0.5035	0.2483	0.4965	0.2517
0.69	0.5098	0.2451	0.4902	0.2549
0.70	0.5161	0.2420	0.4839	0.2580
0.71	0.5223	0.2389	0.4777	0.2611
0.72	0.5285	0.2358	0.4715	0.2642
0.73	0.5346	0.2327	0.4654	0.2673
0.74	0.5407	0.2296	0.4593	0.2704
0.75	0.5467	0.2266	0.4533	0.2734
0.76	0.5527	0.2236	0.4473	0.2764
0.77	0.5587	0.2206	0.4413	0.2794
0.78	0.5646	0.2177	0.4354	0.2823
0.79	0.5705	0.2148	0.4295	0.2852
0.80	0.5763	0.2119	0.4237	0.2881
0.81	0.5821	0.2090	0.4179	0.2910
0.82	0.5878	0.2061	0.4122	0.2939
0.83	0.5935	0.2033	0.4065	0.2967
0.84	0.5991	0.2005	0.4009	0.2995
0.85	0.6047	0.1977	0.3953	0.3023
0.86	0.6102	0.1949	0.3898	0.3051
0.87	0.6157	0.1922	0.3843	0.3078
0.88	0.6211	0.1894	0.3789	0.3106
0.89	0.6265	0.1867	0.3735	0.3133
0.90	0.6319	0.1841	0.3681	0.3159
0.91	0.6372	0.1814	0.3628	0.3186
0.92	0.6424	0.1788	0.3576	0.3212
0.93	0.6476	0.1762	0.3524	0.3238
0.94	0.6528	0.1736	0.3472	0.3264
0.95	0.6579	0.1711	0.3421	0.3289
0.96	0.6629	0.1685	0.3371	0.3315
0.97	0.6680	0.1660	0.3320	0.3340
0.98	0.6729	0.1635	0.3271	0.3365
0.99	0.6778	0.1611	0.3222	0.3389
1.00	0.6827	0.1587	0.3174	0.3413
1.01	0.6875	0.1562	0.3124	0.3438

Column 1	Column 2	Column 3	Column 4	Column 5
1.02	0.6923	0.1539	0.3077	0.3461
1.03	0.6970	0.1515	0.3030	0.3485
1.04	0.7017	0.1492	0.2983	0.3508
1.05	0.7063	0.1469	0.2937	0.3531
1.06	0.7109	0.1446	0.2891	0.3554
1.07	0.7154	0.1423	0.2846	0.3577
1.08	0.7199	0.1401	0.2801	0.3599
1.09	0.7243	0.1379	0.2757	0.3621
1.10	0.7287	0.1357	0.2713	0.3643
1.11	0.7330	0.1335	0.2670	0.3665
1.12	0.7373	0.1314	0.2627	0.3686
1.13	0.7415	0.1292	0.2585	0.3708
1.14	0.7457	0.1271	0.2543	0.3729
1.15	0.7499	0.1251	0.2501	0.3749
1.16	0.7540	0.1230	0.2460	0.3770
1.17	0.7580	0.1210	0.2420	0.3790
1.18	0.7620	0.1190	0.2380	0.3810
1.19	0.7660	0.1170	0.2340	0.3830
1.20	0.7699	0.1151	0.2301	0.3849
1.21	0.7737	0.1131	0.2263	0.3869
1.22	0.7775	0.1112	0.2225	0.3888
1.23	0.7813	0.1093	0.2187	0.3907
1.24	0.7850	0.1075	0.2150	0.3925
1.25	0.7887	0.1056	0.2113	0.3944
1.26	0.7923	0.1038	0.2077	0.3962
1.27	0.7959	0.1020	0.2041	0.3980
1.28	0.7995	0.1003	0.2005	0.3997
1.29	0.8029	0.0985	0.1971	0.4015
1.30	0.8064	0.0968	0.1936	0.4032
1.31	0.8098	0.0951	0.1902	0.4049
1.32	0.8132	0.0934	0.1868	0.4066
1.33	0.8165	0.0918	0.1835	0.4082
1.34	0.8198	0.0901	0.1802	0.4099
1.35	0.8230	0.0885	0.1770	0.4115
1.36	0.8262	0.0869	0.1738	0.4131
1.37	0.8293	0.0853	0.1707	0.4147
1.38	0.8324	0.0838	0.1676	0.4162
1.39	0.8355	0.0823	0.1645	0.4177
1.40	0.8385	0.0808	0.1615	0.4192
1.41	0.8415	0.0793	0.1585	0.4207
1.42	0.8444	0.0778	0.1556	0.4222
1.43	0.8473	0.0764	0.1527	0.4236
1.44	0.8501	0.0749	0.1499	0.4251
1.45	0.8529	0.0735	0.1471	0.4265
1.46	0.8557	0.0721	0.1443	0.4279
1.47	0.8584	0.0708	0.1416	0.4292
1.48	0.8611	0.0694	0.1389	0.4306
1.49	0.8638	0.0681	0.1362	0.4319
1.50	0.8664	0.0668	0.1336	0.4332
1.51	0.8690	0.0655	0.1310	0.4345
1.52	0.8715	0.0643	0.1285	0.4357
1.53	0.8740	0.0630	0.1260	0.4370
1.54	0.8764	0.0618	0.1236	0.4382
1.55	0.8789	0.0606	0.1211	0.4394
1.56	0.8812	0.0594	0.1188	0.4406
1.57	0.8836	0.0582	0.1164	0.4418
1.58	0.8859	0.0571	0.1141	0.4429
1.59	0.8882	0.0559	0.1118	0.4441
1.60	0.8904	0.0548	0.1096	0.4452

