SOURCEBOOK

Intro Articles

Statistical Tables

Abstract: This chapter provides basic statistical tables. Tables included are the Standard Normal Distribution, Student's (t) Distribution, Snedecor's F Distribution, Tukey's HSD Distribution, and power tables for Cohen's d and Eta-Squared. These tables were used in the annotated output sections of this project.

Keywords: Statistical tables, normal distribution, critical values, power tables

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Standard Normal Distribution

Percentile Ranks (PR) and Two-Tailed Probabilities (p) for the Given Normal Deviates (z)

Z	PR	*p*
< -3.400	<.001	<.001
-3.400	<.001	.001
-3.380	<.001	.001
-3.360	<.001	.001
-3.340	<.001	.001
-3.320	<.001	.001
-3.300	<.001	.001
-3.280	.001	.001
-3.260	.001	.001
-3.240	.001	.001
-3.220	.001	.001
-3.200	.001	.001
-3.180	.001	.001
-3.160	.001	.002
-3.140	.001	.002
-3.120	.001	.002
-3.100	.001	.002
-3.080	.001	.002
-3.060	.001	.002
-3.040	.001	.002
-3.020	.001	.003
-3.000	.001	.003
-2.980	.001	.003
-2.960	.002	.003
-2.940	.002	.003
-2.920	.002	.004
-2.900	.002	.004
-2.880	.002	.004
-2.860	.002	.004
-2.840	.002	.005
-2.820	.002	.005
-2.800	.003	.005
-2.780	.003	.005
-2.760	.003	.006
-2.740	.003	.006
-2.720	.003	.007
-2.700	.003	.007
-2.680	.004	.007
-2.660	.004	.008
-2.640	.004	.008
-2.620	.004	.009
-2.600	.005	.009
-2.580	.005	.010
-2.560	.005	.010
-2.540	.006	.011
-2.520	.006	.012
-2.500	.006	.012
-2.480	.007	.013
-2.460	.007	.014
-2.440	.007	.015
-2.420	.008	.016
-2.400	.008	.016
-2.380	.009	.017
-2.360	.009	.018
-2.340	.010	.019
-2.320	.010	.020
-2.300	.011	.021
-2.280	.011	.023
-2.260	.012	.024
-2.240	.013	.025
-2.220	.013	.026
-2.200	.014	.028
-2.180	.015	.029
-2.160	.015	.031
-2.140	.016	.032
-2.120	.017	.034
-2.100	.018	.036
-2.080	.019	.038
-2.060	.020	.039
-2.040	.021	.041
-2.020	.022	.043
-2.000	.023	.046
-1.980	.024	.048
-1.960	.025	.050
-1.940	.026	.052
-1.920	.027	.055
-1.900	.029	.057
-1.880	.030	.060
-1.860	.031	.063
-1.840	.033	.066
-1.820	.034	.069
-1.800	.036	.072
-1.780	.038	.075
-1.760	.039	.078
-1.740	.041	.082
-1.720	.043	.085
-1.700	.045	.089
-1.680	.046	.093
-1.660	.048	.097
-1.640	.051	.101
-1.620	.053	.105
-1.600	.055	.110
-1.580	.057	.114
-1.560	.059	.119
-1.540	.062	.124
-1.520	.064	.129
-1.500	.067	.134
-1.480	.069	.139
-1.460	.072	.144
-1.440	.075	.150
-1.420	.078	.156
-1.400	.081	.162
-1.380	.084	.168
-1.360	.087	.174
-1.340	.090	.180
-1.320	.093	.187
-1.300	.097	.194
-1.280	.100	.201
-1.260	.104	.208
-1.240	.107	.215
-1.220	.111	.222
-1.200	.115	.230
-1.180	.119	.238
-1.160	.123	.246
-1.140	.127	.254
-1.120	.131	.263
-1.100	.136	.271
-1.080	.140	.280
-1.060	.145	.289
-1.040	.149	.298
-1.020	.154	.308
-1.000	.159	.317
-0.980	.164	.327
-0.960	.169	.337
-0.940	.174	.347
-0.920	.179	.358
-0.900	.184	.368
-0.880	.189	.379
-0.860	.195	.390
-0.840	.200	.401
-0.820	.206	.412
-0.800	.212	.424
-0.780	.218	.435
-0.760	.224	.447
-0.740	.230	.459
-0.720	.236	.472
-0.700	.242	.484
-0.680	.248	.497
-0.660	.255	.509
-0.640	.261	.522
-0.620	.268	.535
-0.600	.274	.549
-0.580	.281	.562
-0.560	.288	.575
-0.540	.295	.589
-0.520	.302	.603
-0.500	.309	.617
-0.480	.316	.631
-0.460	.323	.646
-0.440	.330	.660
-0.420	.337	.674
-0.400	.345	.689
-0.380	.352	.704
-0.360	.359	.719
-0.340	.367	.734
-0.320	.374	.749
-0.300	.382	.764
-0.280	.390	.779
-0.260	.397	.795
-0.240	.405	.810
-0.220	.413	.826
-0.200	.421	.841
-0.180	.429	.857
-0.160	.436	.873
-0.140	.444	.889
-0.120	.452	.904
-0.100	.460	.920
-0.080	.468	.936
-0.060	.476	.952
-0.040	.484	.968
-0.020	.492	.984
0.000	.500	1.000

Percentile Ranks (PR) and Two-Tailed Probabilities (p) for the Given Normal Deviates (z)

Z	PR	*p*
0.000	.500	1.000
0.020	.508	.984
0.040	.516	.968
0.060	.524	.952
0.080	.532	.936
0.100	.540	.920
0.120	.548	.904
0.140	.556	.889
0.160	.564	.873
0.180	.571	.857
0.200	.579	.841
0.220	.587	.826
0.240	.595	.810
0.260	.603	.795
0.280	.610	.779
0.300	.618	.764
0.320	.626	.749
0.340	.633	.734
0.360	.641	.719
0.380	.648	.704
0.400	.655	.689
0.420	.663	.674
0.440	.670	.660
0.460	.677	.646
0.480	.684	.631
0.500	.691	.617
0.520	.698	.603
0.540	.705	.589
0.560	.712	.575
0.580	.719	.562
0.600	.726	.549
0.620	.732	.535
0.640	.739	.522
0.660	.745	.509
0.680	.752	.497
0.700	.758	.484
0.720	.764	.472
0.740	.770	.459
0.760	.776	.447
0.780	.782	.435
0.800	.788	.424
0.820	.794	.412
0.840	.800	.401
0.860	.805	.390
0.880	.811	.379
0.900	.816	.368
0.920	.821	.358
0.940	.826	.347
0.960	.831	.337
0.980	.836	.327
1.000	.841	.317
1.020	.846	.308
1.040	.851	.298
1.060	.855	.289
1.080	.860	.280
1.100	.864	.271
1.120	.869	.263
1.140	.873	.254
1.160	.877	.246
1.180	.881	.238
1.200	.885	.230
1.220	.889	.222
1.240	.893	.215
1.260	.896	.208
1.280	.900	.201
1.300	.903	.194
1.320	.907	.187
1.340	.910	.180
1.360	.913	.174
1.380	.916	.168
1.400	.919	.162
1.420	.922	.156
1.440	.925	.150
1.460	.928	.144
1.480	.931	.139
1.500	.933	.134
1.520	.936	.129
1.540	.938	.124
1.560	.941	.119
1.580	.943	.114
1.600	.945	.110
1.620	.947	.105
1.640	.949	.101
1.660	.952	.097
1.680	.954	.093
1.700	.955	.089
1.720	.957	.085
1.740	.959	.082
1.760	.961	.078
1.780	.962	.075
1.800	.964	.072
1.820	.966	.069
1.840	.967	.066
1.860	.969	.063
1.880	.970	.060
1.900	.971	.057
1.920	.973	.055
1.940	.974	.052
1.960	.975	.050
1.980	.976	.048
2.000	.977	.046
2.020	.978	.043
2.040	.979	.041
2.060	.980	.039
2.080	.981	.038
2.100	.982	.036
2.120	.983	.034
2.140	.984	.032
2.160	.985	.031
2.180	.985	.029
2.200	.986	.028
2.220	.987	.026
2.240	.987	.025
2.260	.988	.024
2.280	.989	.023
2.300	.989	.021
2.320	.990	.020
2.340	.990	.019
2.360	.991	.018
2.380	.991	.017
2.400	.992	.016
2.420	.992	.016
2.440	.993	.015
2.460	.993	.014
2.480	.993	.013
2.500	.994	.012
2.520	.994	.012
2.540	.994	.011
2.560	.995	.010
2.580	.995	.010
2.600	.995	.009
2.620	.996	.009
2.640	.996	.008
2.660	.996	.008
2.680	.996	.007
2.700	.997	.007
2.720	.997	.007
2.740	.997	.006
2.760	.997	.006
2.780	.997	.005
2.800	.997	.005
2.820	.998	.005
2.840	.998	.005
2.860	.998	.004
2.880	.998	.004
2.900	.998	.004
2.920	.998	.004
2.940	.998	.003
2.960	.998	.003
2.980	.999	.003
3.000	.999	.003
3.020	.999	.003
3.040	.999	.002
3.060	.999	.002
3.080	.999	.002
3.100	.999	.002
3.120	.999	.002
3.140	.999	.002
3.160	.999	.002
3.180	.999	.001
3.200	.999	.001
3.220	.999	.001
3.240	.999	.001
3.260	.999	.001
3.280	.999	.001
3.300	>.999	.001
3.320	>.999	.001
3.340	>.999	.001
3.360	>.999	.001
3.380	>.999	.001
3.400	>.999	.001
> 3.400	>.999	<.001

Student's *t* Distribution

t Statistics for the Given Two-Tailed Probabilities (*p*) and Degrees of Freedom (df)

	Two-Tailed *p* Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.142	.289	.445	.617	.816	1.06	1.386	1.886	2.920	4.303	4.849	5.643	6.965	9.925	31.599
3	.137	.277	.424	.584	.765	.978	1.250	1.638	2.353	3.182	3.482	3.896	4.541	5.841	12.924
4	.134	.271	.414	.569	.741	.941	1.190	1.533	2.132	2.776	2.999	3.298	3.747	4.604	8.610
5	.132	.267	.408	.559	.727	.920	1.156	1.476	2.015	2.571	2.757	3.003	3.365	4.032	6.869
6	.131	.265	.404	.553	.718	.906	1.134	1.440	1.943	2.447	2.612	2.829	3.143	3.707	5.959
7	.130	.263	.402	.549	.711	.896	1.119	1.415	1.895	2.365	2.517	2.715	2.998	3.499	5.408
8	.130	.262	.399	.546	.706	.889	1.108	1.397	1.860	2.306	2.449	2.634	2.896	3.355	5.041
9	.129	.261	.398	.543	.703	.883	1.100	1.383	1.833	2.262	2.398	2.574	2.821	3.250	4.781
10	.129	.260	.397	.542	.700	.879	1.093	1.372	1.812	2.228	2.359	2.527	2.764	3.169	4.587
11	.129	.260	.396	.540	.697	.876	1.088	1.363	1.796	2.201	2.328	2.491	2.718	3.106	4.437
12	.128	.259	.395	.539	.695	.873	1.083	1.356	1.782	2.179	2.303	2.461	2.681	3.055	4.318
13	.128	.259	.394	.538	.694	.870	1.079	1.350	1.771	2.160	2.282	2.436	2.650	3.012	4.221
14	.128	.258	.393	.537	.692	.868	1.076	1.345	1.761	2.145	2.264	2.415	2.624	2.977	4.140
15	.128	.258	.393	.536	.691	.866	1.074	1.341	1.753	2.131	2.249	2.397	2.602	2.947	4.073
16	.128	.258	.392	.535	.690	.865	1.071	1.337	1.746	2.120	2.235	2.382	2.583	2.921	4.015
17	.128	.257	.392	.534	.689	.863	1.069	1.333	1.740	2.110	2.224	2.368	2.567	2.898	3.965
18	.127	.257	.392	.534	.688	.862	1.067	1.330	1.734	2.101	2.214	2.356	2.552	2.878	3.922
19	.127	.257	.391	.533	.688	.861	1.066	1.328	1.729	2.093	2.205	2.346	2.539	2.861	3.883
20	.127	.257	.391	.533	.687	.860	1.064	1.325	1.725	2.086	2.197	2.336	2.528	2.845	3.850
21	.127	.257	.391	.532	.686	.859	1.063	1.323	1.721	2.080	2.189	2.328	2.518	2.831	3.819
22	.127	.256	.390	.532	.686	.858	1.061	1.321	1.717	2.074	2.183	2.320	2.508	2.819	3.792
23	.127	.256	.390	.532	.685	.858	1.060	1.319	1.714	2.069	2.177	2.313	2.500	2.807	3.768
24	.127	.256	.390	.531	.685	.857	1.059	1.318	1.711	2.064	2.172	2.307	2.492	2.797	3.745
25	.127	.256	.390	.531	.684	.856	1.058	1.316	1.708	2.060	2.167	2.301	2.485	2.787	3.725
26	.127	.256	.390	.531	.684	.856	1.058	1.315	1.706	2.056	2.162	2.296	2.479	2.779	3.707
27	.127	.256	.389	.531	.684	.855	1.057	1.314	1.703	2.052	2.158	2.291	2.473	2.771	3.690
28	.127	.256	.389	.530	.683	.855	1.056	1.313	1.701	2.048	2.154	2.286	2.467	2.763	3.674
29	.127	.256	.389	.530	.683	.854	1.055	1.311	1.699	2.045	2.150	2.282	2.462	2.756	3.659
30	.127	.256	.389	.530	.683	.854	1.055	1.310	1.697	2.042	2.147	2.278	2.457	2.750	3.646
35	.127	.255	.388	.529	.682	.852	1.052	1.306	1.690	2.030	2.133	2.262	2.438	2.724	3.591
40	.126	.255	.388	.529	.681	.851	1.050	1.303	1.684	2.021	2.123	2.250	2.423	2.704	3.551
45	.126	.255	.388	.528	.680	.850	1.049	1.301	1.679	2.014	2.115	2.241	2.412	2.690	3.520
50	.126	.255	.388	.528	.679	.849	1.047	1.299	1.676	2.009	2.109	2.234	2.403	2.678	3.496
55	.126	.255	.387	.527	.679	.848	1.046	1.297	1.673	2.004	2.104	2.228	2.396	2.668	3.476
60	.126	.254	.387	.527	.679	.848	1.045	1.296	1.671	2.000	2.099	2.223	2.390	2.660	3.460
70	.126	.254	.387	.527	.678	.847	1.044	1.294	1.667	1.994	2.093	2.215	2.381	2.648	3.435
80	.126	.254	.387	.526	.678	.846	1.043	1.292	1.664	1.990	2.088	2.209	2.374	2.639	3.416
90	.126	.254	.387	.526	.677	.846	1.042	1.291	1.662	1.987	2.084	2.205	2.368	2.632	3.402
100	.126	.254	.386	.526	.677	.845	1.042	1.290	1.660	1.984	2.081	2.201	2.364	2.626	3.390
120	.126	.254	.386	.526	.677	.845	1.041	1.289	1.658	1.980	2.076	2.196	2.358	2.617	3.373
240	.126	.254	.386	.525	.676	.843	1.039	1.285	1.651	1.970	2.065	2.183	2.342	2.596	3.332
∞	.126	.253	.385	.524	.674	.842	1.036	1.282	1.645	1.960	2.054	2.170	2.326	2.576	3.291

