

TABEL DISTRIBUSI

Dilengkapi Metode Untuk Membaca Tabel Distribusi

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2008

Penulis memberikan ijin kepada siapapun untuk memperbanyak dan menyebarkan tulisan ini dalam bentuk (format) apapun tanpa batas. Penulis memiliki hak tak terbatas atas tulisan ini, baik secara material maupun immaterial.

Dilarang merubah sebagian atau keseluruhan isi tulisan ini.
Segala kritik, saran dan komentar yang membangun dapat ditujukan ke

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Pengantar

Tulisan ini memuat titik-titik kritis untuk distribusi z (normal baku), distribusi t dan distribusi F. Penulis menganggap bahwa ketiga tabel distribusi tersebut adalah tabel distribusi yang paling banyak digunakan. Titik-titik kritis dan nilai peluang yang tertulis di dalam tulisan ini dapat dikatakan lebih presisi dibandingkan yang tertulis di dalam sebagian besar buku-buku cetak. Hal ini disebabkan karena penulis menggunakan format penulisan hingga 6 angka dibelakang koma. Sedangkan pada kebanyakan buku-buku cetak, format penulisan hanya hingga 4 angka dibelakang koma. Selain itu, banyaknya titik-titik kritis yang dibangkitkan pada umumnya lebih banyak daripada yang tertulis pada buku-buku cetak. Tentu saja, tidak semua orang membutuhkan tingkat ketelitian seperti itu. Namun hal ini dilakukan semata-mata untuk memberikan yang terbaik kepada semua pihak. Oleh karena itu, penulis berharap bahwa tulisan ini dapat bermanfaat bagi siapapun yang membutuhkan tabel distribusi z, t dan F.

Titik-titik kritis beserta nilai peluang dalam tulisan ini dibangkitkan (*generated*) dengan

software R version 2.6.2

R Development Core Team (2008). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL <http://www.R-project.org>.

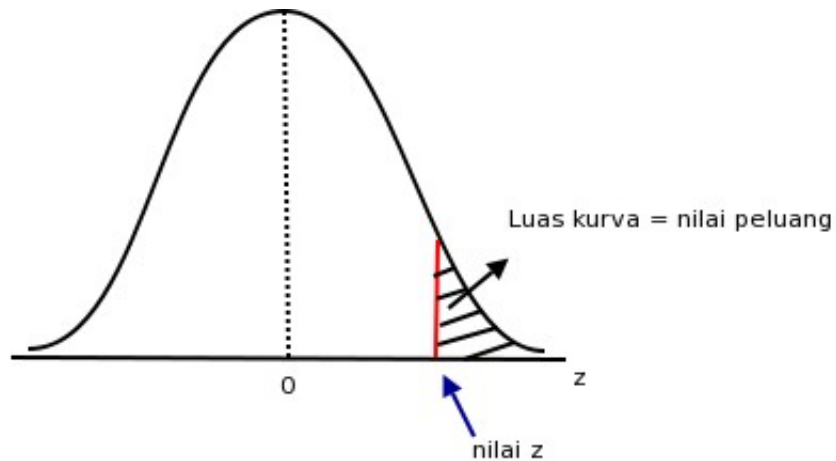
Kurva distribusi dalam tulisan ini didesain menggunakan program aplikasi

dia 0.96.1

A program for drawing structured diagrams.
(C) 1998-2006 The Free Software Foundation and the authors
<http://www.gnome.org/projects/dia/>

Tabel Distribusi z (Normal Baku)

Tabel ini berisi nilai peluang untuk nilai z dari 0 s.d. 4.095
Gambar kurva distribusi normal baku z



Luas kurva diarsir dari $z = +\infty$ s.d. nilai z yang dimaksud.