Column 1	Column 2	Column 3	Column 4	Column 5
1.61	0.8926	0.0537	0.1074	0.4463
1.62	0.8948	0.0526	0.1052	0.4474
1.63	0.8969	0.0516	0.1031	0.4484
1.64	0.8990	0.0505	0.1010	0.4495
1.65	0.9011	0.0495	0.0989	0.4505
1.66	0.9031	0.0485	0.0969	0.4515
1.67	0.9051	0.0475	0.0949	0.4525
1.68	0.9070	0.0465	0.0930	0.4535
1.69	0.9090	0.0455	0.0910	0.4545
1.70	0.9109	0.0446	0.0891	0.4554
1.71	0.9127	0.0436	0.0873	0.4564
1.72	0.9146	0.0427	0.0854	0.4573
1.73	0.9164	0.0418	0.0836	0.4582
1.74	0.9181	0.0409	0.0819	0.4591
1.75	0.9199	0.0401	0.0801	0.4599
1.76	0.9216	0.0392	0.0784	0.4608
1.77	0.9233	0.0384	0.0767	0.4616
1.78	0.9249	0.0375	0.0751	0.4625
1.79	0.9265	0.0367	0.0735	0.4633
1.80	0.9281	0.0359	0.0719	0.4641
1.81	0.9297	0.0351	0.0703	0.4649
1.82	0.9312	0.0344	0.0688	0.4656
1.83	0.9328	0.0336	0.0672	0.4664
1.84	0.9342	0.0329	0.0658	0.4671
1.85	0.9357	0.0322	0.0643	0.4678
1.86	0.9371	0.0314	0.0629	0.4686
1.87	0.9385	0.0307	0.0615	0.4693
1.88	0.9399	0.0301	0.0601	0.4699
1.89	0.9412	0.0294	0.0588	0.4706
1.90	0.9426	0.0287	0.0574	0.4713
1.91	0.9439	0.0281	0.0561	0.4721
1.92	0.9451	0.0274	0.0549	0.4726
1.93	0.9464	0.0268	0.0536	0.4732
1.94	0.9476	0.0262	0.0524	0.4738
1.95	0.9488	0.0256	0.0512	0.4744
1.96	0.9500	0.0250	0.0500	0.4750
1.97	0.9512	0.0244	0.0488	0.4756
1.98	0.9523	0.0239	0.0477	0.4761
1.99	0.9534	0.0233	0.0466	0.4767
2.00	0.9545	0.0228	0.0455	0.4772
2.01	0.9556	0.0222	0.0444	0.4778
2.02	0.9566	0.0217	0.0434	0.4783
2.03	0.9576	0.0212	0.0424	0.4788
2.04	0.9586	0.0207	0.0414	0.4793
2.05	0.9596	0.0202	0.0404	0.4798
2.06	0.9606	0.0197	0.0394	0.4803
2.07	0.9615	0.0192	0.0385	0.4808
2.08	0.9625	0.0188	0.0375	0.4812
2.09	0.9634	0.0183	0.0366	0.4817
2.10	0.9643	0.0179	0.0357	0.4821
2.11	0.9651	0.0174	0.0349	0.4826
2.12	0.9660	0.0170	0.0340	0.4830
2.13	0.9668	0.0166	0.0332	0.4834
2.14	0.9676	0.0162	0.0324	0.4838
2.15	0.9684	0.0158	0.0316	0.4842
2.16	0.9692	0.0154	0.0308	0.4846
2.17	0.9700	0.0150	0.0300	0.4850
2.18	0.9707	0.0146	0.0293	0.4854
2.19	0.9715	0.0143	0.0285	0.4857

Column 1	Column 2	Column 3	Column 4	Column 5
2.20	0.9722	0.0139	0.0278	0.4861
2.21	0.9729	0.0136	0.0271	0.4864
2.22	0.9736	0.0132	0.0264	0.4868
2.23	0.9743	0.0129	0.0257	0.4871
2.24	0.9749	0.0125	0.0251	0.4875
2.25	0.9756	0.0122	0.0244	0.4878
2.26	0.9762	0.0119	0.0238	0.4881
2.27	0.9768	0.0116	0.0232	0.4884
2.28	0.9774	0.0113	0.0226	0.4887
2.29	0.9780	0.0110	0.0220	0.4890
2.30	0.9786	0.0107	0.0214	0.4893
2.31	0.9791	0.0104	0.0209	0.4896
2.32	0.9797	0.0102	0.0203	0.4898
2.33	0.9802	0.0099	0.0198	0.4901
2.34	0.9807	0.0096	0.0193	0.4904
2.35	0.9812	0.0094	0.0188	0.4906
2.36	0.9817	0.0091	0.0183	0.4909
2.37	0.9822	0.0089	0.0178	0.4911
2.38	0.9827	0.0087	0.0173	0.4913
2.39	0.9832	0.0084	0.0168	0.4916
2.40	0.9836	0.0082	0.0164	0.4918
2.41	0.9840	0.0080	0.0160	0.4920
2.42	0.9845	0.0078	0.0155	0.4922
2.43	0.9849	0.0075	0.0151	0.4925
2.44	0.9853	0.0073	0.0147	0.4927
2.45	0.9857	0.0071	0.0143	0.4929
2.46	0.9861	0.0069	0.0139	0.4931
2.47	0.9865	0.0068	0.0135	0.4932
2.48	0.9869	0.0066	0.0131	0.4934
2.49	0.9872	0.0064	0.0128	0.4936
2.50	0.9876	0.0062	0.0124	0.4938
2.51	0.9879	0.0060	0.0121	0.4940
2.52	0.9883	0.0059	0.0117	0.4941
2.53	0.9886	0.0057	0.0114	0.4943
2.54	0.9889	0.0055	0.0111	0.4945
2.55	0.9892	0.0054	0.0108	0.4946
2.56	0.9895	0.0052	0.0105	0.4948
2.57	0.9898	0.0051	0.0102	0.4949
2.58	0.9901	0.0049	0.0099	0.4951
2.59	0.9904	0.0048	0.0096	0.4952
2.60	0.9907	0.0047	0.0093	0.4953
2.61	0.9909	0.0045	0.0091	0.4955
2.62	0.9912	0.0044	0.0088	0.4956
2.63	0.9915	0.0043	0.0085	0.4957
2.64	0.9917	0.0041	0.0083	0.4959
2.65	0.9920	0.0040	0.0080	0.4960
2.66	0.9922	0.0039	0.0078	0.4961
2.67	0.9924	0.0038	0.0076	0.4962
2.68	0.9926	0.0037	0.0074	0.4963
2.69	0.9929	0.0036	0.0071	0.4964
2.70	0.9931	0.0035	0.0069	0.4965
2.71	0.9933	0.0034	0.0067	0.4966
2.72	0.9935	0.0033	0.0065	0.4967
2.73	0.9937	0.0032	0.0063	0.4968
2.74	0.9939	0.0031	0.0061	0.4969
2.75	0.9940	0.0030	0.0060	0.4970
2.76	0.9942	0.0029	0.0058	0.4971
2.77	0.9944	0.0028	0.0056	0.4972
2.78	0.9946	0.0027	0.0054	0.4973