Power Table for Cohen's d

Two-Tailed Probabilities (*p*) for a One-Sample Design (α = .05) Given Cohen's d and Sample Size (n)

	Cohen's d Effect Size															
n	**.10**	**.20**	**.30**	**.40**	**.50**	**.60**	**.70**	**.80**	**.90**	**1.00**	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**
3	.032	.041	.052	.065	.079	.095	.113	.133	.155	.179	.204	.230	.258	.287	.316	.347
4	.035	.048	.064	.084	.108	.136	.169	.205	.245	.289	.335	.383	.433	.483	.533	.582
5	.037	.054	.076	.104	.138	.180	.227	.281	.339	.401	.466	.530	.594	.654	.711	.762
6	.039	.060	.088	.124	.169	.224	.286	.356	.430	.507	.583	.655	.722	.781	.833	.875
7	.041	.066	.099	.144	.200	.268	.345	.428	.515	.600	.681	.754	.816	.867	.908	.938
8	.043	.071	.111	.164	.231	.311	.401	.496	.591	.681	.761	.828	.882	.922	.951	.971
9	.045	.077	.122	.184	.262	.354	.455	.559	.659	.748	.823	.882	.925	.955	.975	.986
10	.047	.082	.134	.204	.293	.396	.506	.616	.717	.803	.871	.920	.954	.975	.987	.994
11	.049	.087	.145	.224	.323	.436	.554	.668	.767	.848	.907	.947	.972	.986	.994	.997
12	.050	.092	.156	.244	.353	.475	.599	.714	.810	.883	.933	.965	.983	.993	.997	.999
13	.052	.098	.168	.264	.382	.512	.640	.754	.845	.911	.953	.977	.990	.996	.999	>.999
14	.053	.103	.179	.283	.410	.547	.678	.790	.875	.932	.967	.985	.994	.998	.999	>.999
15	.055	.108	.190	.303	.438	.580	.713	.821	.899	.949	.977	.991	.997	.999	>.999	>.999
16	.057	.113	.202	.322	.465	.612	.745	.848	.919	.962	.984	.994	.998	.999	>.999	>.999
17	.058	.118	.213	.341	.491	.642	.773	.872	.936	.972	.989	.996	.999	>.999	>.999	>.999
18	.059	.123	.224	.360	.516	.670	.799	.892	.949	.979	.992	.998	.999	>.999	>.999	>.999
19	.061	.128	.235	.379	.541	.696	.823	.909	.960	.984	.995	.999	>.999	>.999	>.999	>.999
20	.062	.133	.246	.397	.564	.721	.844	.924	.968	.989	.997	.999	>.999	>.999	>.999	>.999
21	.064	.139	.258	.415	.587	.744	.862	.936	.975	.992	.998	.999	>.999	>.999	>.999	>.999
22	.065	.144	.269	.433	.609	.765	.879	.947	.980	.994	.998	>.999	>.999	>.999	>.999	>.999
23	.067	.149	.280	.450	.630	.785	.894	.956	.985	.996	.999	>.999	>.999	>.999	>.999	>.999
24	.068	.154	.291	.467	.650	.804	.907	.963	.988	.997	.999	>.999	>.999	>.999	>.999	>.999
25	.069	.159	.302	.484	.670	.821	.919	.970	.991	.998	>.999	>.999	>.999	>.999	>.999	>.999
26	.071	.164	.312	.500	.688	.836	.929	.975	.993	.998	>.999	>.999	>.999	>.999	>.999	>.999
27	.072	.169	.323	.517	.706	.851	.938	.979	.994	.999	>.999	>.999	>.999	>.999	>.999	>.999
28	.074	.174	.334	.532	.723	.864	.946	.983	.996	.999	>.999	>.999	>.999	>.999	>.999	>.999
29	.075	.179	.345	.548	.739	.877	.953	.986	.997	.999	>.999	>.999	>.999	>.999	>.999	>.999
30	.076	.184	.355	.563	.754	.888	.959	.988	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999
35	.083	.209	.407	.633	.820	.932	.980	.996	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.090	.234	.456	.694	.869	.959	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.096	.259	.503	.747	.907	.976	.996	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.103	.283	.548	.792	.934	.986	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.109	.307	.589	.830	.954	.992	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.115	.331	.628	.862	.968	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.128	.378	.697	.910	.985	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.141	.424	.755	.942	.993	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.154	.467	.804	.964	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.166	.508	.844	.977	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.191	.584	.903	.991	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.338	.870	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.473	.966	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for a One-Sample Design (α = .01) Given Cohen's d and Sample Size (n)

	Cohen's d Effect Size															
n	**.10**	**.20**	**.30**	**.40**	**.50**	**.60**	**.70**	**.80**	**.90**	**1.00**	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**
3	.007	.008	.011	.013	.016	.020	.024	.028	.033	.039	.045	.052	.059	.066	.074	.083
4	.007	.010	.014	.018	.024	.031	.040	.050	.062	.076	.091	.108	.128	.149	.172	.196
5	.008	.012	.017	.024	.034	.046	.061	.080	.102	.128	.158	.192	.229	.269	.313	.358
6	.008	.013	.021	.031	.045	.064	.088	.117	.153	.194	.242	.294	.350	.410	.471	.532
7	.009	.015	.024	.038	.058	.084	.118	.160	.211	.269	.334	.403	.476	.548	.619	.685
8	.009	.017	.028	.046	.072	.106	.151	.207	.273	.348	.428	.511	.593	.671	.741	.802
9	.010	.018	.033	.055	.087	.131	.188	.258	.339	.427	.519	.610	.694	.769	.832	.883
10	.010	.020	.037	.064	.103	.157	.226	.310	.404	.504	.603	.696	.777	.844	.896	.934
11	.011	.022	.042	.073	.120	.184	.266	.362	.468	.576	.678	.768	.841	.897	.937	.964
12	.011	.024	.046	.083	.137	.212	.306	.415	.530	.642	.743	.826	.890	.934	.964	.981
13	.012	.026	.051	.093	.156	.241	.347	.466	.587	.701	.797	.872	.925	.959	.979	.990
14	.012	.028	.056	.104	.175	.271	.388	.515	.641	.752	.842	.907	.950	.975	.989	.995
15	.013	.030	.061	.115	.194	.301	.428	.562	.689	.797	.878	.933	.967	.985	.994	.998
16	.013	.031	.066	.126	.214	.331	.467	.606	.733	.835	.907	.953	.978	.991	.997	.999
17	.014	.033	.072	.137	.235	.361	.505	.648	.772	.866	.930	.967	.986	.995	.998	.999
18	.014	.035	.077	.149	.255	.391	.542	.686	.806	.893	.947	.977	.991	.997	.999	>.999
19	.015	.037	.083	.161	.276	.421	.577	.721	.836	.915	.961	.984	.994	.998	>.999	>.999
20	.015	.040	.089	.174	.297	.450	.611	.754	.862	.932	.971	.989	.997	.999	>.999	>.999
21	.016	.042	.095	.186	.318	.479	.642	.783	.885	.947	.979	.993	.998	.999	>.999	>.999
22	.016	.044	.101	.199	.340	.507	.672	.809	.904	.958	.985	.995	.999	>.999	>.999	>.999
23	.017	.046	.107	.212	.361	.534	.701	.833	.920	.968	.989	.997	.999	>.999	>.999	>.999
24	.017	.048	.113	.225	.381	.560	.727	.855	.934	.975	.992	.998	>.999	>.999	>.999	>.999
25	.017	.050	.120	.238	.402	.586	.752	.873	.946	.981	.994	.999	>.999	>.999	>.999	>.999
26	.018	.052	.126	.252	.423	.610	.775	.890	.956	.985	.996	.999	>.999	>.999	>.999	>.999
27	.018	.055	.133	.265	.443	.634	.796	.905	.964	.989	.997	.999	>.999	>.999	>.999	>.999
28	.019	.057	.139	.278	.463	.657	.815	.918	.970	.991	.998	>.999	>.999	>.999	>.999	>.999
29	.019	.059	.146	.292	.483	.678	.833	.929	.976	.993	.999	>.999	>.999	>.999	>.999	>.999
30	.020	.062	.153	.305	.503	.699	.850	.939	.980	.995	.999	>.999	>.999	>.999	>.999	>.999
35	.022	.074	.188	.373	.594	.788	.913	.973	.993	.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.024	.086	.224	.439	.674	.854	.952	.988	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.027	.100	.262	.503	.743	.902	.974	.995	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.029	.113	.299	.562	.799	.936	.986	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.032	.128	.338	.618	.846	.959	.993	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.034	.142	.376	.668	.882	.974	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.039	.173	.450	.755	.934	.990	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.045	.205	.520	.823	.964	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.050	.238	.586	.874	.981	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.056	.271	.646	.913	.990	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.067	.339	.747	.959	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.150	.692	.979	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.246	.885	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for Dependent-Samples Design (α = .05) Given Cohen's d and Sample Size (n)

	Cohen's d Effect Size															
n	**.10**	**.20**	**.30**	**.40**	**.50**	**.60**	**.70**	**.80**	**.90**	**1.00**	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**
3	.034	.046	.061	.079	.100	.126	.155	.188	.226	.267	.311	.357	.406	.455	.506	.555
4	.037	.053	.074	.100	.133	.173	.219	.271	.329	.391	.456	.521	.586	.648	.707	.760
5	.039	.059	.086	.121	.166	.219	.281	.351	.425	.502	.579	.653	.722	.783	.835	.878
6	.041	.065	.098	.142	.198	.265	.341	.425	.513	.599	.681	.755	.818	.870	.911	.941
7	.043	.071	.110	.162	.229	.309	.399	.495	.590	.681	.762	.830	.884	.924	.953	.972
8	.045	.076	.121	.183	.261	.352	.454	.558	.659	.749	.824	.884	.927	.957	.976	.987
9	.047	.081	.133	.203	.291	.394	.505	.616	.717	.804	.872	.922	.955	.976	.988	.994
10	.048	.087	.144	.223	.322	.435	.554	.668	.768	.848	.908	.948	.973	.987	.994	.998
11	.050	.092	.156	.243	.352	.474	.598	.714	.810	.884	.934	.966	.984	.993	.997	.999
12	.052	.097	.167	.263	.381	.511	.640	.754	.846	.911	.953	.978	.990	.996	.999	>.999
13	.053	.103	.178	.283	.409	.546	.678	.790	.875	.933	.967	.986	.994	.998	.999	>.999
14	.055	.108	.190	.302	.437	.580	.713	.822	.900	.950	.977	.991	.997	.999	>.999	>.999
15	.056	.113	.201	.321	.464	.612	.744	.849	.920	.962	.984	.994	.998	.999	>.999	>.999
16	.058	.118	.212	.341	.490	.642	.773	.872	.936	.972	.989	.996	.999	>.999	>.999	>.999
17	.059	.123	.224	.359	.516	.670	.799	.892	.949	.979	.993	.998	.999	>.999	>.999	>.999
18	.061	.128	.235	.378	.540	.696	.823	.909	.960	.985	.995	.999	>.999	>.999	>.999	>.999
19	.062	.133	.246	.396	.564	.721	.843	.924	.968	.989	.997	.999	>.999	>.999	>.999	>.999
20	.064	.138	.257	.414	.587	.744	.862	.936	.975	.992	.998	.999	>.999	>.999	>.999	>.999
21	.065	.143	.268	.432	.609	.765	.879	.947	.980	.994	.998	>.999	>.999	>.999	>.999	>.999
22	.067	.148	.279	.450	.630	.785	.894	.956	.985	.996	.999	>.999	>.999	>.999	>.999	>.999
23	.068	.153	.290	.467	.650	.804	.907	.963	.988	.997	.999	>.999	>.999	>.999	>.999	>.999
24	.069	.159	.301	.484	.669	.821	.919	.970	.991	.998	>.999	>.999	>.999	>.999	>.999	>.999
25	.071	.164	.312	.500	.688	.836	.929	.975	.993	.998	>.999	>.999	>.999	>.999	>.999	>.999
26	.072	.169	.323	.516	.706	.851	.938	.979	.994	.999	>.999	>.999	>.999	>.999	>.999	>.999
27	.074	.174	.334	.532	.722	.864	.946	.983	.996	.999	>.999	>.999	>.999	>.999	>.999	>.999
28	.075	.179	.344	.547	.738	.877	.953	.986	.997	.999	>.999	>.999	>.999	>.999	>.999	>.999
29	.076	.184	.355	.562	.754	.888	.959	.988	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999
30	.078	.189	.365	.577	.768	.898	.965	.991	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999
35	.084	.214	.417	.645	.830	.938	.983	.997	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.091	.239	.466	.705	.878	.963	.992	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.097	.263	.512	.756	.913	.978	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.104	.288	.556	.800	.938	.987	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.110	.312	.597	.836	.957	.993	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.117	.336	.635	.867	.970	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.129	.383	.703	.914	.986	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.142	.428	.760	.945	.994	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.155	.471	.808	.965	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.167	.512	.847	.978	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.192	.588	.905	.992	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.339	.871	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.474	.966	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for Dependent-Samples Design (α = .01) Given Cohen's d and Sample Size (n)