	0.000	0.005	0.010	0.015	0.020	0.025	0.030	0.035
0.0	0.500000	0.498005	0.496011	0.494016	0.492022	0.490027	0.488034	0.486040
0.1	0.460172	0.458188	0.456205	0.454223	0.452242	0.450262	0.448283	0.446306
0.2	0.420740	0.418786	0.416834	0.414884	0.412936	0.410990	0.409046	0.407104
0.3	0.382089	0.380183	0.378280	0.376381	0.374484	0.372591	0.370700	0.368813
0.4	0.344578	0.342739	0.340903	0.339071	0.337243	0.335418	0.333598	0.331781
0.5	0.308538	0.306779	0.305026	0.303277	0.301532	0.299792	0.298056	0.296325
0.6	0.274253	0.272589	0.270931	0.269277	0.267629	0.265986	0.264347	0.262714
0.7	0.241964	0.240405	0.238852	0.237305	0.235762	0.234226	0.232695	0.231170
0.8	0.211855	0.210410	0.208970	0.207536	0.206108	0.204686	0.203269	0.201859
0.9	0.184060	0.182733	0.181411	0.180096	0.178786	0.177483	0.176186	0.174894
1.0	0.158655	0.157448	0.156248	0.155053	0.153864	0.152682	0.151505	0.150334
1.1	0.135666	0.134580	0.133500	0.132425	0.131357	0.130295	0.129238	0.128188
1.2	0.115070	0.114102	0.113139	0.112183	0.111232	0.110288	0.109349	0.108415
1.3	0.096800	0.095946	0.095098	0.094255	0.093418	0.092586	0.091759	0.090938
1.4	0.080757	0.080011	0.079270	0.078534	0.077804	0.077079	0.076359	0.075644
1.5	0.066807	0.066162	0.065522	0.064886	0.064255	0.063630	0.063008	0.062392
1.6	0.054799	0.054247	0.053699	0.053155	0.052616	0.052081	0.051551	0.051025
1.7	0.044565	0.044097	0.043633	0.043173	0.042716	0.042264	0.041815	0.041370
1.8	0.035930	0.035537	0.035148	0.034762	0.034380	0.034001	0.033625	0.033253
1.9	0.028717	0.028390	0.028067	0.027746	0.027429	0.027115	0.026803	0.026495
2.0	0.022750	0.022482	0.022216	0.021952	0.021692	0.021434	0.021178	0.020925
2.1	0.017864	0.017646	0.017429	0.017215	0.017003	0.016793	0.016586	0.016381
2.2	0.013903	0.013727	0.013553	0.013380	0.013209	0.013041	0.012874	0.012709
2.3	0.010724	0.010583	0.010444	0.010306	0.010170	0.010036	0.009903	0.009772
2.4	0.008198	0.008086	0.007976	0.007868	0.007760	0.007654	0.007549	0.007446
2.5	0.006210	0.006123	0.006037	0.005952	0.005868	0.005785	0.005703	0.005622
2.6	0.004661	0.004594	0.004527	0.004461	0.004396	0.004332	0.004269	0.004207
2.7	0.003467	0.003415	0.003364	0.003314	0.003264	0.003215	0.003167	0.003119
2.8	0.002555	0.002516	0.002477	0.002439	0.002401	0.002364	0.002327	0.002291
2.9	0.001866	0.001836	0.001807	0.001778	0.001750	0.001722	0.001695	0.001668
3.0	0.001350	0.001328	0.001306	0.001285	0.001264	0.001243	0.001223	0.001203
3.1	0.000968	0.000951	0.000935	0.000920	0.000904	0.000889	0.000874	0.000859
3.2	0.000687	0.000675	0.000664	0.000652	0.000641	0.000630	0.000619	0.000608
3.3	0.000483	0.000475	0.000466	0.000458	0.000450	0.000442	0.000434	0.000426
3.4	0.000337	0.000331	0.000325	0.000319	0.000313	0.000307	0.000302	0.000296
3.5	0.000233	0.000228	0.000224	0.000220	0.000216	0.000212	0.000208	0.000204
3.6	0.000159	0.000156	0.000153	0.000150	0.000147	0.000144	0.000142	0.000139
3.7	0.000108	0.000106	0.000104	0.000102	0.000100	0.000098	0.000096	0.000094
3.8	0.000072	0.000071	0.000069	0.000068	0.000067	0.000065	0.000064	0.000063
3.9	0.000048	0.000047	0.000046	0.000045	0.000044	0.000043	0.000042	0.000042
4.0	0.000032	0.000031	0.000030	0.000030	0.000029	0.000028	0.000028	0.000027