Column 1	Column 2	Column 3	Column 4	Column 5
2.79	0.9947	0.0026	0.0053	0.4974
2.80	0.9949	0.0026	0.0051	0.4974
2.81	0.9950	0.0025	0.0050	0.4975
2.82	0.9952	0.0024	0.0048	0.4976
2.83	0.9953	0.0023	0.0047	0.4977
2.84	0.9955	0.0023	0.0045	0.4977
2.85	0.9956	0.0022	0.0044	0.4978
2.86	0.9958	0.0021	0.0042	0.4979
2.87	0.9959	0.0021	0.0041	0.4979
2.88	0.9960	0.0020	0.0040	0.4980
2.89	0.9961	0.0019	0.0039	0.4981
2.90	0.9963	0.0019	0.0037	0.4981
2.91	0.9964	0.0018	0.0036	0.4982
2.92	0.9965	0.0018	0.0035	0.4982
2.93	0.9966	0.0017	0.0034	0.4983
2.94	0.9967	0.0016	0.0033	0.4984
2.95	0.9968	0.0016	0.0032	0.4984
2.96	0.9969	0.0015	0.0031	0.4985
2.97	0.9970	0.0015	0.0030	0.4985
2.98	0.9971	0.0014	0.0029	0.4986
2.99	0.9972	0.0014	0.0028	0.4986
3.00	0.9973	0.0013	0.0027	0.4987
3.01	0.9974	0.0013	0.0026	0.4987
3.02	0.9975	0.0013	0.0025	0.4987
3.03	0.9976	0.0012	0.0024	0.4988
3.04	0.9976	0.0012	0.0024	0.4988
3.05	0.9977	0.0011	0.0023	0.4989
3.06	0.9978	0.0011	0.0022	0.4989
3.07	0.9979	0.0011	0.0021	0.4989
3.08	0.9979	0.0010	0.0021	0.4990
3.09	0.9980	0.0010	0.0020	0.4990
3.10	0.9981	0.0010	0.0019	0.4990
3.11	0.9981	0.0009	0.0019	0.4991
3.12	0.9982	0.0009	0.0018	0.4991
3.13	0.9983	0.0009	0.0017	0.4991
3.14	0.9983	0.0008	0.0017	0.4992
3.15	0.9984	0.0008	0.0016	0.4992
3.16	0.9984	0.0008	0.0016	0.4992
3.17	0.9985	0.0008	0.0015	0.4992
3.18	0.9985	0.0007	0.0015	0.4993
3.19	0.9986	0.0007	0.0014	0.4993
3.20	0.9986	0.0007	0.0014	0.4993
3.21	0.9987	0.0007	0.0013	0.4993
3.22	0.9987	0.0006	0.0013	0.4994
3.23	0.9988	0.0006	0.0012	0.4994
3.24	0.9988	0.0006	0.0012	0.4994
3.25	0.9988	0.0006	0.0012	0.4994
3.30	0.9990	0.0005	0.0010	0.4995
3.35	0.9992	0.0004	0.0008	0.4996
3.50	0.9995	0.0002	0.0005	0.4998
3.60	0.9997	0.0002	0.0003	0.4998
3.70	0.9998	0.0001	0.0002	0.4999
3.80	0.9999	0.0001	0.0001	0.4999
3.90	0.9999	0.0000	0.0001	0.5000
4.00	0.9999	0.0000	0.0001	0.5000