	Cohen's d Effect Size															
n	**.10**	**.20**	**.30**	**.40**	**.50**	**.60**	**.70**	**.80**	**.90**	**1.00**	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**
3	.007	.010	.013	.018	.023	.030	.039	.049	.061	.075	.091	.110	.130	.153	.179	.206
4	.008	.012	.017	.025	.035	.048	.065	.085	.110	.140	.175	.214	.258	.306	.357	.410
5	.008	.014	.021	.032	.048	.068	.095	.129	.170	.218	.273	.334	.399	.467	.536	.603
6	.009	.015	.025	.040	.062	.091	.129	.177	.235	.301	.375	.453	.533	.612	.686	.753
7	.010	.017	.030	.049	.077	.116	.166	.229	.303	.386	.474	.564	.650	.729	.798	.855
8	.010	.019	.034	.058	.093	.142	.205	.283	.372	.468	.566	.660	.745	.817	.875	.919
9	.011	.021	.039	.067	.110	.169	.245	.337	.439	.545	.648	.741	.819	.881	.925	.956
10	.011	.023	.044	.077	.128	.198	.287	.391	.504	.616	.719	.806	.874	.924	.957	.977
11	.012	.025	.048	.088	.146	.227	.328	.444	.564	.679	.778	.857	.915	.953	.976	.988
12	.012	.027	.053	.098	.166	.257	.370	.495	.620	.734	.827	.896	.943	.971	.987	.994
13	.013	.029	.059	.109	.185	.288	.411	.544	.671	.782	.867	.926	.962	.983	.993	.997
14	.013	.030	.064	.120	.205	.318	.451	.589	.717	.822	.898	.947	.976	.990	.996	.999
15	.014	.032	.069	.132	.226	.349	.490	.632	.759	.856	.923	.963	.984	.994	.998	.999
16	.014	.034	.075	.144	.247	.379	.528	.672	.795	.885	.942	.975	.990	.997	.999	>.999
17	.014	.036	.080	.156	.268	.409	.564	.709	.827	.908	.957	.983	.994	.998	.999	>.999
18	.015	.039	.086	.168	.289	.439	.598	.743	.854	.927	.968	.988	.996	.999	>.999	>.999
19	.015	.041	.092	.181	.310	.468	.631	.773	.878	.943	.977	.992	.998	.999	>.999	>.999
20	.016	.043	.098	.194	.331	.496	.662	.801	.898	.955	.983	.995	.999	>.999	>.999	>.999
21	.016	.045	.104	.207	.352	.524	.691	.826	.915	.965	.988	.996	.999	>.999	>.999	>.999
22	.017	.047	.111	.220	.373	.551	.718	.848	.930	.973	.991	.998	.999	>.999	>.999	>.999
23	.017	.049	.117	.233	.394	.577	.743	.868	.942	.979	.994	.998	>.999	>.999	>.999	>.999
24	.018	.051	.123	.246	.415	.602	.767	.885	.953	.984	.996	.999	>.999	>.999	>.999	>.999
25	.018	.054	.130	.260	.436	.626	.789	.901	.961	.988	.997	.999	>.999	>.999	>.999	>.999
26	.019	.056	.136	.273	.456	.649	.809	.914	.968	.991	.998	>.999	>.999	>.999	>.999	>.999
27	.019	.058	.143	.287	.476	.671	.828	.926	.974	.993	.998	>.999	>.999	>.999	>.999	>.999
28	.020	.061	.150	.300	.495	.692	.845	.936	.979	.995	.999	>.999	>.999	>.999	>.999	>.999
29	.020	.063	.157	.314	.515	.712	.860	.946	.983	.996	.999	>.999	>.999	>.999	>.999	>.999
30	.021	.065	.164	.327	.534	.731	.874	.953	.986	.997	.999	>.999	>.999	>.999	>.999	>.999
35	.023	.078	.199	.395	.622	.812	.928	.979	.996	.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.025	.091	.236	.460	.698	.872	.960	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.028	.104	.274	.523	.763	.915	.979	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.030	.118	.312	.581	.816	.945	.989	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.032	.132	.350	.635	.859	.964	.994	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.035	.147	.388	.684	.893	.978	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.040	.178	.462	.767	.940	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.045	.210	.532	.833	.968	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.051	.243	.596	.882	.983	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.057	.277	.655	.918	.991	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.068	.345	.754	.962	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.151	.696	.980	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.247	.887	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for a Two-Sample Design (α = .05) Given Cohen's d and Sample Size (n)

	Cohen's d Effect Size															
n	**.10**	**.20**	**.30**	**.40**	**.50**	**.60**	**.70**	**.80**	**.90**	**1.00**	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**
3	.031	.039	.048	.058	.070	.083	.099	.116	.136	.157	.181	.206	.233	.262	.293	.325
4	.033	.043	.055	.070	.087	.108	.131	.158	.189	.222	.259	.299	.341	.385	.430	.476
5	.034	.047	.062	.081	.104	.131	.163	.200	.241	.286	.335	.386	.440	.495	.549	.603
6	.036	.050	.068	.092	.120	.154	.195	.240	.292	.347	.406	.467	.529	.591	.650	.705
7	.037	.053	.075	.102	.136	.177	.226	.280	.341	.406	.473	.541	.608	.672	.731	.785
8	.038	.056	.081	.112	.152	.200	.256	.320	.389	.461	.535	.608	.677	.740	.797	.845
9	.039	.059	.087	.123	.168	.223	.287	.358	.434	.513	.592	.667	.735	.796	.848	.890
10	.040	.062	.093	.133	.184	.245	.316	.395	.478	.562	.643	.718	.785	.841	.887	.922
11	.041	.065	.099	.143	.200	.268	.346	.431	.520	.607	.690	.763	.826	.877	.917	.946
12	.042	.068	.104	.153	.215	.290	.374	.466	.559	.649	.731	.802	.861	.906	.939	.963
13	.043	.071	.110	.163	.231	.312	.403	.499	.596	.687	.768	.835	.889	.928	.956	.974
14	.044	.074	.116	.174	.246	.333	.430	.531	.630	.721	.800	.863	.911	.946	.968	.983
15	.045	.076	.122	.184	.262	.355	.457	.562	.663	.753	.828	.887	.930	.959	.977	.988
16	.046	.079	.127	.194	.277	.376	.483	.591	.693	.781	.853	.907	.945	.969	.984	.992
17	.047	.082	.133	.204	.293	.396	.508	.619	.721	.807	.875	.924	.957	.977	.989	.995
18	.048	.084	.139	.214	.308	.417	.532	.645	.746	.830	.894	.938	.966	.983	.992	.997
19	.048	.087	.145	.224	.323	.436	.556	.670	.770	.851	.910	.949	.974	.987	.994	.998
20	.049	.090	.150	.234	.338	.456	.578	.693	.792	.869	.924	.959	.980	.991	.996	.999
21	.050	.092	.156	.244	.352	.475	.600	.716	.812	.885	.935	.967	.984	.993	.997	.999
22	.051	.095	.162	.253	.367	.494	.621	.736	.830	.900	.946	.973	.988	.995	.998	.999
23	.052	.097	.167	.263	.382	.512	.641	.756	.847	.912	.954	.978	.991	.996	.999	>.999
24	.053	.100	.173	.273	.396	.530	.661	.774	.863	.924	.962	.983	.993	.997	.999	>.999
25	.053	.103	.179	.283	.410	.547	.679	.791	.877	.934	.968	.986	.994	.998	.999	>.999
26	.054	.105	.184	.293	.424	.564	.697	.807	.889	.942	.973	.989	.996	.999	>.999	>.999
27	.055	.108	.190	.302	.438	.581	.714	.822	.901	.950	.978	.991	.997	.999	>.999	>.999
28	.056	.110	.196	.312	.451	.597	.730	.836	.911	.957	.981	.993	.998	.999	>.999	>.999
29	.056	.113	.201	.322	.465	.612	.745	.849	.920	.963	.984	.994	.998	.999	>.999	>.999
30	.057	.115	.207	.331	.478	.627	.760	.861	.929	.968	.987	.995	.999	>.999	>.999	>.999
35	.061	.128	.235	.378	.541	.697	.823	.910	.960	.985	.995	.999	>.999	>.999	>.999	>.999
40	.064	.141	.263	.423	.598	.755	.871	.942	.978	.993	.998	>.999	>.999	>.999	>.999	>.999
45	.068	.153	.290	.467	.650	.804	.907	.964	.988	.997	.999	>.999	>.999	>.999	>.999	>.999
50	.071	.166	.318	.508	.697	.844	.934	.977	.994	.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.075	.179	.344	.547	.738	.877	.953	.986	.997	.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.078	.191	.371	.584	.775	.903	.967	.991	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.085	.216	.422	.652	.836	.941	.984	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.092	.241	.470	.710	.882	.965	.993	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.098	.266	.517	.761	.916	.979	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.105	.290	.560	.804	.940	.988	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.117	.338	.638	.870	.971	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.193	.590	.907	.992	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.268	.764	.980	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for a Two-Sample Design (α = .01) Given Cohen's d and Sample Size (n)

	Cohen's d Effect Size															
n	**.10**	**.20**	**.30**	**.40**	**.50**	**.60**	**.70**	**.80**	**.90**	**1.00**	**1.10**	**1.20**	**1.30**	**1.40**	**1.50**	**1.60**
3	.006	.008	.010	.013	.015	.019	.023	.028	.033	.039	.046	.054	.063	.073	.084	.097
4	.007	.009	.012	.016	.021	.027	.034	.043	.054	.066	.080	.097	.116	.137	.161	.187
5	.007	.010	.014	.020	.027	.036	.047	.061	.077	.097	.121	.148	.178	.213	.251	.291
6	.008	.011	.016	.023	.033	.045	.061	.080	.104	.132	.166	.204	.247	.294	.345	.399
7	.008	.012	.018	.027	.039	.055	.075	.101	.133	.170	.214	.264	.318	.377	.439	.503
8	.008	.013	.021	.031	.046	.065	.091	.123	.163	.210	.264	.325	.390	.458	.528	.597
9	.009	.014	.023	.035	.053	.076	.108	.147	.195	.252	.316	.386	.459	.535	.609	.679
10	.009	.015	.025	.039	.060	.088	.125	.172	.228	.294	.367	.445	.525	.605	.680	.748
11	.009	.016	.027	.043	.067	.100	.143	.197	.262	.336	.417	.502	.587	.668	.741	.805
12	.009	.017	.029	.048	.075	.112	.162	.223	.296	.378	.467	.556	.643	.723	.793	.851
13	.010	.018	.031	.052	.083	.125	.181	.250	.331	.420	.514	.607	.694	.772	.837	.888
14	.010	.019	.034	.057	.091	.138	.200	.277	.365	.461	.559	.654	.740	.813	.872	.916
15	.010	.020	.036	.061	.099	.152	.220	.304	.399	.500	.602	.697	.780	.848	.901	.938
16	.010	.021	.038	.066	.108	.166	.241	.331	.432	.538	.642	.735	.815	.877	.923	.955
17	.011	.022	.040	.071	.117	.180	.261	.358	.465	.575	.679	.770	.845	.902	.941	.967
18	.011	.023	.043	.076	.126	.194	.282	.385	.497	.609	.713	.801	.871	.922	.955	.976
19	.011	.023	.045	.081	.135	.209	.303	.412	.528	.642	.745	.829	.893	.938	.966	.983
20	.012	.024	.048	.086	.144	.223	.323	.438	.558	.673	.773	.853	.912	.951	.975	.988
21	.012	.025	.050	.091	.153	.238	.344	.464	.587	.702	.799	.875	.928	.962	.981	.992
22	.012	.026	.053	.097	.163	.253	.365	.489	.614	.729	.823	.893	.941	.970	.986	.994
23	.012	.027	.055	.102	.173	.269	.385	.514	.641	.754	.844	.910	.952	.977	.990	.996
24	.012	.028	.058	.108	.183	.284	.406	.538	.666	.777	.863	.924	.961	.982	.992	.997
25	.013	.029	.060	.113	.193	.299	.426	.562	.690	.799	.881	.936	.968	.986	.994	.998
26	.013	.030	.063	.119	.203	.314	.446	.584	.713	.818	.896	.946	.975	.989	.996	.999
27	.013	.031	.066	.125	.213	.329	.466	.606	.734	.837	.909	.955	.980	.992	.997	.999
28	.013	.032	.068	.130	.223	.345	.485	.628	.754	.853	.921	.962	.984	.994	.998	.999
29	.014	.033	.071	.136	.233	.360	.504	.648	.773	.868	.932	.968	.987	.995	.998	>.999
30	.014	.034	.074	.142	.244	.375	.523	.668	.791	.882	.941	.974	.990	.996	.999	>.999
35	.015	.039	.088	.173	.296	.449	.611	.755	.864	.934	.972	.990	.997	.999	>.999	>.999
40	.016	.045	.103	.205	.349	.520	.687	.823	.914	.964	.987	.996	.999	>.999	>.999	>.999
45	.017	.050	.119	.238	.402	.586	.752	.874	.947	.981	.994	.999	>.999	>.999	>.999	>.999
50	.019	.056	.135	.271	.453	.646	.806	.912	.968	.990	.998	>.999	>.999	>.999	>.999	>.999
55	.020	.061	.152	.305	.502	.699	.850	.940	.981	.995	.999	>.999	>.999	>.999	>.999	>.999
60	.021	.067	.170	.339	.549	.747	.886	.959	.989	.998	>.999	>.999	>.999	>.999	>.999	>.999
70	.023	.080	.205	.406	.636	.824	.935	.982	.996	.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.026	.093	.242	.471	.710	.881	.964	.992	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.028	.106	.280	.533	.772	.921	.981	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.030	.120	.318	.591	.824	.949	.990	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.035	.150	.394	.692	.898	.979	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.069	.347	.758	.963	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.108	.540	.925	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Snedecor's *F* Distribution