	0.040	0.045	0.050	0.055	0.060	0.065	0.070	0.075
0.0	0.484047	0.482054	0.480061	0.478069	0.476078	0.474087	0.472097	0.470107
0.1	0.444330	0.442355	0.440382	0.438411	0.436441	0.434472	0.432505	0.430540
0.2	0.405165	0.403228	0.401294	0.399362	0.397432	0.395505	0.393580	0.391658
0.3	0.366928	0.365047	0.363169	0.361295	0.359424	0.357556	0.355691	0.353830
0.4	0.329969	0.328160	0.326355	0.324555	0.322758	0.320966	0.319178	0.317393
0.5	0.294599	0.292877	0.291160	0.289447	0.287740	0.286037	0.284339	0.282646
0.6	0.261086	0.259464	0.257846	0.256234	0.254627	0.253025	0.251429	0.249838
0.7	0.229650	0.228136	0.226627	0.225124	0.223627	0.222136	0.220650	0.219170
0.8	0.200454	0.199055	0.197663	0.196276	0.194895	0.193519	0.192150	0.190787
0.9	0.173609	0.172329	0.171056	0.169789	0.168528	0.167272	0.166023	0.164780
1.0	0.149170	0.148011	0.146859	0.145713	0.144572	0.143438	0.142310	0.141187
1.1	0.127143	0.126105	0.125072	0.124045	0.123024	0.122009	0.121000	0.119997
1.2	0.107488	0.106566	0.105650	0.104739	0.103835	0.102936	0.102042	0.101155
1.3	0.090123	0.089313	0.088508	0.087709	0.086915	0.086127	0.085343	0.084566
1.4	0.074934	0.074229	0.073529	0.072835	0.072145	0.071460	0.070781	0.070106
1.5	0.061780	0.061173	0.060571	0.059973	0.059380	0.058791	0.058208	0.057628
1.6	0.050503	0.049985	0.049471	0.048962	0.048457	0.047956	0.047460	0.046967
1.7	0.040930	0.040492	0.040059	0.039630	0.039204	0.038782	0.038364	0.037949
1.8	0.032884	0.032519	0.032157	0.031798	0.031443	0.031091	0.030742	0.030396
1.9	0.026190	0.025887	0.025588	0.025292	0.024998	0.024707	0.024419	0.024134
2.0	0.020675	0.020427	0.020182	0.019940	0.019699	0.019462	0.019226	0.018993
2.1	0.016177	0.015976	0.015778	0.015581	0.015386	0.015194	0.015003	0.014815
2.2	0.012545	0.012384	0.012224	0.012067	0.011911	0.011756	0.011604	0.011453
2.3	0.009642	0.009514	0.009387	0.009261	0.009137	0.009015	0.008894	0.008774
2.4	0.007344	0.007243	0.007143	0.007044	0.006947	0.006851	0.006756	0.006662
2.5	0.005543	0.005464	0.005386	0.005309	0.005234	0.005159	0.005085	0.005012
2.6	0.004145	0.004085	0.004025	0.003965	0.003907	0.003849	0.003793	0.003736
2.7	0.003072	0.003026	0.002980	0.002935	0.002890	0.002846	0.002803	0.002760
2.8	0.002256	0.002221	0.002186	0.002152	0.002118	0.002085	0.002052	0.002020
2.9	0.001641	0.001615	0.001589	0.001563	0.001538	0.001513	0.001489	0.001465
3.0	0.001183	0.001163	0.001144	0.001125	0.001107	0.001088	0.001070	0.001053
3.1	0.000845	0.000830	0.000816	0.000802	0.000789	0.000775	0.000762	0.000749
3.2	0.000598	0.000587	0.000577	0.000567	0.000557	0.000547	0.000538	0.000528
3.3	0.000419	0.000411	0.000404	0.000397	0.000390	0.000383	0.000376	0.000369
3.4	0.000291	0.000286	0.000280	0.000275	0.000270	0.000265	0.000260	0.000255
3.5	0.000200	0.000196	0.000193	0.000189	0.000185	0.000182	0.000178	0.000175
3.6	0.000136	0.000134	0.000131	0.000129	0.000126	0.000124	0.000121	0.000119
3.7	0.000092	0.000090	0.000088	0.000087	0.000085	0.000083	0.000082	0.000080
3.8	0.000062	0.000060	0.000059	0.000058	0.000057	0.000056	0.000054	0.000053
3.9	0.000041	0.000040	0.000039	0.000038	0.000037	0.000037	0.000036	0.000035
4.0	0.000027	0.000026	0.000026	0.000025	0.000025	0.000024	0.000024	0.000023