**Table 2: Critical Values of f-Distribution**

df	Level of Significance for a Directional (One-Tailed) Test					Level of Significance for a Non-Directional (Two-Tailed) Test				
	.10					.05				
	.10	.05	.025	.01	.005	.10	.05	.02	.01	.001
1	3.078	6.314	12.706	31.821	63.656	636.578				
2	1.886	2.920	4.303	6.965	9.925	31.600				
3	1.638	2.353	3.182	4.541	5.841	12.924				
4	1.533	2.132	2.776	3.747	4.604	8.610				
5	1.476	2.015	2.571	3.365	4.032	6.869				
6	1.440	1.943	2.447	3.143	3.707	5.959				
7	1.415	1.895	2.365	2.998	3.499	5.408				
8	1.397	1.860	2.306	2.896	3.355	5.041				
9	1.383	1.833	2.262	2.821	3.250	4.781				
10	1.372	1.812	2.228	2.764	3.169	4.587				
11	1.363	1.796	2.201	2.718	3.106	4.437				
12	1.356	1.782	2.179	2.681	3.055	4.318				
13	1.350	1.771	2.160	2.650	3.012	4.221				
14	1.345	1.761	2.145	2.624	2.977	4.140				
15	1.341	1.753	2.131	2.602	2.947	4.073				
16	1.337	1.746	2.120	2.583	2.921	4.015				
17	1.333	1.740	2.110	2.567	2.898	3.965				
18	1.330	1.734	2.101	2.552	2.878	3.922				
19	1.328	1.729	2.093	2.539	2.861	3.883				
20	1.325	1.725	2.086	2.528	2.845	3.850				
21	1.323	1.721	2.080	2.518	2.831	3.819				
22	1.321	1.717	2.074	2.508	2.819	3.792				
23	1.319	1.714	2.069	2.500	2.807	3.768				
24	1.318	1.711	2.064	2.492	2.797	3.745				
25	1.316	1.708	2.060	2.485	2.787	3.725				
26	1.315	1.706	2.056	2.479	2.779	3.707				
27	1.314	1.703	2.052	2.473	2.771	3.689				
28	1.313	1.701	2.048	2.467	2.763	3.674				
29	1.311	1.699	2.045	2.462	2.756	3.660				
30	1.310	1.697	2.042	2.457	2.750	3.646				
40	1.303	1.684	2.021	2.423	2.704	3.551				
60	1.296	1.671	2.000	2.390	2.660	3.460				
120	1.289	1.658	1.980	2.358	2.617	3.373				
∞	1.282	1.645	1.960	2.326	2.576	3.291				

**Table 3: Critical Values of the Pearson Correlation (r)**

df	Level of Significance for a Directional Test					Level of Significance for a Non-directional Test				
	.05					.025				
	.10	.05	.025	.01	.005	.10	.05	.02	.01	.001
1	.988	.997	.9995	.9999	.9999					
2	.980	.990	.9980	.9990	.9999					
3	.805	.878	.934	.959	.967					
4	.729	.811	.882	.917	.929					
5	.669	.754	.833	.874	.883					
6	.622	.707	.789	.843	.843					
7	.582	.666	.750	.816	.816					
8	.549	.632	.716	.785	.785					
9	.521	.602	.685	.755	.755					
10	.497	.576	.658	.728	.728					
11	.476	.553	.634	.708	.708					
12	.458	.532	.612	.681	.681					
13	.441	.514	.592	.661	.661					
14	.426	.497	.574	.641	.641					
15	.412	.482	.558	.623	.623					
16	.400	.468	.542	.606	.606					
17	.389	.456	.528	.590	.590					
18	.378	.444	.516	.575	.575					
19	.369	.433	.503	.561	.561					
20	.360	.423	.492	.549	.549					
21	.352	.413	.482	.537	.537					
22	.344	.404	.472	.526	.526					
23	.337	.396	.462	.515	.515					
24	.330	.388	.453	.505	.505					
25	.323	.381	.445	.496	.496					
26	.317	.374	.437	.487	.487					
27	.311	.367	.430	.479	.479					
28	.306	.361	.423	.471	.471					
29	.301	.355	.416	.463	.463					
30	.296	.349	.409	.456	.456					
35	.275	.325	.381	.418	.418					
40	.257	.304	.358	.393	.393					
45	.243	.288	.338	.372	.372					
50	.231	.273	.322	.354	.354					
60	.211	.250	.295	.325	.325					
70	.195	.232	.274	.302	.302					
80	.183	.217	.256	.283	.283					
90	.173	.205	.242	.267	.267					
100	.164	.195	.230	.254	.254					

Table 4: Critical Values for the Spearman Correlation ( $r_s$ )

N	Level of Significance for Directional Test			
	.05	.01	.005	
	Level of Significance for Non-Directional Test			
.10	.05	.02	.01	
5	.900	1.000	1.000	-----
6	.829	.886	.943	1.000
7	.714	.786	.893	.929
8	.643	.738	.833	.881
9	.600	.683	.783	.833
10	.564	.648	.746	.794
12	.506	.591	.712	.777
14	.456	.544	.645	.715
16	.425	.506	.601	.665
18	.399	.475	.564	.625
20	.377	.450	.534	.591
22	.359	.428	.508	.562
24	.343	.409	.485	.537
26	.329	.392	.465	.515
28	.317	.377	.448	.496
30	.306	.364	.432	.478