F Statistics for the Given Two-Tailed Probabilities (*p*) and Degrees of Freedom (df)

df_{EFFECT} = 1		
df_{ERROR}	*p* = .05	*p* = .01
2	18.513	98.503
3	10.128	34.116
4	7.709	21.198
5	6.608	16.258
6	5.987	13.745
7	5.591	12.246
8	5.318	11.259
9	5.117	10.561
10	4.965	10.044
11	4.844	9.646
12	4.747	9.330
13	4.667	9.074
14	4.600	8.862
15	4.543	8.683
16	4.494	8.531
17	4.451	8.400
18	4.414	8.285
19	4.381	8.185
20	4.351	8.096
21	4.325	8.017
22	4.301	7.945
23	4.279	7.881
24	4.260	7.823
25	4.242	7.770
26	4.225	7.721
27	4.210	7.677
28	4.196	7.636
29	4.183	7.598
30	4.171	7.562
35	4.121	7.419
40	4.085	7.314
45	4.057	7.234
50	4.034	7.171
55	4.016	7.119
60	4.001	7.077
70	3.978	7.011
80	3.960	6.963
90	3.947	6.925
100	3.936	6.895
120	3.920	6.851
240	3.880	6.742
∞	3.842	6.635

df_{EFFECT} = 2		
df_{ERROR}	*p* = .05	*p* = .01
2	19.000	99.000
3	9.552	30.817
4	6.944	18.000
5	5.786	13.274
6	5.143	10.925
7	4.737	9.547
8	4.459	8.649
9	4.256	8.022
10	4.103	7.559
11	3.982	7.206
12	3.885	6.927
13	3.806	6.701
14	3.739	6.515
15	3.682	6.359
16	3.634	6.226
17	3.592	6.112
18	3.555	6.013
19	3.522	5.926
20	3.493	5.849
21	3.467	5.780
22	3.443	5.719
23	3.422	5.664
24	3.403	5.614
25	3.385	5.568
26	3.369	5.526
27	3.354	5.488
28	3.340	5.453
29	3.328	5.420
30	3.316	5.390
35	3.267	5.268
40	3.232	5.179
45	3.204	5.110
50	3.183	5.057
55	3.165	5.013
60	3.150	4.977
70	3.128	4.922
80	3.111	4.881
90	3.098	4.849
100	3.087	4.824
120	3.072	4.787
240	3.033	4.695
∞	2.996	4.605

df_{EFFECT} = 3		
df_{ERROR}	*p* = .05	*p* = .01
2	19.164	99.166
3	9.277	29.457
4	6.591	16.694
5	5.409	12.060
6	4.757	9.780
7	4.347	8.451
8	4.066	7.591
9	3.863	6.992
10	3.708	6.552
11	3.587	6.217
12	3.490	5.953
13	3.411	5.739
14	3.344	5.564
15	3.287	5.417
16	3.239	5.292
17	3.197	5.185
18	3.160	5.092
19	3.127	5.010
20	3.098	4.938
21	3.072	4.874
22	3.049	4.817
23	3.028	4.765
24	3.009	4.718
25	2.991	4.675
26	2.975	4.637
27	2.960	4.601
28	2.947	4.568
29	2.934	4.538
30	2.922	4.510
35	2.874	4.396
40	2.839	4.313
45	2.812	4.249
50	2.790	4.199
55	2.773	4.159
60	2.758	4.126
70	2.736	4.074
80	2.719	4.036
90	2.706	4.007
100	2.696	3.984
120	2.680	3.949
240	2.642	3.864
∞	2.605	3.782

df_{EFFECT} = 4		
df_{ERROR}	*p* = .05	*p* = .01
2	19.247	99.249
3	9.117	28.710
4	6.388	15.977
5	5.192	11.392
6	4.534	9.148
7	4.120	7.847
8	3.838	7.006
9	3.633	6.422
10	3.478	5.994
11	3.357	5.668
12	3.259	5.412
13	3.179	5.205
14	3.112	5.035
15	3.056	4.893
16	3.007	4.773
17	2.965	4.669
18	2.928	4.579
19	2.895	4.500
20	2.866	4.431
21	2.840	4.369
22	2.817	4.313
23	2.796	4.264
24	2.776	4.218
25	2.759	4.177
26	2.743	4.140
27	2.728	4.106
28	2.714	4.074
29	2.701	4.045
30	2.690	4.018
35	2.641	3.908
40	2.606	3.828
45	2.579	3.767
50	2.557	3.720
55	2.540	3.681
60	2.525	3.649
70	2.503	3.600
80	2.486	3.563
90	2.473	3.535
100	2.463	3.513
120	2.447	3.480
240	2.409	3.398
∞	2.372	3.319

F Statistics for the Given Two-Tailed Probabilities (*p*) and $df_{EFFECT} = 1$

	Two-Tailed *p* Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.020	.083	.198	.381	.667	1.13	1.922	3.556	8.526	18.51	23.51	31.84	48.51	98.50	998.50
3	.019	.077	.180	.342	.585	.957	1.562	2.682	5.538	10.13	12.12	15.18	20.62	34.12	167.03
4	.018	.073	.172	.323	.549	.885	1.415	2.351	4.545	7.709	8.991	10.87	14.04	21.20	74.137
5	.017	.071	.167	.313	.528	.846	1.336	2.178	4.060	6.608	7.598	9.017	11.32	16.26	47.181
6	.017	.070	.163	.306	.515	.820	1.286	2.073	3.776	5.987	6.824	8.003	9.876	13.75	35.507
7	.017	.069	.161	.302	.506	.803	1.253	2.002	3.589	5.591	6.334	7.369	8.988	12.25	29.245
8	.017	.069	.160	.298	.499	.790	1.228	1.951	3.458	5.318	5.998	6.937	8.389	11.26	25.415
9	.017	.068	.158	.295	.494	.780	1.209	1.913	3.360	5.117	5.753	6.624	7.961	10.56	22.857
10	.017	.068	.157	.293	.490	.773	1.195	1.883	3.285	4.965	5.566	6.388	7.638	10.04	21.040
11	.017	.067	.156	.292	.486	.767	1.183	1.859	3.225	4.844	5.420	6.203	7.388	9.646	19.687
12	.016	.067	.156	.290	.484	.761	1.173	1.839	3.177	4.747	5.303	6.055	7.188	9.330	18.643
13	.016	.067	.155	.289	.481	.757	1.165	1.823	3.136	4.667	5.206	5.933	7.024	9.074	17.815
14	.016	.067	.155	.288	.479	.754	1.158	1.809	3.102	4.600	5.125	5.832	6.888	8.862	17.143
15	.016	.067	.154	.287	.478	.750	1.152	1.797	3.073	4.543	5.056	5.746	6.773	8.683	16.587
16	.016	.066	.154	.286	.476	.748	1.147	1.787	3.048	4.494	4.997	5.672	6.674	8.531	16.120
17	.016	.066	.154	.286	.475	.745	1.143	1.778	3.026	4.451	4.945	5.608	6.589	8.400	15.722
18	.016	.066	.153	.285	.474	.743	1.139	1.770	3.007	4.414	4.900	5.552	6.515	8.285	15.379
19	.016	.066	.153	.284	.473	.741	1.135	1.763	2.990	4.381	4.861	5.502	6.449	8.185	15.081
20	.016	.066	.153	.284	.472	.740	1.132	1.757	2.975	4.351	4.825	5.458	6.391	8.096	14.819
21	.016	.066	.153	.284	.471	.738	1.129	1.751	2.961	4.325	4.794	5.419	6.339	8.017	14.587
22	.016	.066	.152	.283	.470	.737	1.127	1.746	2.949	4.301	4.765	5.383	6.292	7.945	14.380
23	.016	.066	.152	.283	.470	.735	1.124	1.741	2.937	4.279	4.739	5.351	6.249	7.881	14.195
24	.016	.066	.152	.282	.469	.734	1.122	1.737	2.927	4.260	4.716	5.322	6.211	7.823	14.028
25	.016	.066	.152	.282	.468	.733	1.120	1.733	2.918	4.242	4.694	5.295	6.176	7.770	13.877
26	.016	.066	.152	.282	.468	.732	1.118	1.729	2.909	4.225	4.674	5.271	6.144	7.721	13.739
27	.016	.065	.152	.282	.467	.731	1.117	1.726	2.901	4.210	4.656	5.248	6.114	7.677	13.613
28	.016	.065	.152	.281	.467	.730	1.115	1.723	2.894	4.196	4.639	5.228	6.087	7.636	13.498
29	.016	.065	.151	.281	.467	.730	1.114	1.720	2.887	4.183	4.624	5.208	6.062	7.598	13.391
30	.016	.065	.151	.281	.466	.729	1.112	1.717	2.881	4.171	4.609	5.190	6.038	7.562	13.293
35	.016	.065	.151	.280	.465	.726	1.107	1.706	2.855	4.121	4.550	5.117	5.942	7.419	12.896
40	.016	.065	.151	.279	.463	.724	1.103	1.698	2.835	4.085	4.507	5.064	5.872	7.314	12.609
45	.016	.065	.150	.279	.462	.722	1.099	1.692	2.820	4.057	4.473	5.022	5.818	7.234	12.392
50	.016	.065	.150	.279	.462	.721	1.097	1.687	2.809	4.034	4.447	4.990	5.776	7.171	12.222
55	.016	.065	.150	.278	.461	.719	1.095	1.683	2.799	4.016	4.425	4.963	5.741	7.119	12.085
60	.016	.065	.150	.278	.460	.719	1.093	1.679	2.791	4.001	4.407	4.941	5.713	7.077	11.973
70	.016	.065	.150	.278	.460	.717	1.090	1.674	2.779	3.978	4.380	4.907	5.668	7.011	11.799
80	.016	.065	.150	.277	.459	.716	1.088	1.670	2.769	3.960	4.359	4.882	5.635	6.963	11.671
90	.016	.065	.149	.277	.459	.715	1.087	1.667	2.762	3.947	4.343	4.862	5.610	6.925	11.573
100	.016	.065	.149	.277	.458	.714	1.085	1.664	2.756	3.936	4.330	4.847	5.590	6.895	11.495
120	.016	.064	.149	.276	.458	.713	1.084	1.661	2.748	3.920	4.311	4.823	5.559	6.851	11.380
240	.016	.064	.149	.276	.456	.711	1.079	1.651	2.727	3.880	4.264	4.766	5.485	6.742	11.099
∞	.016	.064	.148	.275	.455	.708	1.074	1.642	2.706	3.842	4.218	4.709	5.412	6.635	10.828

F Statistics for the Given Two-Tailed Probabilities (*p*) and df_{EFFECT} = 2

	Two-Tailed *p* Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.111	.250	.429	.667	1.00	1.50	2.333	4.000	9.000	19.00	24.00	32.33	49.00	99.00	999.00
3	.109	.241	.403	.609	.881	1.26	1.847	2.886	5.462	9.552	11.32	14.04	18.86	30.82	148.50
4	.108	.236	.390	.582	.828	1.16	1.651	2.472	4.325	6.944	8.000	9.547	12.14	18.00	61.246
5	.108	.233	.383	.567	.799	1.11	1.547	2.259	3.780	5.786	6.560	7.665	9.454	13.27	37.122
6	.107	.232	.379	.557	.780	1.07	1.481	2.130	3.463	5.143	5.772	6.655	8.052	10.92	27.000
7	.107	.230	.375	.550	.767	1.05	1.437	2.043	3.257	4.737	5.280	6.032	7.203	9.547	21.689
8	.107	.229	.373	.545	.757	1.03	1.405	1.981	3.113	4.459	4.944	5.611	6.637	8.649	18.494
9	.107	.229	.371	.541	.749	1.02	1.380	1.935	3.006	4.256	4.702	5.309	6.234	8.022	16.387
10	.106	.228	.370	.538	.743	1.01	1.361	1.899	2.924	4.103	4.518	5.082	5.934	7.559	14.905
11	.106	.228	.368	.535	.739	.997	1.346	1.870	2.860	3.982	4.375	4.905	5.701	7.206	13.812
12	.106	.227	.367	.533	.735	.990	1.333	1.846	2.807	3.885	4.260	4.764	5.516	6.927	12.974
13	.106	.227	.367	.531	.731	.984	1.323	1.826	2.763	3.806	4.165	4.648	5.366	6.701	12.313
14	.106	.227	.366	.530	.729	.979	1.314	1.809	2.726	3.739	4.087	4.552	5.241	6.515	11.779
15	.106	.226	.365	.529	.726	.975	1.306	1.795	2.695	3.682	4.020	4.470	5.135	6.359	11.339
16	.106	.226	.365	.527	.724	.971	1.299	1.783	2.668	3.634	3.963	4.401	5.046	6.226	10.971
17	.106	.226	.364	.526	.722	.968	1.293	1.772	2.645	3.592	3.913	4.340	4.968	6.112	10.658
18	.106	.226	.364	.526	.721	.965	1.288	1.762	2.624	3.555	3.870	4.288	4.900	6.013	10.390
19	.106	.226	.363	.525	.719	.962	1.284	1.754	2.606	3.522	3.831	4.241	4.840	5.926	10.157
20	.106	.226	.363	.524	.718	.960	1.279	1.746	2.589	3.493	3.797	4.200	4.788	5.849	9.953
21	.106	.226	.363	.523	.717	.957	1.276	1.739	2.575	3.467	3.767	4.163	4.740	5.780	9.772
22	.106	.225	.363	.523	.715	.956	1.272	1.733	2.561	3.443	3.739	4.130	4.698	5.719	9.612
23	.106	.225	.362	.522	.714	.954	1.269	1.728	2.549	3.422	3.715	4.100	4.660	5.664	9.469
24	.106	.225	.362	.522	.714	.952	1.266	1.722	2.538	3.403	3.692	4.073	4.625	5.614	9.339
25	.106	.225	.362	.521	.713	.951	1.264	1.718	2.528	3.385	3.671	4.048	4.593	5.568	9.223
26	.106	.225	.362	.521	.712	.949	1.261	1.713	2.519	3.369	3.652	4.025	4.564	5.526	9.116
27	.106	.225	.361	.521	.711	.948	1.259	1.709	2.511	3.354	3.635	4.004	4.538	5.488	9.019
28	.106	.225	.361	.520	.711	.947	1.257	1.706	2.503	3.340	3.619	3.985	4.513	5.453	8.931
29	.106	.225	.361	.520	.710	.946	1.255	1.702	2.495	3.328	3.604	3.967	4.491	5.420	8.849
30	.106	.225	.361	.520	.709	.945	1.254	1.699	2.489	3.316	3.590	3.950	4.470	5.390	8.773
35	.106	.225	.360	.518	.707	.941	1.246	1.686	2.461	3.267	3.534	3.883	4.384	5.268	8.470
40	.106	.224	.360	.517	.705	.938	1.241	1.676	2.440	3.232	3.492	3.833	4.321	5.179	8.251
45	.106	.224	.360	.517	.704	.935	1.237	1.668	2.425	3.204	3.461	3.795	4.273	5.110	8.086
50	.106	.224	.359	.516	.703	.933	1.233	1.662	2.412	3.183	3.435	3.764	4.235	5.057	7.956
55	.106	.224	.359	.516	.702	.932	1.231	1.657	2.402	3.165	3.415	3.740	4.204	5.013	7.853
60	.106	.224	.359	.515	.701	.930	1.228	1.653	2.393	3.150	3.398	3.720	4.179	4.977	7.768
70	.106	.224	.358	.515	.700	.928	1.225	1.647	2.380	3.128	3.372	3.688	4.139	4.922	7.637
80	.105	.224	.358	.514	.699	.927	1.222	1.642	2.370	3.111	3.352	3.665	4.110	4.881	7.540
90	.105	.224	.358	.514	.699	.926	1.220	1.639	2.363	3.098	3.337	3.647	4.087	4.849	7.466
100	.105	.224	.358	.513	.698	.925	1.219	1.636	2.356	3.087	3.325	3.632	4.069	4.824	7.408
120	.105	.224	.358	.513	.697	.923	1.216	1.631	2.347	3.072	3.307	3.611	4.042	4.787	7.321
240	.105	.223	.357	.512	.695	.920	1.210	1.620	2.325	3.033	3.262	3.558	3.976	4.695	7.110
∞	.105	.223	.357	.511	.693	.916	1.204	1.609	2.303	2.996	3.219	3.507	3.912	4.605	6.908