	0.080	0.085	0.090	0.095
0.0	0.468119	0.466131	0.464144	0.462157
0.1	0.428576	0.426615	0.424655	0.422696
0.2	0.389739	0.387822	0.385908	0.383997
0.3	0.351973	0.350119	0.348268	0.346421
0.4	0.315614	0.313838	0.312067	0.310300
0.5	0.280957	0.279274	0.277595	0.275922
0.6	0.248252	0.246672	0.245097	0.243528
0.7	0.217695	0.216227	0.214764	0.213307
0.8	0.189430	0.188078	0.186733	0.185394
0.9	0.163543	0.162312	0.161087	0.159868
1.0	0.140071	0.138961	0.137857	0.136758
1.1	0.119000	0.118009	0.117023	0.116044
1.2	0.100273	0.099396	0.098525	0.097660
1.3	0.083793	0.083026	0.082264	0.081508
1.4	0.069437	0.068772	0.068112	0.067457
1.5	0.057053	0.056483	0.055917	0.055356
1.6	0.046479	0.045994	0.045514	0.045038
1.7	0.037538	0.037131	0.036727	0.036327
1.8	0.030054	0.029715	0.029379	0.029046
1.9	0.023852	0.023572	0.023295	0.023021
2.0	0.018763	0.018535	0.018309	0.018085
2.1	0.014629	0.014444	0.014262	0.014082
2.2	0.011304	0.011156	0.011011	0.010867
2.3	0.008656	0.008540	0.008424	0.008310
2.4	0.006569	0.006478	0.006387	0.006298
2.5	0.004940	0.004869	0.004799	0.004730
2.6	0.003681	0.003626	0.003573	0.003519
2.7	0.002718	0.002676	0.002635	0.002595
2.8	0.001988	0.001957	0.001926	0.001896
2.9	0.001441	0.001418	0.001395	0.001372
3.0	0.001035	0.001018	0.001001	0.000984
3.1	0.000736	0.000724	0.000711	0.000699
3.2	0.000519	0.000510	0.000501	0.000492
3.3	0.000362	0.000356	0.000349	0.000343
3.4	0.000251	0.000246	0.000242	0.000237
3.5	0.000172	0.000169	0.000165	0.000162
3.6	0.000117	0.000114	0.000112	0.000110
3.7	0.000078	0.000077	0.000075	0.000074
3.8	0.000052	0.000051	0.000050	0.000049
3.9	0.000034	0.000034	0.000033	0.000032
4.0	0.000023	0.000022	0.000022	0.000021

Cara membaca tabel distribusi z (normal baku):

1. Mencari nilai z untuk suatu nilai peluang yang diketahui

Misal ingin dicari nilai z bagi nilai peluang sebesar 0.05, maka langkah-langkah yang dilakukan adalah:

- carilah angka 0.05 pada deretan angka berwarna biru. Apabila tidak dapat menemukan angka yang persis sebesar 0.05, maka carilah angka yang paling mendekati angka 0.05.
- angka yang paling mendekati 0.05 pada tabel adalah **0.049985**.
- dari angka **0.049985**, tariklah garis ke kiri terlebih dahulu hingga mencapai deretan angka pada kolom paling kiri dan catatlah angkanya. Dalam kasus ini adalah 1.6.
- kemudian kembali ke posisi angka **0.049985**, tariklah garis ke atas hingga mencapai deretan ujung kolom bagian atas dan catatlah angkanya (yaitu 0.045).
- nilai z yang dicari adalah $1.6 + 0.045 = 1.645$.