Table 5: Critical Values in the F-Distribution

df Within Groups	α	df Between Groups																		
		1	2	3	4	5	6	7	8	9	10	11	12	14	16	20				
1	.05	161	199	216	225	230	234	237	239	241	242	243	244	245	246	248				
	.01	4052	4999	5403	5625	5764	5859	5928	5981	6022	6056	6083	6106	6143	6170	6209				
2	.05	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40	19.40	19.41	19.42	19.43	19.45				
	.01	98.50	99.00	99.17	99.25	99.30	99.33	99.36	99.37	99.39	99.40	99.41	99.42	99.44	99.45					
3	.05	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79	8.76	8.74	8.71	8.69	8.66				
	.01	34.12	30.82	29.46	28.71	28.24	27.91	27.67	27.49	27.35	27.23	27.13	27.05	26.92	26.83	26.69				
4	.05	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96	5.94	5.91	5.87	5.84	5.80				
	.01	21.20	18.00	16.89	15.98	15.52	15.21	14.98	14.80	14.66	14.55	14.45	14.37	14.25	14.15	14.02				
5	.05	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.70	4.68	4.64	4.60	4.56				
	.01	16.28	13.27	12.06	11.39	10.97	10.67	10.46	10.29	10.16	10.05	9.96	9.89	9.77	9.68	9.55				
6	.05	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06	4.03	4.00	3.96	3.92	3.87				
	.01	13.75	10.92	9.78	9.15	8.75	8.47	8.26	8.10	7.98	7.87	7.79	7.72	7.60	7.52	7.40				
7	.05	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.60	3.57	3.53	3.49	3.44				
	.01	12.25	9.55	8.45	7.85	7.46	7.19	6.99	6.84	6.72	6.62	6.54	6.47	6.36	6.28	6.16				
8	.05	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35	3.31	3.28	3.24	3.20	3.15				
	.01	11.28	8.65	7.59	7.01	6.63	6.37	6.18	6.03	5.91	5.81	5.73	5.67	5.56	5.48	5.36				
9	.05	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.10	3.07	3.03	2.99	2.94				
	.01	10.56	8.02	6.99	6.42	6.06	5.80	5.61	5.47	5.35	5.26	5.18	5.11	5.01	4.92	4.81				
10	.05	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.94	2.91	2.86	2.83	2.77				
	.01	10.04	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.94	4.85	4.77	4.71	4.60	4.52	4.41				
11	.05	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85	2.82	2.79	2.74	2.70	2.65				
	.01	9.65	7.21	6.22	5.67	5.32	5.07	4.89	4.74	4.63	4.54	4.46	4.40	4.29	4.21	4.10				
12	.05	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75	2.72	2.69	2.64	2.60	2.54				
	.01	9.33	6.93	5.95	5.41	5.06	4.82	4.64	4.50	4.39	4.30	4.22	4.16	4.05	3.97	3.86				
13	.05	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.63	2.60	2.55	2.51	2.46				
	.01	9.07	6.70	5.74	5.21	4.86	4.62	4.44	4.30	4.19	4.10	4.02	3.96	3.86	3.78	3.66				
14	.05	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60	2.57	2.53	2.48	2.44	2.39				
	.01	8.86	6.51	5.56	5.04	4.69	4.46	4.28	4.14	4.03	3.94	3.86	3.80	3.70	3.62	3.51				
15	.05	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54	2.51	2.48	2.42	2.38	2.33				
	.01	8.68	6.36	5.42	4.89	4.55	4.32	4.14	4.00	3.89	3.80	3.73	3.67	3.56	3.49	3.37				
16	.05	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.46	2.42	2.37	2.33	2.28				
	.01	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89	3.78	3.69	3.62	3.55	3.45	3.37	3.26				
17	.05	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45	2.41	2.38	2.33	2.29	2.23				
	.01	8.40	6.11	5.18	4.67	4.34	4.10	3.93	3.79	3.68	3.59	3.52	3.46	3.35	3.27	3.16				
18	.05	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.37	2.34	2.29	2.25	2.19				
	.01	8.29	6.01	5.09	4.58	4.25	4.01	3.84	3.71	3.60	3.51	3.43	3.37	3.27	3.19	3.08				
19	.05	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38	2.34	2.31	2.26	2.21	2.16				
	.01	8.18	5.93	5.01	4.50	4.17	3.94	3.77	3.63	3.52	3.43	3.36	3.30	3.19	3.12	3.00				

df Within Groups	df Between Groups																			
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20					
20	.05 4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35	2.31	2.28	2.22	2.18	2.12					
.01	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.46	3.37	3.29	3.23	3.13	3.05	2.94					
21	.05 4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32	2.28	2.25	2.20	2.16	2.10					
.01	8.02	5.78	4.87	4.37	4.04	3.81	3.64	3.51	3.40	3.31	3.24	3.17	3.07	2.99	2.88					
22	.05 4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30	2.26	2.23	2.17	2.13	2.07					
.01	7.95	5.72	4.82	4.31	3.99	3.76	3.59	3.45	3.35	3.26	3.18	3.12	3.02	2.94	2.83					
23	.05 4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27	2.24	2.20	2.15	2.11	2.05					
.01	7.88	5.66	4.76	4.26	3.94	3.71	3.54	3.41	3.30	3.21	3.14	3.07	2.97	2.89	2.78					
24	.05 4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25	2.22	2.18	2.13	2.09	2.03					
.01	7.82	5.61	4.72	4.22	3.90	3.67	3.50	3.36	3.26	3.17	3.09	3.03	2.93	2.85	2.74					
25	.05 4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24	2.20	2.16	2.11	2.07	2.01					
.01	7.77	5.57	4.68	4.18	3.85	3.63	3.46	3.32	3.22	3.13	3.06	2.99	2.89	2.81	2.70					
26	.05 4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.18	2.15	2.09	2.05	1.99					
.01	7.72	5.53	4.64	4.14	3.82	3.59	3.42	3.29	3.18	3.09	3.02	2.96	2.86	2.78	2.66					
27	.05 4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20	2.17	2.13	2.08	2.04	1.97					
.01	7.68	5.49	4.60	4.11	3.78	3.56	3.39	3.26	3.15	3.06	2.99	2.93	2.82	2.75	2.63					
28	.05 4.20	3.34	2.95	2.71	2.55	2.45	2.36	2.29	2.24	2.19	2.15	2.12	2.06	2.02	1.96					
.01	7.64	5.45	4.57	4.07	3.75	3.53	3.36	3.23	3.12	3.03	2.96	2.90	2.79	2.72	2.60					
29	.05 4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18	2.14	2.10	2.05	2.01	1.94					
.01	7.60	5.42	4.54	4.04	3.73	3.50	3.33	3.20	3.09	3.00	2.93	2.87	2.77	2.69	2.57					
30	.05 4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.13	2.09	2.04	1.99	1.93					
.01	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	3.07	2.98	2.91	2.84	2.74	2.66	2.55					
32	.05 4.15	3.29	2.90	2.67	2.51	2.40	2.31	2.24	2.19	2.14	2.10	2.07	2.01	1.97	1.91					
.01	7.50	5.34	4.46	3.97	3.65	3.43	3.26	3.13	3.02	2.93	2.86	2.80	2.70	2.62	2.50					
34	.05 4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12	2.08	2.05	1.99	1.95	1.89					
.01	7.44	5.29	4.42	3.93	3.61	3.39	3.22	3.09	2.98	2.89	2.82	2.76	2.66	2.58	2.46					
36	.05 4.11	3.26	2.87	2.63	2.48	2.36	2.28	2.21	2.15	2.11	2.07	2.03	1.98	1.93	1.87					
.01	7.40	5.25	4.38	3.89	3.57	3.35	3.18	3.05	2.95	2.86	2.79	2.72	2.62	2.54	2.43					
38	.05 4.10	3.24	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09	2.05	2.02	1.96	1.92	1.85					
.01	7.36	5.21	4.34	3.86	3.54	3.32	3.15	3.02	2.92	2.83	2.75	2.69	2.59	2.51	2.40					
40	.05 4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.04	2.00	1.95	1.90	1.84					
.01	7.31	5.18	4.31	3.83	3.51	3.29	3.12	2.99	2.89	2.80	2.73	2.66	2.56	2.48	2.37					
42	.05 4.07	3.22	2.83	2.59	2.44	2.32	2.24	2.17	2.11	2.06	2.03	1.99	1.94	1.89	1.83					
.01	7.28	5.15	4.29	3.80	3.49	3.27	3.10	2.97	2.86	2.78	2.70	2.64	2.54	2.46	2.34					
44	.05 4.06	3.21	2.82	2.58	2.43	2.31	2.23	2.16	2.10	2.05	2.01	1.98	1.92	1.88	1.81					
.01	7.25	5.12	4.26	3.78	3.47	3.24	3.08	2.95	2.84	2.75	2.68	2.62	2.52	2.44	2.32					
46	.05 4.05	3.20	2.81	2.57	2.42	2.30	2.22	2.15	2.09	2.04	2.00	1.97	1.91	1.87	1.80					
.01	7.22	5.10	4.24	3.76	3.44	3.22	3.06	2.93	2.82	2.73	2.66	2.60	2.50	2.42	2.30					
48	.05 4.04	3.19	2.80	2.57	2.41	2.29	2.21	2.14	2.08	2.03	1.99	1.96	1.90	1.86	1.79					
.01	7.19	5.08	4.22	3.74	3.43	3.20	3.04	2.91	2.80	2.71	2.64	2.58	2.48	2.40	2.28					