F Statistics for the Given Two-Tailed Probabilities (*p*) and df_{EFFECT} = 3

	Two-Tailed *p* Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.183	.346	.541	.792	1.13	1.64	2.484	4.156	9.162	19.16	24.16	32.50	49.17	99.17	999.17
3	.186	.341	.516	.728	1.00	1.37	1.940	2.936	5.391	9.277	10.96	13.53	18.11	29.46	141.11
4	.187	.338	.504	.699	.941	1.26	1.721	2.485	4.191	6.591	7.557	8.972	11.34	16.69	56.177
5	.188	.337	.497	.682	.907	1.20	1.605	2.253	3.619	5.409	6.098	7.080	8.670	12.06	33.202
6	.189	.337	.493	.672	.886	1.16	1.532	2.113	3.289	4.757	5.305	6.073	7.287	9.780	23.703
7	.190	.336	.490	.664	.871	1.13	1.482	2.019	3.074	4.347	4.811	5.454	6.454	8.451	18.772
8	.190	.336	.488	.659	.860	1.11	1.446	1.951	2.924	4.066	4.476	5.039	5.901	7.591	15.829
9	.191	.336	.487	.655	.852	1.10	1.419	1.901	2.813	3.863	4.234	4.741	5.510	6.992	13.902
10	.191	.336	.485	.651	.845	1.08	1.398	1.861	2.728	3.708	4.052	4.517	5.218	6.552	12.553
11	.191	.336	.484	.649	.840	1.07	1.381	1.830	2.660	3.587	3.910	4.344	4.993	6.217	11.561
12	.192	.336	.483	.646	.835	1.07	1.366	1.804	2.606	3.490	3.795	4.205	4.814	5.953	10.804
13	.192	.335	.483	.645	.832	1.06	1.355	1.783	2.560	3.411	3.702	4.092	4.669	5.739	10.209
14	.192	.335	.482	.643	.828	1.05	1.345	1.765	2.522	3.344	3.624	3.998	4.549	5.564	9.729
15	.192	.335	.482	.642	.826	1.05	1.336	1.749	2.490	3.287	3.558	3.918	4.447	5.417	9.335
16	.192	.335	.481	.640	.823	1.04	1.328	1.736	2.462	3.239	3.502	3.850	4.361	5.292	9.006
17	.193	.335	.481	.639	.821	1.04	1.322	1.724	2.437	3.197	3.453	3.791	4.286	5.185	8.727
18	.193	.335	.480	.638	.819	1.04	1.316	1.713	2.416	3.160	3.410	3.740	4.221	5.092	8.487
19	.193	.335	.480	.638	.818	1.03	1.311	1.704	2.397	3.127	3.372	3.694	4.164	5.010	8.280
20	.193	.335	.480	.637	.816	1.03	1.306	1.696	2.380	3.098	3.338	3.654	4.113	4.938	8.098
21	.193	.335	.479	.636	.815	1.03	1.302	1.688	2.365	3.072	3.308	3.618	4.068	4.874	7.938
22	.193	.335	.479	.636	.814	1.03	1.298	1.682	2.351	3.049	3.281	3.586	4.028	4.817	7.796
23	.193	.335	.479	.635	.813	1.02	1.295	1.676	2.339	3.028	3.257	3.557	3.991	4.765	7.669
24	.193	.335	.479	.635	.812	1.02	1.292	1.670	2.327	3.009	3.234	3.530	3.958	4.718	7.554
25	.193	.335	.479	.634	.811	1.02	1.289	1.665	2.317	2.991	3.214	3.506	3.928	4.675	7.451
26	.193	.335	.479	.634	.810	1.02	1.286	1.660	2.307	2.975	3.196	3.484	3.900	4.637	7.357
27	.193	.335	.478	.633	.809	1.02	1.284	1.656	2.299	2.960	3.178	3.464	3.874	4.601	7.272
28	.193	.335	.478	.633	.808	1.02	1.281	1.652	2.291	2.947	3.163	3.445	3.851	4.568	7.193
29	.193	.335	.478	.633	.808	1.02	1.279	1.648	2.283	2.934	3.148	3.428	3.829	4.538	7.121
30	.193	.335	.478	.632	.807	1.01	1.277	1.645	2.276	2.922	3.135	3.412	3.809	4.510	7.054
35	.194	.335	.477	.631	.804	1.01	1.269	1.630	2.247	2.874	3.079	3.346	3.727	4.396	6.787
40	.194	.335	.477	.630	.802	1.01	1.263	1.620	2.226	2.839	3.038	3.298	3.667	4.313	6.595
45	.194	.335	.477	.629	.801	1.00	1.258	1.611	2.210	2.812	3.007	3.261	3.622	4.249	6.450
50	.194	.335	.477	.629	.800	1.00	1.255	1.605	2.197	2.790	2.982	3.231	3.585	4.199	6.336
55	.194	.335	.476	.628	.799	1.00	1.252	1.599	2.186	2.773	2.962	3.208	3.556	4.159	6.246
60	.194	.335	.476	.628	.798	.998	1.249	1.595	2.177	2.758	2.946	3.188	3.532	4.126	6.171
70	.194	.335	.476	.627	.796	.996	1.245	1.588	2.164	2.736	2.920	3.158	3.494	4.074	6.057
80	.194	.335	.476	.626	.795	.994	1.242	1.583	2.154	2.719	2.901	3.135	3.467	4.036	5.972
90	.194	.335	.476	.626	.795	.993	1.240	1.579	2.146	2.706	2.886	3.118	3.445	4.007	5.908
100	.194	.335	.476	.626	.794	.992	1.238	1.576	2.139	2.696	2.874	3.104	3.428	3.984	5.857
120	.194	.335	.475	.625	.793	.990	1.235	1.571	2.130	2.680	2.856	3.083	3.403	3.949	5.781
240	.195	.335	.475	.624	.791	.986	1.228	1.559	2.107	2.642	2.813	3.032	3.340	3.864	5.598
∞	.195	.335	.475	.623	.789	.982	1.222	1.547	2.084	2.605	2.770	2.983	3.279	3.782	5.422

F Statistics for the Given Two-Tailed Probabilities (*p*) and df_{EFFECT} = 4

df_{ERROR}	Two-Tailed *p* Values														
	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.231	.405	.606	.860	1.21	1.72	2.561	4.236	9.243	19.25	24.25	32.58	49.25	99.25	999.25
3	.239	.402	.581	.793	1.06	1.43	1.985	2.956	5.343	9.117	10.75	13.25	17.69	28.71	137.10
4	.243	.403	.570	.763	1.00	1.31	1.753	2.483	4.107	6.388	7.305	8.648	10.90	15.98	53.436
5	.247	.404	.565	.747	.965	1.24	1.629	2.240	3.520	5.192	5.835	6.751	8.233	11.39	31.085
6	.249	.404	.562	.736	.942	1.20	1.551	2.092	3.181	4.534	5.038	5.744	6.859	9.148	21.924
7	.251	.405	.559	.729	.926	1.17	1.499	1.994	2.961	4.120	4.543	5.127	6.035	7.847	17.198
8	.253	.406	.558	.723	.915	1.15	1.460	1.923	2.806	3.838	4.207	4.713	5.489	7.006	14.392
9	.254	.406	.556	.719	.906	1.13	1.431	1.870	2.693	3.633	3.965	4.417	5.103	6.422	12.560
10	.255	.407	.556	.716	.899	1.12	1.408	1.829	2.605	3.478	3.783	4.195	4.816	5.994	11.283
11	.256	.407	.555	.713	.893	1.11	1.390	1.796	2.536	3.357	3.641	4.023	4.594	5.668	10.346
12	.257	.407	.554	.711	.888	1.10	1.375	1.768	2.480	3.259	3.527	3.886	4.419	5.412	9.633
13	.257	.408	.554	.709	.885	1.09	1.362	1.746	2.434	3.179	3.434	3.773	4.276	5.205	9.073
14	.258	.408	.553	.708	.881	1.09	1.352	1.727	2.395	3.112	3.356	3.680	4.158	5.035	8.622
15	.258	.408	.553	.706	.878	1.08	1.342	1.710	2.361	3.056	3.290	3.602	4.058	4.893	8.253
16	.259	.408	.553	.705	.876	1.08	1.334	1.696	2.333	3.007	3.234	3.534	3.974	4.773	7.944
17	.259	.409	.552	.704	.874	1.07	1.327	1.684	2.308	2.965	3.185	3.476	3.901	4.669	7.683
18	.260	.409	.552	.703	.872	1.07	1.321	1.673	2.286	2.928	3.142	3.425	3.837	4.579	7.459
19	.260	.409	.552	.702	.870	1.07	1.316	1.663	2.266	2.895	3.105	3.380	3.781	4.500	7.265
20	.260	.409	.552	.702	.868	1.06	1.311	1.654	2.249	2.866	3.071	3.341	3.731	4.431	7.096
21	.260	.409	.552	.701	.867	1.06	1.306	1.646	2.233	2.840	3.041	3.305	3.687	4.369	6.947
22	.261	.409	.551	.700	.866	1.06	1.302	1.639	2.219	2.817	3.014	3.273	3.647	4.313	6.814
23	.261	.409	.551	.700	.864	1.06	1.298	1.633	2.207	2.796	2.990	3.244	3.611	4.264	6.696
24	.261	.409	.551	.699	.863	1.06	1.295	1.627	2.195	2.776	2.968	3.218	3.579	4.218	6.589
25	.261	.410	.551	.699	.862	1.05	1.292	1.622	2.184	2.759	2.948	3.194	3.549	4.177	6.493
26	.261	.410	.551	.698	.861	1.05	1.289	1.617	2.174	2.743	2.929	3.173	3.522	4.140	6.406
27	.262	.410	.551	.698	.861	1.05	1.286	1.612	2.165	2.728	2.912	3.153	3.498	4.106	6.326
28	.262	.410	.551	.698	.860	1.05	1.284	1.608	2.157	2.714	2.896	3.134	3.475	4.074	6.253
29	.262	.410	.551	.697	.859	1.05	1.282	1.604	2.149	2.701	2.882	3.117	3.453	4.045	6.186
30	.262	.410	.551	.697	.858	1.05	1.280	1.600	2.142	2.690	2.868	3.101	3.434	4.018	6.125
35	.262	.410	.550	.696	.856	1.04	1.271	1.585	2.113	2.641	2.813	3.036	3.354	3.908	5.876
40	.263	.410	.550	.695	.854	1.04	1.264	1.574	2.091	2.606	2.773	2.989	3.295	3.828	5.698
45	.263	.411	.550	.694	.852	1.03	1.259	1.565	2.074	2.579	2.742	2.952	3.251	3.767	5.564
50	.263	.411	.550	.693	.851	1.03	1.255	1.558	2.061	2.557	2.717	2.923	3.215	3.720	5.459
55	.264	.411	.550	.693	.850	1.03	1.252	1.552	2.050	2.540	2.697	2.900	3.187	3.681	5.375
60	.264	.411	.550	.693	.849	1.03	1.249	1.548	2.041	2.525	2.680	2.881	3.163	3.649	5.307
70	.264	.411	.549	.692	.847	1.03	1.245	1.540	2.027	2.503	2.655	2.851	3.127	3.600	5.201
80	.264	.411	.549	.691	.846	1.02	1.242	1.535	2.016	2.486	2.636	2.828	3.100	3.563	5.123
90	.265	.411	.549	.691	.846	1.02	1.239	1.531	2.008	2.473	2.621	2.811	3.079	3.535	5.064
100	.265	.411	.549	.691	.845	1.02	1.237	1.527	2.002	2.463	2.609	2.798	3.062	3.513	5.017
120	.265	.412	.549	.690	.844	1.02	1.234	1.522	1.992	2.447	2.592	2.777	3.037	3.480	4.947
240	.265	.412	.549	.689	.842	1.02	1.227	1.510	1.968	2.409	2.549	2.727	2.976	3.398	4.778
∞	.266	.412	.549	.688	.839	1.01	1.220	1.497	1.945	2.372	2.506	2.678	2.917	3.319	4.617

Power Table for Eta-Squared

Two-Tailed Probabilities (*p*) for a Single-Factor Design with $df_{EFFECT} = 2$ ($\alpha = .05$)
Given Eta-Squared and Sample Size per Condition (n)

	Eta-Squared															
n	**0.01**	**0.02**	**0.04**	**0.06**	**0.09**	**0.12**	**0.16**	**0.20**	**0.25**	**0.30**	**0.36**	**0.42**	**0.49**	**0.56**	**0.64**	**0.72**
3	.053	.056	.062	.069	.079	.091	.108	.127	.154	.186	.232	.288	.368	.467	.608	.770
4	.055	.060	.071	.083	.102	.123	.154	.190	.241	.299	.381	.473	.594	.722	.860	.957
5	.057	.065	.081	.098	.127	.158	.205	.258	.333	.415	.523	.637	.765	.876	.960	.994
6	.059	.069	.091	.114	.152	.195	.258	.328	.424	.525	.647	.763	.875	.950	.990	.999
7	.062	.074	.101	.131	.179	.233	.312	.398	.510	.622	.747	.852	.937	.982	.998	>.999
8	.064	.079	.112	.147	.207	.272	.366	.465	.588	.705	.824	.911	.970	.994	>.999	>.999
9	.066	.084	.122	.165	.235	.311	.418	.528	.659	.773	.880	.948	.986	.998	>.999	>.999
10	.069	.089	.133	.182	.263	.350	.469	.587	.720	.829	.920	.970	.994	.999	>.999	>.999
11	.071	.094	.145	.200	.291	.388	.518	.641	.772	.872	.947	.983	.997	>.999	>.999	>.999
12	.074	.099	.156	.218	.320	.425	.564	.689	.817	.906	.966	.991	.999	>.999	>.999	>.999
13	.076	.104	.167	.237	.348	.462	.607	.733	.853	.931	.978	.995	>.999	>.999	>.999	>.999
14	.079	.110	.179	.255	.376	.497	.647	.772	.884	.950	.986	.997	>.999	>.999	>.999	>.999
15	.081	.115	.191	.273	.403	.531	.684	.806	.908	.964	.991	.999	>.999	>.999	>.999	>.999
16	.083	.120	.202	.292	.430	.564	.718	.836	.928	.975	.995	.999	>.999	>.999	>.999	>.999
17	.086	.126	.214	.310	.457	.595	.750	.861	.944	.982	.997	>.999	>.999	>.999	>.999	>.999
18	.088	.131	.226	.328	.483	.625	.778	.884	.957	.987	.998	>.999	>.999	>.999	>.999	>.999
19	.091	.137	.238	.346	.508	.653	.804	.903	.967	.991	.999	>.999	>.999	>.999	>.999	>.999
20	.093	.142	.250	.364	.533	.680	.827	.919	.975	.994	.999	>.999	>.999	>.999	>.999	>.999
21	.096	.148	.262	.382	.556	.705	.848	.933	.981	.996	>.999	>.999	>.999	>.999	>.999	>.999
22	.099	.153	.274	.400	.579	.728	.867	.944	.985	.997	>.999	>.999	>.999	>.999	>.999	>.999
23	.101	.159	.286	.418	.602	.750	.883	.954	.989	.998	>.999	>.999	>.999	>.999	>.999	>.999
24	.104	.164	.298	.435	.623	.771	.898	.962	.992	.999	>.999	>.999	>.999	>.999	>.999	>.999
25	.106	.170	.310	.452	.644	.790	.911	.969	.994	.999	>.999	>.999	>.999	>.999	>.999	>.999
26	.109	.176	.322	.469	.664	.808	.923	.975	.995	.999	>.999	>.999	>.999	>.999	>.999	>.999
27	.111	.181	.334	.486	.683	.825	.933	.979	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999
28	.114	.187	.346	.502	.701	.840	.942	.983	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999
29	.117	.193	.357	.518	.718	.854	.950	.986	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999
30	.119	.199	.369	.534	.735	.867	.957	.989	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
35	.133	.228	.427	.608	.807	.919	.980	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.146	.257	.482	.674	.862	.951	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.160	.286	.535	.731	.903	.972	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.174	.316	.584	.780	.932	.984	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.188	.345	.630	.821	.954	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.203	.374	.672	.856	.968	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.231	.430	.745	.909	.986	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.260	.485	.805	.943	.994	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.290	.536	.853	.965	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.319	.584	.890	.979	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.376	.670	.940	.993	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.669	.938	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.847	.991	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for a Single-Factor Design with $df_{EFFECT} = 3$ ($\alpha = .05$) Given Eta-Squared and Sample Size per Condition (n)