2. Cara mencari nilai peluang dari suatu nilai z tertentu

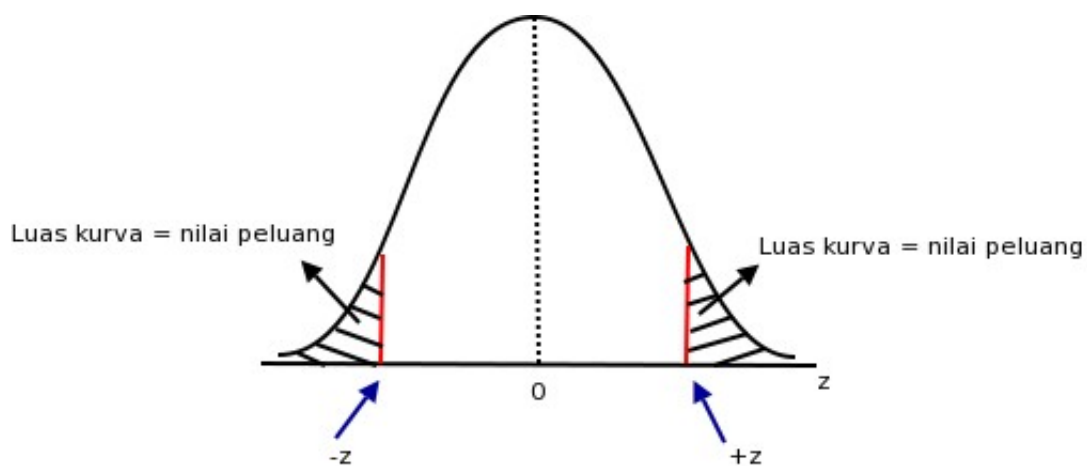
Misal ingin dicari nilai peluang dari nilai z sebesar 1.645, maka langkah-langkah yang perlu dilakukan:

- ambillah 2 angka paling kiri dari nilai 1.645, sehingga menjadi 1.6
- carilah angka 1.6 pada kolom paling kiri (tercetak tebal), kemudian tarik garis ke kanan melewati deretan angka-angka berwarna biru
- nilai yang terbuang dari langkah sebelumnya adalah 0.045 (karena $1.645 - 1.6 = 0.045$), maka carilah angka 0.045 pada kolom tabel z, kemudian tarik garis ke bawah
- perpotongan dari kedua garis menunjukkan nilai peluang dari nilai z, dalam kasus ini adalah **0.049985** (dibulatkan menjadi 0.05).

Bagaimana cara mencari nilai peluang dari nilai z bertanda negatif?

Mudah saja, nilai peluang bagi nilai z bertanda positif dan negatif adalah sama. Kemudahan ini didasarkan pada sifat kurva distribusi z (normal baku) yang setangkup (simetris).

Ilustrasi:



Tabel Titik Kritis Distribusi t

α	0.1	0.05	0.025	0.01	0.005	0.0025	0.001
df							
1	3.077684	6.313752	12.706205	31.820516	63.656741	127.321336	318.308839
2	1.885618	2.919986	4.302653	6.964557	9.924843	14.089047	22.327125
3	1.637744	2.353363	3.182446	4.540703	5.840909	7.453319	10.214532
4	1.533206	2.131847	2.776445	3.746947	4.604095	5.597568	7.173182
5	1.475884	2.015048	2.570582	3.364930	4.032143	4.773341	5.893430
6	1.439756	1.943180	2.446912	3.142668	3.707428	4.316827	5.207626
7	1.414924	1.894579	2.364624	2.997952	3.499483	4.029337	4.785290
8	1.396815	1.859548	2.306004	2.896459	3.355387	3.832519	4.500791
9	1.383029	1.833113	2.262157	2.821438	3.249836	3.689662	4.296806
10	1.372184	1.812461	2.228139	2.763769	3.169273	3.581406	4.143700
11	1.363430	1.795885	2.200985	2.718079	3.105807	3.496614	4.024701
12	1.356217	1.782288	2.178813	2.680998	3.054540	3.428444	3.929633
13	1.350171	1.770933	2.160369	2.650309	3.012276	3.372468	3.851982
14	1.345030	1.761310	2.144787	2.624494	2.976843	3.325696	3.787390
15	1.340606	1.753050	2.131450	2.602480	2.946713	3.286039	3.732834
16	1.336757	1.745884	2.119905	2.583487	2.920782	3.251993	3.686155
17	1.333379	1.739607	2.109816	2.566934	2.898231	3.222450	3.645767
18	1.330391	1.734064	2.100922	2.552380	2.878440	3.196574	3.610485
19	1.327728	1.729133	2.093024	2.539483	2.860935	3.173725	3.579400
20	1.325341	1.724718	2.085963	2.527977	2.845340	3.153401	3.551808
21	1.323188	1.720743	2.079614	2.517648	2.831360	3.135206	3.527154
22	1.321237	1.717144	2.073873	2.508325	2.818756	3.118824	3.504992
23	1.319460	1.713872	2.068658	2.499867	2.807336	3.103997	3.484964
24	1.317836	1.710882	2.063899	2.492159	2.796940	3.090514	3.466777
25	1.316345	1.708141	2.059539	2.485107	2.787436	3.078199	3.450189
26	1.314972	1.705618	2.055529	2.478630	2.778715	3.066909	3.434997
27	1.313703	1.703288	2.051831	2.472660	2.770683	3.056520	3.421034
28	1.312527	1.701131	2.048407	2.467140	2.763262	3.046929	3.408155
29	1.311434	1.699127	2.045230	2.462021	2.756386	3.038047	3.396240
30	1.310415	1.697261	2.042272	2.457262	2.749996	3.029798	3.385185
31	1.309464	1.695519	2.039513	2.452824	2.744042	3.022118	3.374899
32	1.308573	1.693889	2.036933	2.448678	2.738481	3.014949	3.365306
33	1.307737	1.692360	2.034515	2.444794	2.733277	3.008242	3.356337
34	1.306952	1.690924	2.032245	2.441150	2.728394	3.001954	3.347934
35	1.306212	1.689572	2.030108	2.437723	2.723806	2.996047	3.340045
36	1.305514	1.688298	2.028094	2.434494	2.719485	2.990487	3.332624
37	1.304854	1.687094	2.026192	2.431447	2.715409	2.985244	3.325631
38	1.304230	1.685954	2.024394	2.428568	2.711558	2.980293	3.319030
39	1.303639	1.684875	2.022691	2.425841	2.707913	2.975609	3.312788
40	1.303077	1.683851	2.021075	2.423257	2.704459	2.971171	3.306878
41	1.302543	1.682878	2.019541	2.420803	2.701181	2.966961	3.301273
42	1.302035	1.681952	2.018082	2.418470	2.698066	2.962962	3.295951
43	1.301552	1.681071	2.016692	2.416250	2.695102	2.959157	3.290890
44	1.301090	1.680230	2.015368	2.414134	2.692278	2.955534	3.286072
45	1.300649	1.679427	2.014103	2.412116	2.689585	2.952079	3.281480
46	1.300228	1.678660	2.012896	2.410188	2.687013	2.948781	3.277098
47	1.299825	1.677927	2.011741	2.408345	2.684556	2.945630	3.272912
48	1.299439	1.677224	2.010635	2.406581	2.682204	2.942616	3.268910
49	1.299069	1.676551	2.009575	2.404892	2.679952	2.939730	3.265079
50	1.298714	1.675905	2.008559	2.403272	2.677793	2.936964	3.261409
51	1.298373	1.675285	2.007584	2.401718	2.675722	2.934311	3.257890
52	1.298045	1.674689	2.006647	2.400225	2.673734	2.931765	3.254512
53	1.297730	1.674116	2.005746	2.398790	2.671823	2.929318	3.251268
54	1.297426	1.673565	2.004879	2.397410	2.669985	2.926965	3.248149
55	1.297134	1.673034	2.004045	2.396081	2.668216	2.924701	3.245149
56	1.296853	1.672522	2.003241	2.394801	2.666512	2.922521	3.242261
57	1.296581	1.672029	2.002465	2.393568	2.664870	2.920420	3.239478
58	1.296319	1.671553	2.001717	2.392377	2.663287	2.918394	3.236795
59	1.296066	1.671093	2.000995	2.391229	2.661759	2.916440	3.234207
60	1.295821	1.670649	2.000298	2.390119	2.660283	2.914553	3.231709
61	1.295585	1.670219	1.999624	2.389047	2.658857	2.912729	3.229296
62	1.295356	1.669804	1.998972	2.388011	2.657479	2.910967	3.226964
63	1.295134	1.669402	1.998341	2.387008	2.656145	2.909262	3.224709
64	1.294920	1.669013	1.997730	2.386037	2.654854	2.907613	3.222527
65	1.294712	1.668636	1.997138	2.385097	2.653604	2.906015	3.220414
66	1.294511	1.668271	1.996564	2.384186	2.652394	2.904468	3.218368
67	1.294315	1.667916	1.996008	2.383302	2.651220	2.902968	3.216386
68	1.294126	1.667572	1.995469	2.382446	2.650081	2.901514	3.214463
69	1.293942	1.667239	1.994945	2.381615	2.648977	2.900103	3.212599
70	1.293763	1.666914	1.994437	2.380807	2.647905	2.898734	3.210789
71	1.293589	1.666600	1.993943	2.380024	2.646863	2.897404	3.209032
72	1.293421	1.666294	1.993464	2.379262	2.645852	2.896113	3.207326
73	1.293256	1.665996	1.992997	2.378522	2.644869	2.894857	3.205668
74	1.293097	1.665707	1.992543	2.377802	2.643913	2.893637	3.204056
75	1.292941	1.665425	1.992102	2.377102	2.642983	2.892450	3.202489
76	1.292790	1.665151	1.991673	2.376420	2.642078	2.891295	3.200964
77	1.292643	1.664885	1.991254	2.375757	2.641198	2.890171	3.199480