df Within Groups	df Between Groups																			
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20					
55	.05 4.02	3.16	2.77	2.54	2.38	2.27	2.18	2.11	2.06	2.01	1.97	1.93	1.88	1.83	1.76					
.01	7.12	5.01	4.16	3.68	3.37	3.15	2.98	2.85	2.75	2.66	2.59	2.53	2.42	2.34	2.23					
60	.05 4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99	1.95	1.92	1.86	1.82	1.75					
.01	7.08	4.98	4.13	3.65	3.34	3.12	2.95	2.82	2.72	2.63	2.56	2.50	2.39	2.31	2.20					
65	.05 3.99	3.14	2.75	2.51	2.36	2.24	2.15	2.08	2.03	1.98	1.94	1.90	1.85	1.80	1.73					
.01	7.04	4.95	4.10	3.62	3.31	3.09	2.93	2.80	2.69	2.61	2.53	2.47	2.37	2.29	2.17					
70	.05 3.98	3.13	2.74	2.50	2.35	2.23	2.14	2.07	2.02	1.97	1.93	1.89	1.84	1.79	1.72					
.01	7.01	4.92	4.07	3.60	3.29	3.07	2.91	2.78	2.67	2.59	2.51	2.45	2.35	2.27	2.15					
80	.05 3.96	3.11	2.72	2.49	2.33	2.21	2.13	2.06	2.00	1.95	1.91	1.88	1.82	1.77	1.70					
.01	6.96	4.88	4.04	3.56	3.26	3.04	2.87	2.74	2.64	2.55	2.48	2.42	2.31	2.23	2.12					
100	.05 3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.97	1.93	1.89	1.85	1.79	1.75	1.68					
.01	6.90	4.82	3.98	3.51	3.21	2.99	2.82	2.69	2.59	2.50	2.43	2.37	2.27	2.19	2.07					
125	.05 3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.77	1.73	1.66					
.01	6.84	4.76	3.94	3.47	3.17	2.95	2.79	2.66	2.55	2.47	2.39	2.33	2.23	2.15	2.03					
150	.05 3.90	3.06	2.66	2.43	2.27	2.16	2.07	2.00	1.94	1.89	1.85	1.82	1.76	1.71	1.64					
.01	6.81	4.75	3.91	3.45	3.14	2.92	2.76	2.63	2.53	2.44	2.37	2.31	2.20	2.12	2.00					
200	.05 3.89	3.04	2.65	2.42	2.26	2.14	2.06	1.98	1.93	1.88	1.84	1.80	1.74	1.69	1.62					
.01	6.76	4.71	3.88	3.41	3.11	2.89	2.73	2.60	2.50	2.41	2.34	2.27	2.17	2.09	1.97					
400	.05 3.86	3.02	2.63	2.39	2.24	2.12	2.03	1.96	1.90	1.85	1.81	1.78	1.72	1.67	1.60					
.01	6.70	4.66	3.83	3.37	3.06	2.85	2.68	2.56	2.45	2.37	2.29	2.23	2.13	2.05	1.92					
1000	.05 3.85	3.00	2.61	2.38	2.22	2.11	2.02	1.95	1.89	1.84	1.80	1.76	1.70	1.65	1.58					
.01	6.66	4.63	3.80	3.34	3.04	2.82	2.66	2.53	2.43	2.34	2.27	2.20	2.10	2.02	1.90					