	Eta-Squared															
n	**0.01**	**0.02**	**0.04**	**0.06**	**0.09**	**0.12**	**0.16**	**0.20**	**0.25**	**0.30**	**0.36**	**0.42**	**0.49**	**0.56**	**0.64**	**0.72**
3	.053	.056	.063	.070	.082	.095	.114	.136	.168	.207	.261	.328	.424	.540	.695	.854
4	.055	.061	.073	.085	.107	.131	.167	.208	.269	.338	.433	.540	.674	.803	.921	.984
5	.058	.066	.083	.102	.134	.171	.225	.288	.375	.472	.594	.715	.840	.932	.985	.999
6	.060	.071	.094	.120	.164	.213	.287	.369	.480	.594	.724	.836	.930	.980	.998	>.999
7	.062	.076	.105	.138	.194	.257	.350	.449	.576	.697	.821	.912	.972	.995	>.999	>.999
8	.065	.081	.117	.158	.226	.302	.412	.525	.661	.780	.888	.955	.989	.999	>.999	>.999
9	.067	.086	.129	.177	.258	.348	.472	.595	.734	.844	.933	.978	.996	>.999	>.999	>.999
10	.070	.092	.141	.198	.291	.392	.530	.659	.794	.892	.960	.989	.999	>.999	>.999	>.999
11	.073	.097	.154	.218	.324	.437	.584	.715	.843	.927	.977	.995	>.999	>.999	>.999	>.999
12	.075	.103	.167	.239	.357	.479	.634	.764	.882	.951	.987	.998	>.999	>.999	>.999	>.999
13	.078	.109	.180	.260	.390	.521	.679	.806	.912	.968	.993	.999	>.999	>.999	>.999	>.999
14	.080	.115	.193	.281	.422	.560	.721	.842	.935	.979	.996	>.999	>.999	>.999	>.999	>.999
15	.083	.121	.207	.303	.454	.598	.759	.872	.953	.986	.998	>.999	>.999	>.999	>.999	>.999
16	.086	.126	.220	.324	.485	.633	.792	.897	.966	.991	.999	>.999	>.999	>.999	>.999	>.999
17	.088	.132	.234	.346	.515	.667	.822	.918	.975	.995	.999	>.999	>.999	>.999	>.999	>.999
18	.091	.139	.248	.367	.544	.698	.848	.935	.983	.997	>.999	>.999	>.999	>.999	>.999	>.999
19	.094	.145	.261	.388	.572	.727	.870	.948	.988	.998	>.999	>.999	>.999	>.999	>.999	>.999
20	.097	.151	.275	.409	.599	.754	.890	.959	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999
21	.099	.157	.289	.430	.625	.778	.907	.968	.994	.999	>.999	>.999	>.999	>.999	>.999	>.999
22	.102	.164	.303	.450	.650	.801	.922	.975	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999
23	.105	.170	.317	.470	.674	.822	.935	.981	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999
24	.108	.176	.331	.490	.696	.841	.945	.985	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999
25	.111	.183	.345	.509	.717	.858	.954	.989	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
26	.114	.189	.359	.528	.738	.874	.962	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
27	.117	.196	.373	.547	.757	.888	.969	.993	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
28	.119	.202	.387	.565	.775	.901	.974	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
29	.122	.209	.401	.583	.792	.912	.979	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
30	.125	.216	.414	.600	.807	.922	.982	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
35	.140	.249	.480	.680	.873	.959	.994	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.156	.283	.543	.747	.918	.979	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.171	.318	.601	.803	.948	.990	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.187	.352	.654	.849	.968	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.204	.386	.703	.885	.981	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.220	.419	.746	.913	.988	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.254	.484	.817	.952	.996	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.287	.545	.871	.975	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.321	.602	.911	.987	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.355	.654	.939	.993	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.422	.744	.973	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.743	.971	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.906	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for a Single-Factor Design with $df_{EFFECT} = 2$ ($\alpha = .01$) Given Eta-Squared and Sample Size per Condition (n)

	Eta-Squared															
n	**0.01**	**0.02**	**0.04**	**0.06**	**0.09**	**0.12**	**0.16**	**0.20**	**0.25**	**0.30**	**0.36**	**0.42**	**0.49**	**0.56**	**0.64**	**0.72**
3	.011	.011	.013	.015	.018	.021	.026	.031	.040	.051	.067	.089	.124	.175	.264	.408
4	.011	.013	.016	.019	.025	.032	.042	.056	.076	.102	.143	.198	.283	.399	.573	.775
5	.012	.014	.019	.024	.034	.045	.064	.088	.125	.172	.244	.337	.470	.627	.809	.945
6	.013	.016	.022	.030	.044	.062	.090	.126	.183	.254	.358	.482	.642	.797	.930	.990
7	.013	.017	.026	.037	.056	.080	.120	.170	.248	.342	.473	.615	.775	.901	.978	.999
8	.014	.019	.030	.043	.069	.100	.153	.218	.317	.432	.581	.727	.867	.956	.994	>.999
9	.015	.021	.034	.051	.083	.123	.189	.270	.388	.518	.675	.813	.926	.981	.999	>.999
10	.016	.022	.039	.059	.098	.146	.227	.322	.457	.598	.755	.876	.960	.993	>.999	>.999
11	.017	.024	.043	.067	.114	.172	.266	.376	.524	.670	.819	.921	.980	.997	>.999	>.999
12	.017	.026	.048	.076	.130	.198	.307	.429	.587	.733	.869	.950	.990	.999	>.999	>.999
13	.018	.028	.053	.086	.148	.226	.347	.481	.645	.787	.906	.970	.995	>.999	>.999	>.999
14	.019	.030	.058	.095	.167	.254	.388	.531	.698	.832	.934	.982	.998	>.999	>.999	>.999
15	.020	.032	.064	.106	.186	.283	.429	.578	.745	.869	.955	.989	.999	>.999	>.999	>.999
16	.021	.034	.070	.116	.205	.312	.469	.623	.786	.899	.969	.994	>.999	>.999	>.999	>.999
17	.022	.036	.076	.127	.225	.341	.507	.665	.822	.923	.979	.996	>.999	>.999	>.999	>.999
18	.023	.039	.082	.138	.246	.371	.545	.703	.853	.941	.986	.998	>.999	>.999	>.999	>.999
19	.023	.041	.088	.150	.266	.400	.581	.739	.879	.956	.991	.999	>.999	>.999	>.999	>.999
20	.024	.043	.094	.162	.288	.429	.615	.771	.901	.967	.994	.999	>.999	>.999	>.999	>.999
21	.025	.046	.101	.174	.309	.458	.648	.800	.920	.976	.996	>.999	>.999	>.999	>.999	>.999
22	.026	.048	.108	.187	.330	.486	.678	.826	.935	.982	.998	>.999	>.999	>.999	>.999	>.999
23	.027	.050	.115	.199	.352	.513	.707	.849	.948	.987	.998	>.999	>.999	>.999	>.999	>.999
24	.028	.053	.122	.212	.373	.540	.734	.870	.959	.990	.999	>.999	>.999	>.999	>.999	>.999
25	.029	.056	.129	.225	.394	.566	.759	.888	.967	.993	.999	>.999	>.999	>.999	>.999	>.999
26	.030	.058	.136	.238	.415	.592	.783	.904	.974	.995	>.999	>.999	>.999	>.999	>.999	>.999
27	.031	.061	.144	.252	.436	.616	.804	.918	.979	.996	>.999	>.999	>.999	>.999	>.999	>.999
28	.032	.064	.151	.265	.457	.640	.824	.930	.984	.998	>.999	>.999	>.999	>.999	>.999	>.999
29	.033	.066	.159	.279	.478	.662	.842	.940	.987	.998	>.999	>.999	>.999	>.999	>.999	>.999
30	.034	.069	.167	.292	.498	.684	.859	.950	.990	.999	>.999	>.999	>.999	>.999	>.999	>.999
35	.040	.084	.208	.361	.593	.777	.921	.979	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.046	.100	.251	.430	.677	.848	.958	.992	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.052	.117	.296	.496	.749	.899	.978	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.058	.134	.341	.559	.807	.934	.989	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.065	.153	.386	.618	.855	.958	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.072	.172	.430	.671	.892	.974	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.087	.213	.516	.762	.942	.990	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.103	.255	.596	.833	.971	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.119	.299	.667	.885	.986	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.137	.343	.730	.923	.993	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.175	.431	.828	.967	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.431	.823	.994	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.662	.962	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Two-Tailed Probabilities (*p*) for a Single-Factor Design with $df_{EFFECT} = 3$ ($\alpha = .01$) Given Eta-Squared and Sample Size per Condition (n)

	Eta-Squared															
n	**0.01**	**0.02**	**0.04**	**0.06**	**0.09**	**0.12**	**0.16**	**0.20**	**0.25**	**0.30**	**0.36**	**0.42**	**0.49**	**0.56**	**0.64**	**0.72**
3	.011	.012	.013	.015	.018	.022	.028	.035	.046	.060	.081	.111	.160	.232	.355	.542
4	.011	.013	.016	.020	.027	.035	.048	.064	.091	.125	.180	.253	.366	.511	.706	.889
5	.012	.014	.020	.026	.037	.051	.074	.104	.152	.214	.308	.425	.585	.751	.907	.985
6	.013	.016	.023	.032	.049	.070	.106	.152	.226	.317	.447	.593	.760	.894	.978	.999
7	.014	.018	.028	.040	.063	.093	.143	.208	.307	.425	.579	.731	.875	.961	.996	>.999
8	.014	.019	.032	.048	.078	.118	.185	.268	.392	.530	.693	.833	.940	.987	.999	>.999
9	.015	.021	.037	.057	.095	.145	.230	.332	.476	.625	.785	.902	.973	.996	>.999	>.999
10	.016	.023	.042	.066	.114	.175	.277	.396	.556	.709	.854	.945	.989	.999	>.999	>.999
11	.017	.025	.047	.076	.134	.207	.326	.460	.630	.778	.904	.970	.996	>.999	>.999	>.999
12	.018	.027	.053	.087	.154	.240	.375	.522	.696	.835	.939	.984	.998	>.999	>.999	>.999
13	.019	.030	.059	.098	.177	.274	.425	.580	.753	.879	.962	.992	.999	>.999	>.999	>.999
14	.019	.032	.065	.110	.200	.309	.473	.635	.802	.913	.977	.996	>.999	>.999	>.999	>.999
15	.020	.034	.072	.123	.223	.345	.520	.685	.843	.938	.986	.998	>.999	>.999	>.999	>.999
16	.021	.036	.078	.136	.248	.380	.565	.730	.877	.957	.992	.999	>.999	>.999	>.999	>.999
17	.022	.039	.086	.150	.273	.416	.608	.770	.905	.970	.995	>.999	>.999	>.999	>.999	>.999
18	.023	.041	.093	.164	.298	.451	.648	.806	.927	.980	.997	>.999	>.999	>.999	>.999	>.999
19	.024	.044	.101	.178	.324	.485	.686	.837	.944	.986	.998	>.999	>.999	>.999	>.999	>.999
20	.025	.047	.108	.193	.350	.519	.721	.864	.958	.991	.999	>.999	>.999	>.999	>.999	>.999
21	.026	.050	.117	.208	.376	.551	.753	.887	.968	.994	>.999	>.999	>.999	>.999	>.999	>.999
22	.027	.052	.125	.224	.401	.583	.782	.907	.977	.996	>.999	>.999	>.999	>.999	>.999	>.999
23	.028	.055	.133	.239	.427	.613	.808	.924	.983	.997	>.999	>.999	>.999	>.999	>.999	>.999
24	.030	.058	.142	.255	.452	.642	.832	.938	.987	.998	>.999	>.999	>.999	>.999	>.999	>.999
25	.031	.061	.151	.272	.477	.670	.854	.949	.991	.999	>.999	>.999	>.999	>.999	>.999	>.999
26	.032	.064	.160	.288	.502	.696	.873	.959	.993	.999	>.999	>.999	>.999	>.999	>.999	>.999
27	.033	.068	.170	.304	.526	.721	.890	.967	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999
28	.034	.071	.179	.321	.550	.744	.905	.974	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999
29	.035	.074	.189	.338	.573	.766	.918	.979	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999
30	.036	.078	.199	.355	.595	.786	.930	.983	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999
35	.043	.095	.250	.438	.697	.868	.969	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
40	.049	.115	.303	.518	.779	.922	.987	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
45	.057	.136	.358	.593	.844	.956	.995	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
50	.064	.158	.412	.661	.892	.976	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
55	.072	.181	.466	.721	.927	.987	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
60	.081	.205	.518	.773	.951	.993	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
70	.099	.255	.614	.855	.979	.998	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
80	.118	.308	.698	.910	.992	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
90	.139	.361	.769	.947	.997	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
100	.161	.414	.826	.969	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
120	.208	.518	.907	.990	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
240	.518	.903	.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999
360	.763	.988	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999	>.999