Table 7: Critical Values of the Chi-Square ( $\chi^2$ ) Distribution

df	Level of Significance										
	.95	.90	.80	.70	.50	.30	.20	.10	.05	.02	.01
1	0.00393	0.0158	0.0642	0.148	0.455	1.074	1.642	2.706	3.841	5.412	6.635
2	0.103	0.211	0.446	0.713	1.386	2.408	3.219	4.605	5.991	7.824	9.210
3	0.352	0.584	1.006	1.424	2.368	3.665	4.642	6.251	7.815	9.837	11.345
4	0.711	1.064	1.649	2.195	3.357	4.878	5.989	7.779	9.488	11.668	13.277
5	1.145	1.610	2.343	3.000	4.351	6.064	7.289	9.236	11.070	13.388	15.086
6	1.635	2.204	3.070	3.828	5.348	7.231	8.558	10.645	12.592	15.033	16.812
7	2.167	2.833	3.822	4.671	6.346	8.383	9.803	12.017	14.067	16.622	18.475
8	2.733	3.490	4.594	5.527	7.344	9.524	11.030	13.362	15.507	18.168	20.090
9	3.325	4.168	5.380	6.393	8.343	10.656	12.242	14.684	16.919	19.679	21.666
10	3.940	4.865	6.179	7.267	9.342	11.781	13.442	15.987	18.307	21.161	23.209
11	4.575	5.578	6.989	8.148	10.341	12.899	14.631	17.275	19.675	22.618	24.725
12	5.226	6.304	7.807	9.034	11.340	14.011	15.812	18.549	21.026	24.054	26.217
13	5.892	7.041	8.634	9.926	12.340	15.119	16.985	19.812	22.362	25.471	27.688
14	6.571	7.790	9.467	10.821	13.339	16.222	18.151	21.064	23.685	26.873	29.141
15	7.281	8.547	10.307	11.721	14.339	17.322	19.311	22.307	24.996	28.259	30.578
16	7.962	9.312	11.152	12.624	15.338	18.418	20.465	23.542	26.296	29.633	32.000
17	8.672	10.085	12.002	13.531	16.338	19.511	21.615	24.769	27.587	30.995	33.405
18	9.390	10.865	12.857	14.440	17.338	20.601	22.760	25.989	28.869	32.346	34.805
19	10.117	11.651	13.716	15.352	18.338	21.689	23.900	27.204	30.144	33.687	36.191
20	10.851	12.443	14.578	16.266	19.337	22.775	25.038	28.412	31.410	35.020	37.566
21	11.591	13.240	15.445	17.182	20.337	23.858	26.171	29.615	32.671	36.343	38.932
22	12.338	14.041	16.314	18.101	21.337	24.939	27.301	30.813	33.924	37.659	40.289
23	13.091	14.848	17.187	19.021	22.337	26.018	28.429	32.007	35.172	38.968	41.638
24	13.848	15.659	18.062	19.943	23.337	27.096	29.553	33.196	36.415	40.270	42.980
25	14.611	16.473	18.940	20.867	24.337	28.172	30.675	34.382	37.652	41.566	44.314
26	15.379	17.292	19.820	21.792	25.336	29.246	31.795	35.563	38.885	42.856	45.642
27	16.151	18.114	20.703	22.719	26.336	30.319	32.912	36.741	40.113	44.140	46.963
28	16.928	18.939	21.588	23.647	27.336	31.391	34.027	37.916	41.337	45.419	48.278
29	17.708	19.768	22.475	24.577	28.336	32.461	35.139	39.087	42.557	46.693	49.588
30	18.493	20.599	23.364	25.508	29.336	33.530	36.250	40.256	43.773	47.962	50.892

Table 8: Fisher's Transformation of Pearson  $r$  ( $r'$ )

$r$	$r'$	$r$	$r'$	$r$	$r'$	$r$	$r'$	$r$	$r'$	$r$	$r'$	$r$	$r'$	$r$	$r'$	$r$	$r'$	$r$	$r'$
0.000	0.000	0.200	0.203	0.400	0.424	0.600	0.693	0.800	1.099										
0.005	0.005	0.205	0.208	0.405	0.430	0.605	0.701	0.805	1.113										
0.010	0.010	0.210	0.213	0.410	0.436	0.610	0.709	0.810	1.127										
0.015	0.015	0.215	0.218	0.415	0.442	0.615	0.717	0.815	1.142										
0.020	0.020	0.220	0.224	0.420	0.448	0.620	0.725	0.820	1.157										
0.025	0.025	0.225	0.229	0.425	0.454	0.625	0.733	0.825	1.172										
0.030	0.030	0.230	0.234	0.430	0.460	0.630	0.741	0.830	1.188										
0.035	0.035	0.235	0.239	0.435	0.466	0.635	0.750	0.835	1.204										
0.040	0.040	0.240	0.245	0.440	0.472	0.640	0.758	0.840	1.221										
0.045	0.045	0.245	0.250	0.445	0.478	0.645	0.767	0.845	1.238										
0.050	0.050	0.250	0.255	0.450	0.485	0.650	0.775	0.850	1.256										
0.055	0.055	0.255	0.261	0.455	0.491	0.655	0.784	0.855	1.274										
0.060	0.060	0.260	0.266	0.460	0.497	0.660	0.793	0.860	1.293										
0.065	0.065	0.265	0.271	0.465	0.504	0.665	0.802	0.865	1.313										
0.070	0.070	0.270	0.277	0.470	0.510	0.670	0.811	0.870	1.333										
0.075	0.075	0.275	0.282	0.475	0.517	0.675	0.820	0.875	1.354										
0.080	0.080	0.280	0.288	0.480	0.523	0.680	0.829	0.880	1.376										
0.085	0.085	0.285	0.293	0.485	0.530	0.685	0.838	0.885	1.398										
0.090	0.090	0.290	0.299	0.490	0.536	0.690	0.848	0.890	1.422										
0.095	0.095	0.295	0.304	0.495	0.543	0.695	0.858	0.895	1.447										
0.100	0.100	0.300	0.310	0.500	0.549	0.700	0.867	0.900	1.472										
0.105	0.105	0.305	0.315	0.505	0.556	0.705	0.877	0.905	1.499										
0.110	0.110	0.310	0.321	0.510	0.563	0.710	0.887	0.910	1.528										
0.115	0.115	0.315	0.326	0.515	0.570	0.715	0.897	0.915	1.557										
0.120	0.120	0.320	0.332	0.520	0.576	0.720	0.908	0.920	1.589										
0.125	0.125	0.325	0.337	0.525	0.583	0.725	0.918	0.925	1.623										
0.130	0.131	0.330	0.343	0.530	0.590	0.730	0.929	0.930	1.658										
0.135	0.136	0.335	0.348	0.535	0.597	0.735	0.940	0.935	1.697										
0.140	0.141	0.340	0.354	0.540	0.604	0.740	0.950	0.940	1.738										
0.145	0.146	0.345	0.360	0.545	0.611	0.745	0.962	0.945	1.783										
0.150	0.151	0.350	0.365	0.550	0.618	0.750	0.973	0.950	1.832										
0.155	0.156	0.355	0.371	0.555	0.626	0.755	0.984	0.955	1.886										
0.160	0.161	0.360	0.377	0.560	0.633	0.760	0.996	0.960	1.946										
0.165	0.167	0.365	0.383	0.565	0.640	0.765	1.008	0.965	2.014										
0.170	0.172	0.370	0.388	0.570	0.648	0.770	1.020	0.970	2.092										
0.175	0.177	0.375	0.394	0.575	0.655	0.775	1.033	0.975	2.185										
0.180	0.182	0.380	0.399	0.580	0.662	0.780	1.045	0.980	2.298										
0.185	0.187	0.385	0.406	0.585	0.670	0.785	1.058	0.985	2.443										
0.190	0.192	0.390	0.412	0.590	0.678	0.790	1.071	0.990	2.647										
0.195	0.198	0.395	0.418	0.595	0.685	0.795	1.085	0.995	2.994										







n	r	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
19	16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	19	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	0	0.8179	0.6676	0.5488	0.4420	0.3565	0.2901	0.2342	0.1897	0.1516	0.1216	0.0988	0.0715	0.0532	0.0408	0.0322	0.0260	0.0200	0.0000
20	1	0.1652	0.2725	0.3384	0.3889	0.3774	0.3703	0.3526	0.3282	0.3000	0.2702	0.1968	0.0576	0.0271	0.0068	0.0020	0.0005	0.0001	0.0000
20	2	0.0159	0.0528	0.0988	0.1458	0.1887	0.2246	0.2521	0.2711	0.2818	0.2852	0.2293	0.1369	0.0669	0.0278	0.0100	0.0031	0.0008	0.0002
20	3	0.0010	0.0065	0.0183	0.0364	0.0596	0.0860	0.1139	0.1414	0.1672	0.1901	0.2428	0.2054	0.1339	0.0716	0.0323	0.0123	0.0040	0.0011
20	4	0.0000	0.0006	0.0024	0.0065	0.0133	0.0233	0.0364	0.0523	0.0708	0.0898	0.1821	0.2182	0.1897	0.1304	0.0738	0.0350	0.0139	0.0046
20	5	0.0000	0.0000	0.0002	0.0009	0.0022	0.0048	0.0088	0.0145	0.0222	0.0319	0.0228	0.1746	0.2023	0.1769	0.1272	0.0746	0.0365	0.0148
20	6	0.0000	0.0000	0.0000	0.0001	0.0003	0.0008	0.0017	0.0032	0.0055	0.0089	0.0454	0.1091	0.1666	0.1916	0.1712	0.1244	0.0746	0.0370
20	7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0005	0.0011	0.0020	0.0160	0.0545	0.1124	0.1643	0.1844	0.1659	0.1221	0.0739
20	8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0004	0.0046	0.0222	0.0609	0.1144	0.1614	0.1797	0.1623	0.1201
20	9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0011	0.0074	0.0271	0.0654	0.1158	0.1597	0.1771	0.1602
20	10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0020	0.0098	0.0308	0.0666	0.1171	0.1593	0.1762
20	11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0005	0.0030	0.0120	0.0336	0.0710	0.1165	0.1602	0.1602
20	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0008	0.0039	0.0136	0.0355	0.0727	0.1201	0.1201
20	13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0010	0.0045	0.0146	0.0366	0.0739	0.0739
20	14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0012	0.0049	0.0150	0.0370	0.0370
20	15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	19	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 11: Factorials of Integers 0 – 50

n	n!	n	n!
0	1	26	4.03E+026
1	1	27	1.089E+28
2	2	28	3.049E+29
3	6	29	8.842E+30
4	24	30	2.653E+32
5	120	31	8.223E+33
6	720	32	2.631E+35
7	5040	33	8.683E+36
8	40320	34	2.952E+38
9	362880	35	1.033E+40
10	3628800	36	3.72E+41
11	39916800	37	1.376E+43
12	479001600	38	5.23E+44
13	6.227E+09	39	2.04E+46
14	8.718E+10	40	8.159E+47
15	1.308E+12	41	3.345E+49
16	2.092E+13	42	1.405E+51
17	3.557E+14	43	6.042E+52
18	6.402E+15	44	2.658E+54
19	1.216E+17	45	1.198E+56
20	2.433E+18	46	5.503E+57
21	5.109E+19	47	2.586E+59
22	1.124E+21	48	1.241E+61
23	2.585E+22	49	6.083E+62
24	6.204E+23	50	3.041E+64
25	1.551E+25		