Tukey's HSD Distribution

HSD Statistics for the Given Two-Tailed Probabilities (*p*) and Degrees of Freedom (df)

df_{EFFECT} = 1		
df_{ERROR}	*p* = .05	*p* = .01
2	4.303	9.925
3	3.182	5.841
4	2.776	4.604
5	2.571	4.032
6	2.447	3.707
7	2.365	3.499
8	2.306	3.355
9	2.262	3.250
10	2.228	3.169
11	2.201	3.106
12	2.179	3.055
13	2.160	3.012
14	2.145	2.977
15	2.131	2.947
16	2.120	2.921
17	2.110	2.898
18	2.101	2.878
19	2.093	2.861
20	2.086	2.845
21	2.080	2.831
22	2.074	2.819
23	2.069	2.807
24	2.064	2.797
25	2.060	2.787
26	2.056	2.779
27	2.052	2.771
28	2.048	2.763
29	2.045	2.756
30	2.042	2.750
35	2.030	2.724
40	2.021	2.704
45	2.014	2.690
50	2.009	2.678
55	2.004	2.668
60	2.000	2.660
70	1.994	2.648
80	1.990	2.639
90	1.987	2.632
100	1.984	2.626
120	1.980	2.617
240	1.970	2.596
∞	1.960	2.576

df_{EFFECT} = 2		
df_{ERROR}	*p* = .05	*p* = .01
2	5.891	13.449
3	4.179	7.508
4	3.564	5.742
5	3.254	4.933
6	3.068	4.476
7	2.945	4.186
8	2.857	3.985
9	2.792	3.838
10	2.741	3.727
11	2.701	3.639
12	2.668	3.568
13	2.640	3.510
14	2.617	3.461
15	2.597	3.420
16	2.580	3.384
17	2.565	3.353
18	2.552	3.326
19	2.540	3.302
20	2.530	3.280
21	2.521	3.261
22	2.512	3.244
23	2.504	3.228
24	2.497	3.214
25	2.491	3.201
26	2.485	3.189
27	2.479	3.178
28	2.474	3.168
29	2.470	3.159
30	2.465	3.150
35	2.447	3.114
40	2.434	3.088
45	2.424	3.068
50	2.415	3.052
55	2.409	3.039
60	2.403	3.028
70	2.395	3.011
80	2.388	2.999
90	2.383	2.989
100	2.379	2.981
120	2.373	2.970
240	2.358	2.941
∞	2.344	2.914

df_{EFFECT} = 3		
df_{ERROR}	*p* = .05	*p* = .01
2	6.928	15.764
3	4.826	8.605
4	4.071	6.486
5	3.690	5.518
6	3.462	4.973
7	3.310	4.626
8	3.202	4.387
9	3.122	4.212
10	3.059	4.079
11	3.010	3.974
12	2.969	3.890
13	2.935	3.821
14	2.907	3.763
15	2.882	3.714
16	2.861	3.671
17	2.843	3.634
18	2.826	3.602
19	2.812	3.574
20	2.799	3.548
21	2.787	3.526
22	2.777	3.505
23	2.767	3.487
24	2.759	3.470
25	2.751	3.454
26	2.743	3.440
27	2.737	3.427
28	2.730	3.415
29	2.725	3.404
30	2.719	3.394
35	2.697	3.351
40	2.680	3.320
45	2.668	3.296
50	2.658	3.277
55	2.649	3.262
60	2.643	3.249
70	2.632	3.229
80	2.624	3.214
90	2.618	3.203
100	2.613	3.193
120	2.605	3.180
240	2.587	3.146
∞	2.569	3.113

df_{EFFECT} = 4		
df_{ERROR}	*p* = .05	*p* = .01
2	7.694	17.478
3	5.304	9.422
4	4.446	7.042
5	4.012	5.955
6	3.751	5.343
7	3.578	4.953
8	3.455	4.684
9	3.363	4.488
10	3.291	4.339
11	3.234	4.222
12	3.187	4.127
13	3.149	4.049
14	3.116	3.984
15	3.088	3.929
16	3.064	3.881
17	3.042	3.840
18	3.024	3.803
19	3.007	3.771
20	2.992	3.743
21	2.979	3.717
22	2.967	3.694
23	2.956	3.674
24	2.946	3.655
25	2.937	3.637
26	2.928	3.621
27	2.921	3.607
28	2.913	3.593
29	2.907	3.581
30	2.901	3.569
35	2.875	3.522
40	2.856	3.487
45	2.841	3.460
50	2.830	3.438
55	2.820	3.421
60	2.812	3.407
70	2.800	3.384
80	2.791	3.368
90	2.784	3.355
100	2.778	3.345
120	2.770	3.329
240	2.749	3.292
∞	2.728	3.255

HSD Statistics for df_{EFFECT} = 1 and the Given Two-Tailed Probabilities (p) and df_{ERROR}

	Two-Tailed p Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.142	.289	.445	.617	.816	1.06	1.386	1.886	2.920	4.303	4.849	5.643	6.965	9.925	31.599
3	.137	.277	.424	.584	.765	.978	1.250	1.638	2.353	3.182	3.482	3.896	4.541	5.841	12.924
4	.134	.271	.414	.569	.741	.941	1.190	1.533	2.132	2.776	2.999	3.298	3.747	4.604	8.610
5	.132	.267	.408	.559	.727	.920	1.156	1.476	2.015	2.571	2.757	3.003	3.365	4.032	6.869
6	.131	.265	.404	.553	.718	.906	1.134	1.440	1.943	2.447	2.612	2.829	3.143	3.707	5.959
7	.130	.263	.402	.549	.711	.896	1.119	1.415	1.895	2.365	2.517	2.715	2.998	3.499	5.408
8	.130	.262	.399	.546	.706	.889	1.108	1.397	1.860	2.306	2.449	2.634	2.896	3.355	5.041
9	.129	.261	.398	.543	.703	.883	1.100	1.383	1.833	2.262	2.398	2.574	2.821	3.250	4.781
10	.129	.260	.397	.542	.700	.879	1.093	1.372	1.812	2.228	2.359	2.527	2.764	3.169	4.587
11	.129	.260	.396	.540	.697	.876	1.088	1.363	1.796	2.201	2.328	2.491	2.718	3.106	4.437
12	.128	.259	.395	.539	.695	.873	1.083	1.356	1.782	2.179	2.303	2.461	2.681	3.055	4.318
13	.128	.259	.394	.538	.694	.870	1.079	1.350	1.771	2.160	2.282	2.436	2.650	3.012	4.221
14	.128	.258	.393	.537	.692	.868	1.076	1.345	1.761	2.145	2.264	2.415	2.624	2.977	4.140
15	.128	.258	.393	.536	.691	.866	1.074	1.341	1.753	2.131	2.249	2.397	2.602	2.947	4.073
16	.128	.258	.392	.535	.690	.865	1.071	1.337	1.746	2.120	2.235	2.382	2.583	2.921	4.015
17	.128	.257	.392	.534	.689	.863	1.069	1.333	1.740	2.110	2.224	2.368	2.567	2.898	3.965
18	.127	.257	.392	.534	.688	.862	1.067	1.330	1.734	2.101	2.214	2.356	2.552	2.878	3.922
19	.127	.257	.391	.533	.688	.861	1.066	1.328	1.729	2.093	2.205	2.346	2.539	2.861	3.883
20	.127	.257	.391	.533	.687	.860	1.064	1.325	1.725	2.086	2.197	2.336	2.528	2.845	3.850
21	.127	.257	.391	.532	.686	.859	1.063	1.323	1.721	2.080	2.189	2.328	2.518	2.831	3.819
22	.127	.256	.390	.532	.686	.858	1.061	1.321	1.717	2.074	2.183	2.320	2.508	2.819	3.792
23	.127	.256	.390	.532	.685	.858	1.060	1.319	1.714	2.069	2.177	2.313	2.500	2.807	3.768
24	.127	.256	.390	.531	.685	.857	1.059	1.318	1.711	2.064	2.172	2.307	2.492	2.797	3.745
25	.127	.256	.390	.531	.684	.856	1.058	1.316	1.708	2.060	2.167	2.301	2.485	2.787	3.725
26	.127	.256	.390	.531	.684	.856	1.058	1.315	1.706	2.056	2.162	2.296	2.479	2.779	3.707
27	.127	.256	.389	.531	.684	.855	1.057	1.314	1.703	2.052	2.158	2.291	2.473	2.771	3.690
28	.127	.256	.389	.530	.683	.855	1.056	1.313	1.701	2.048	2.154	2.286	2.467	2.763	3.674
29	.127	.256	.389	.530	.683	.854	1.055	1.311	1.699	2.045	2.150	2.282	2.462	2.756	3.659
30	.127	.256	.389	.530	.683	.854	1.055	1.310	1.697	2.042	2.147	2.278	2.457	2.750	3.646
35	.127	.255	.388	.529	.682	.852	1.052	1.306	1.690	2.030	2.133	2.262	2.438	2.724	3.591
40	.126	.255	.388	.529	.681	.851	1.050	1.303	1.684	2.021	2.123	2.250	2.423	2.704	3.551
45	.126	.255	.388	.528	.680	.850	1.049	1.301	1.679	2.014	2.115	2.241	2.412	2.690	3.520
50	.126	.255	.388	.528	.679	.849	1.047	1.299	1.676	2.009	2.109	2.234	2.403	2.678	3.496
55	.126	.255	.387	.527	.679	.848	1.046	1.297	1.673	2.004	2.104	2.228	2.396	2.668	3.476
60	.126	.254	.387	.527	.679	.848	1.045	1.296	1.671	2.000	2.099	2.223	2.390	2.660	3.460
70	.126	.254	.387	.527	.678	.847	1.044	1.294	1.667	1.994	2.093	2.215	2.381	2.648	3.435
80	.126	.254	.387	.526	.678	.846	1.043	1.292	1.664	1.990	2.088	2.209	2.374	2.639	3.416
90	.126	.254	.387	.526	.677	.846	1.042	1.291	1.662	1.987	2.084	2.205	2.368	2.632	3.402
100	.126	.254	.386	.526	.677	.845	1.042	1.290	1.660	1.984	2.081	2.201	2.364	2.626	3.390
120	.126	.254	.386	.526	.677	.845	1.041	1.289	1.658	1.980	2.076	2.196	2.358	2.617	3.373
240	.126	.254	.386	.525	.676	.843	1.039	1.285	1.651	1.970	2.065	2.183	2.342	2.596	3.332
∞	.126	.253	.385	.524	.674	.842	1.036	1.282	1.645	1.960	2.054	2.170	2.326	2.576	3.291

HSD Statistics for df_{EFFECT} = 2 and the Given Two-Tailed Probabilities (p) and df_{ERROR}

	Two-Tailed p Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.449	.674	.883	1.10	1.35	1.65	2.063	2.701	4.054	5.891	6.621	7.685	9.461	13.45	42.765
3	.445	.661	.855	1.05	1.27	1.52	1.835	2.295	3.159	4.179	4.550	5.066	5.873	7.508	16.487
4	.443	.655	.842	1.03	1.23	1.45	1.735	2.124	2.811	3.564	3.826	4.180	4.715	5.742	10.595
5	.442	.651	.835	1.02	1.21	1.42	1.679	2.030	2.628	3.254	3.465	3.746	4.162	4.933	8.253
6	.441	.649	.830	1.01	1.19	1.40	1.643	1.972	2.516	3.068	3.251	3.492	3.842	4.476	7.042
7	.441	.647	.826	1.00	1.18	1.38	1.618	1.931	2.440	2.945	3.110	3.325	3.634	4.186	6.315
8	.440	.646	.823	.995	1.17	1.37	1.600	1.902	2.386	2.857	3.010	3.207	3.489	3.985	5.833
9	.440	.644	.821	.992	1.17	1.36	1.586	1.879	2.345	2.792	2.935	3.120	3.382	3.838	5.493
10	.440	.644	.820	.989	1.16	1.35	1.575	1.861	2.312	2.741	2.877	3.053	3.300	3.727	5.240
11	.439	.643	.818	.986	1.16	1.35	1.566	1.847	2.287	2.701	2.832	2.999	3.235	3.639	5.045
12	.439	.642	.817	.984	1.16	1.34	1.559	1.835	2.266	2.668	2.794	2.956	3.182	3.568	4.891
13	.439	.642	.816	.983	1.15	1.34	1.553	1.826	2.248	2.640	2.763	2.920	3.139	3.510	4.766
14	.439	.642	.815	.981	1.15	1.33	1.547	1.817	2.233	2.617	2.737	2.890	3.102	3.461	4.662
15	.439	.641	.815	.980	1.15	1.33	1.543	1.810	2.220	2.597	2.715	2.864	3.071	3.420	4.575
16	.439	.641	.814	.979	1.15	1.33	1.539	1.804	2.209	2.580	2.695	2.841	3.044	3.384	4.501
17	.439	.641	.813	.978	1.15	1.33	1.535	1.798	2.199	2.565	2.679	2.822	3.021	3.353	4.437
18	.439	.640	.813	.977	1.14	1.33	1.532	1.793	2.191	2.552	2.664	2.805	3.000	3.326	4.381
19	.438	.640	.813	.977	1.14	1.32	1.529	1.789	2.183	2.540	2.651	2.790	2.982	3.302	4.332
20	.438	.640	.812	.976	1.14	1.32	1.527	1.785	2.176	2.530	2.639	2.776	2.966	3.280	4.289
21	.438	.640	.812	.975	1.14	1.32	1.525	1.782	2.170	2.521	2.628	2.764	2.951	3.261	4.250
22	.438	.640	.811	.975	1.14	1.32	1.523	1.778	2.164	2.512	2.619	2.753	2.938	3.244	4.215
23	.438	.640	.811	.974	1.14	1.32	1.521	1.775	2.159	2.504	2.610	2.743	2.926	3.228	4.184
24	.438	.639	.811	.974	1.14	1.32	1.519	1.773	2.155	2.497	2.602	2.734	2.915	3.214	4.156
25	.438	.639	.811	.973	1.14	1.32	1.518	1.770	2.150	2.491	2.595	2.726	2.905	3.201	4.130
26	.438	.639	.810	.973	1.14	1.31	1.516	1.768	2.146	2.485	2.588	2.718	2.896	3.189	4.106
27	.438	.639	.810	.973	1.14	1.31	1.515	1.766	2.143	2.479	2.582	2.711	2.888	3.178	4.084
28	.438	.639	.810	.972	1.14	1.31	1.514	1.764	2.140	2.474	2.576	2.704	2.880	3.168	4.065
29	.438	.639	.810	.972	1.14	1.31	1.512	1.762	2.136	2.470	2.571	2.698	2.873	3.159	4.046
30	.438	.639	.810	.972	1.14	1.31	1.511	1.761	2.134	2.465	2.566	2.693	2.866	3.150	4.029
35	.438	.639	.809	.971	1.13	1.31	1.507	1.754	2.122	2.447	2.546	2.670	2.838	3.114	3.959
40	.438	.638	.808	.970	1.13	1.31	1.504	1.749	2.113	2.434	2.531	2.653	2.818	3.088	3.909
45	.438	.638	.808	.969	1.13	1.30	1.501	1.745	2.106	2.424	2.519	2.639	2.802	3.068	3.870
50	.438	.638	.808	.968	1.13	1.30	1.499	1.742	2.100	2.415	2.510	2.629	2.790	3.052	3.839
55	.438	.638	.808	.968	1.13	1.30	1.498	1.739	2.096	2.409	2.503	2.620	2.780	3.039	3.814
60	.438	.638	.807	.968	1.13	1.30	1.496	1.737	2.092	2.403	2.497	2.613	2.772	3.028	3.794
70	.438	.637	.807	.967	1.13	1.30	1.494	1.734	2.086	2.395	2.487	2.602	2.759	3.011	3.762
80	.438	.637	.807	.967	1.13	1.30	1.492	1.731	2.082	2.388	2.480	2.594	2.749	2.999	3.738
90	.437	.637	.806	.966	1.13	1.30	1.491	1.729	2.079	2.383	2.474	2.588	2.741	2.989	3.720
100	.437	.637	.806	.966	1.13	1.30	1.490	1.728	2.076	2.379	2.470	2.583	2.735	2.981	3.706
120	.437	.637	.806	.966	1.13	1.30	1.489	1.725	2.072	2.373	2.463	2.575	2.726	2.970	3.684
240	.437	.637	.805	.965	1.12	1.29	1.485	1.719	2.062	2.358	2.447	2.556	2.704	2.941	3.632
∞	.437	.636	.805	.964	1.12	1.29	1.481	1.714	2.052	2.344	2.430	2.538	2.682	2.914	3.581

HSD Statistics for df_{EFFECT} = 3 and the Given Two-Tailed Probabilities (*p*) and df_{ERROR}

	Two-Tailed *p* Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.672	.926	1.16	1.40	1.68	2.02	2.490	3.223	4.789	6.928	7.780	9.023	11.10	15.76	50.056
3	.676	.918	1.13	1.34	1.58	1.85	2.201	2.710	3.676	4.826	5.246	5.830	6.746	8.605	18.839
4	.679	.914	1.12	1.32	1.53	1.77	2.073	2.494	3.243	4.071	4.360	4.752	5.345	6.486	11.906
5	.681	.913	1.11	1.30	1.50	1.73	2.001	2.375	3.015	3.690	3.919	4.224	4.676	5.518	9.166
6	.683	.912	1.10	1.29	1.48	1.70	1.955	2.300	2.874	3.462	3.657	3.914	4.290	4.973	7.753
7	.684	.911	1.10	1.28	1.47	1.68	1.924	2.248	2.780	3.310	3.484	3.711	4.039	4.626	6.907
8	.685	.911	1.10	1.28	1.46	1.66	1.900	2.210	2.711	3.202	3.361	3.568	3.864	4.387	6.348
9	.686	.911	1.10	1.27	1.45	1.65	1.882	2.182	2.660	3.122	3.270	3.462	3.735	4.212	5.953
10	.686	.910	1.10	1.27	1.45	1.64	1.868	2.159	2.619	3.059	3.200	3.380	3.636	4.079	5.661
11	.687	.910	1.09	1.27	1.44	1.63	1.856	2.141	2.587	3.010	3.143	3.315	3.558	3.974	5.436
12	.687	.910	1.09	1.27	1.44	1.63	1.847	2.125	2.560	2.969	3.098	3.263	3.494	3.890	5.258
13	.688	.910	1.09	1.26	1.44	1.62	1.839	2.113	2.538	2.935	3.060	3.219	3.442	3.821	5.113
14	.688	.910	1.09	1.26	1.43	1.62	1.832	2.102	2.519	2.907	3.028	3.182	3.398	3.763	4.993
15	.688	.910	1.09	1.26	1.43	1.62	1.826	2.093	2.503	2.882	3.000	3.151	3.360	3.714	4.893
16	.688	.910	1.09	1.26	1.43	1.61	1.821	2.085	2.489	2.861	2.977	3.124	3.328	3.671	4.808
17	.689	.910	1.09	1.26	1.43	1.61	1.816	2.078	2.477	2.843	2.956	3.100	3.299	3.634	4.734
18	.689	.910	1.09	1.26	1.43	1.61	1.812	2.071	2.466	2.826	2.938	3.079	3.275	3.602	4.670
19	.689	.910	1.09	1.26	1.42	1.60	1.809	2.066	2.456	2.812	2.922	3.061	3.253	3.574	4.613
20	.689	.910	1.09	1.26	1.42	1.60	1.805	2.061	2.448	2.799	2.907	3.044	3.233	3.548	4.564
21	.689	.910	1.09	1.26	1.42	1.60	1.803	2.056	2.440	2.787	2.894	3.029	3.216	3.526	4.519
22	.689	.909	1.09	1.25	1.42	1.60	1.800	2.052	2.433	2.777	2.882	3.016	3.200	3.505	4.479
23	.690	.909	1.09	1.25	1.42	1.60	1.797	2.048	2.426	2.767	2.872	3.004	3.185	3.487	4.444
24	.690	.909	1.09	1.25	1.42	1.60	1.795	2.045	2.421	2.759	2.862	2.993	3.172	3.470	4.411
25	.690	.909	1.09	1.25	1.42	1.59	1.793	2.042	2.415	2.751	2.853	2.983	3.160	3.454	4.381
26	.690	.909	1.09	1.25	1.42	1.59	1.791	2.039	2.410	2.743	2.845	2.973	3.149	3.440	4.354
27	.690	.909	1.09	1.25	1.42	1.59	1.790	2.036	2.406	2.737	2.838	2.965	3.139	3.427	4.330
28	.690	.909	1.09	1.25	1.42	1.59	1.788	2.034	2.402	2.730	2.831	2.957	3.130	3.415	4.307
29	.690	.909	1.09	1.25	1.42	1.59	1.787	2.031	2.398	2.725	2.824	2.949	3.121	3.404	4.286
30	.690	.909	1.09	1.25	1.42	1.59	1.785	2.029	2.394	2.719	2.818	2.943	3.113	3.394	4.266
35	.691	.909	1.09	1.25	1.41	1.59	1.780	2.020	2.379	2.697	2.793	2.915	3.080	3.351	4.186
40	.691	.909	1.09	1.25	1.41	1.58	1.775	2.014	2.368	2.680	2.775	2.894	3.056	3.320	4.128
45	.691	.909	1.09	1.25	1.41	1.58	1.772	2.009	2.359	2.668	2.761	2.878	3.037	3.296	4.084
50	.691	.909	1.09	1.25	1.41	1.58	1.769	2.005	2.352	2.658	2.750	2.865	3.022	3.277	4.049
55	.691	.909	1.09	1.25	1.41	1.58	1.767	2.001	2.347	2.649	2.741	2.855	3.010	3.262	4.020
60	.691	.909	1.08	1.25	1.41	1.58	1.765	1.999	2.342	2.643	2.733	2.846	3.000	3.249	3.997
70	.692	.909	1.08	1.25	1.41	1.57	1.763	1.994	2.335	2.632	2.721	2.833	2.984	3.229	3.961
80	.692	.909	1.08	1.25	1.40	1.57	1.760	1.991	2.329	2.624	2.712	2.823	2.972	3.214	3.934
90	.692	.909	1.08	1.25	1.40	1.57	1.759	1.988	2.325	2.618	2.705	2.815	2.963	3.203	3.913
100	.692	.909	1.08	1.24	1.40	1.57	1.757	1.986	2.321	2.613	2.700	2.809	2.956	3.193	3.897
120	.692	.909	1.08	1.24	1.40	1.57	1.755	1.983	2.316	2.605	2.692	2.800	2.945	3.180	3.872
240	.692	.909	1.08	1.24	1.40	1.57	1.751	1.976	2.304	2.587	2.672	2.777	2.918	3.146	3.812
∞	.693	.909	1.08	1.24	1.40	1.56	1.746	1.968	2.291	2.569	2.652	2.754	2.892	3.113	3.754

HSD Statistics for df_{EFFECT} = 4 and the Given Two-Tailed Probabilities (*p*) and df_{ERROR}

	Two-Tailed *p* Values														
df_{ERROR}	.90	.80	.70	.60	.50	.40	.30	.20	.10	.05	.04	.03	.02	.01	.001
2	.834	1.11	1.36	1.62	1.92	2.29	2.800	3.605	5.330	7.694	8.637	10.01	12.31	17.48	55.467
3	.847	1.10	1.33	1.55	1.80	2.09	2.466	3.013	4.057	5.304	5.762	6.397	7.394	9.422	20.596
4	.855	1.10	1.31	1.52	1.75	2.00	2.317	2.762	3.560	4.446	4.756	5.176	5.813	7.042	12.888
5	.861	1.10	1.31	1.51	1.71	1.95	2.234	2.624	3.298	4.012	4.254	4.578	5.059	5.955	9.850
6	.865	1.10	1.30	1.49	1.69	1.91	2.180	2.537	3.136	3.751	3.956	4.227	4.622	5.343	8.287
7	.868	1.10	1.30	1.49	1.68	1.89	2.143	2.477	3.027	3.578	3.759	3.996	4.339	4.953	7.351
8	.871	1.10	1.30	1.48	1.67	1.87	2.115	2.433	2.948	3.455	3.619	3.834	4.141	4.684	6.733
9	.873	1.11	1.30	1.48	1.66	1.86	2.094	2.399	2.888	3.363	3.515	3.713	3.995	4.488	6.297
10	.874	1.11	1.30	1.47	1.65	1.85	2.077	2.373	2.841	3.291	3.435	3.620	3.883	4.339	5.975
11	.876	1.11	1.29	1.47	1.65	1.84	2.064	2.351	2.804	3.234	3.371	3.546	3.794	4.222	5.726
12	.877	1.11	1.29	1.47	1.64	1.83	2.052	2.333	2.773	3.187	3.318	3.486	3.722	4.127	5.530
13	.878	1.11	1.29	1.47	1.64	1.83	2.043	2.318	2.747	3.149	3.275	3.437	3.663	4.049	5.370
14	.879	1.11	1.29	1.46	1.64	1.82	2.035	2.306	2.725	3.116	3.238	3.395	3.613	3.984	5.239
15	.880	1.11	1.29	1.46	1.63	1.82	2.028	2.295	2.706	3.088	3.207	3.359	3.570	3.929	5.128
16	.880	1.11	1.29	1.46	1.63	1.81	2.022	2.285	2.690	3.064	3.180	3.328	3.534	3.881	5.034
17	.881	1.11	1.29	1.46	1.63	1.81	2.016	2.277	2.676	3.042	3.156	3.301	3.502	3.840	4.953
18	.882	1.11	1.29	1.46	1.63	1.81	2.012	2.270	2.663	3.024	3.135	3.277	3.474	3.803	4.882
19	.882	1.11	1.29	1.46	1.63	1.80	2.007	2.263	2.652	3.007	3.117	3.256	3.449	3.771	4.820
20	.883	1.11	1.29	1.46	1.62	1.80	2.004	2.257	2.642	2.992	3.101	3.237	3.427	3.743	4.766
21	.883	1.11	1.29	1.46	1.62	1.80	2.000	2.252	2.633	2.979	3.086	3.221	3.407	3.717	4.717
22	.883	1.11	1.29	1.46	1.62	1.80	1.997	2.247	2.625	2.967	3.072	3.205	3.389	3.694	4.673
23	.884	1.11	1.29	1.46	1.62	1.80	1.994	2.243	2.617	2.956	3.060	3.192	3.373	3.674	4.634
24	.884	1.11	1.29	1.45	1.62	1.79	1.992	2.238	2.611	2.946	3.049	3.179	3.358	3.655	4.598
25	.884	1.11	1.29	1.45	1.62	1.79	1.989	2.235	2.604	2.937	3.039	3.167	3.344	3.637	4.565
26	.885	1.11	1.29	1.45	1.62	1.79	1.987	2.231	2.599	2.928	3.029	3.157	3.332	3.621	4.536
27	.885	1.11	1.29	1.45	1.62	1.79	1.985	2.228	2.593	2.921	3.021	3.147	3.320	3.607	4.508
28	.885	1.11	1.29	1.45	1.62	1.79	1.983	2.225	2.588	2.913	3.013	3.138	3.310	3.593	4.483
29	.885	1.11	1.29	1.45	1.62	1.79	1.981	2.223	2.584	2.907	3.005	3.130	3.300	3.581	4.460
30	.886	1.11	1.29	1.45	1.61	1.79	1.980	2.220	2.579	2.901	2.999	3.122	3.291	3.569	4.439
35	.886	1.11	1.29	1.45	1.61	1.78	1.973	2.210	2.562	2.875	2.970	3.090	3.253	3.522	4.351
40	.887	1.11	1.29	1.45	1.61	1.78	1.968	2.202	2.549	2.856	2.949	3.066	3.226	3.487	4.287
45	.888	1.11	1.29	1.45	1.61	1.78	1.964	2.196	2.539	2.841	2.933	3.048	3.204	3.460	4.239
50	.888	1.11	1.29	1.45	1.61	1.77	1.961	2.191	2.531	2.830	2.920	3.033	3.187	3.438	4.200
55	.888	1.11	1.29	1.45	1.61	1.77	1.958	2.187	2.524	2.820	2.910	3.022	3.174	3.421	4.169
60	.889	1.11	1.29	1.45	1.61	1.77	1.956	2.184	2.519	2.812	2.901	3.012	3.162	3.407	4.144
70	.889	1.11	1.29	1.45	1.60	1.77	1.953	2.178	2.510	2.800	2.887	2.996	3.144	3.384	4.104
80	.889	1.11	1.29	1.45	1.60	1.77	1.950	2.175	2.504	2.791	2.877	2.985	3.131	3.368	4.074
90	.890	1.11	1.29	1.45	1.60	1.77	1.948	2.172	2.499	2.784	2.869	2.976	3.121	3.355	4.052
100	.890	1.11	1.29	1.45	1.60	1.76	1.946	2.169	2.495	2.778	2.863	2.969	3.113	3.345	4.034
120	.890	1.11	1.29	1.44	1.60	1.76	1.944	2.166	2.489	2.770	2.854	2.959	3.100	3.329	4.007
240	.891	1.11	1.29	1.44	1.60	1.76	1.938	2.157	2.474	2.749	2.831	2.933	3.070	3.292	3.942
∞	.892	1.11	1.29	1.44	1.60	1.76	1.932	2.148	2.460	2.728	2.808	2.907	3.040	3.255	3.878