α	0.1	0.05	0.025	0.01	0.005	0.0025	0.001
df							
78	1.292500	1.664625	1.990847	2.375111	2.640340	2.889077	3.198035
79	1.292360	1.664371	1.990450	2.374482	2.639505	2.888011	3.196628
80	1.292224	1.664125	1.990063	2.373868	2.638691	2.886972	3.195258
81	1.292091	1.663884	1.989686	2.373270	2.637897	2.885960	3.193922
82	1.291961	1.663649	1.989319	2.372687	2.637123	2.884973	3.192619
83	1.291835	1.663420	1.988960	2.372119	2.636369	2.884010	3.191349
84	1.291711	1.663197	1.988610	2.371564	2.635632	2.883071	3.190111
85	1.291591	1.662978	1.988268	2.371022	2.634914	2.882154	3.188902
86	1.291473	1.662765	1.987934	2.370493	2.634212	2.881260	3.187722
87	1.291358	1.662557	1.987608	2.369977	2.633527	2.880386	3.186569
88	1.291246	1.662354	1.987290	2.369472	2.632858	2.879533	3.185444
89	1.291136	1.662155	1.986979	2.368979	2.632204	2.878699	3.184345
90	1.291029	1.661961	1.986675	2.368497	2.631565	2.877884	3.183271
91	1.290924	1.661771	1.986377	2.368026	2.630940	2.877088	3.182221
92	1.290821	1.661585	1.986086	2.367566	2.630330	2.876309	3.181194
93	1.290721	1.661404	1.985802	2.367115	2.629732	2.875547	3.180191
94	1.290623	1.661226	1.985523	2.366674	2.629148	2.874802	3.179209
95	1.290527	1.661052	1.985251	2.366243	2.628576	2.874073	3.178248
96	1.290432	1.660881	1.984984	2.365821	2.628016	2.873360	3.177308
97	1.290340	1.660715	1.984723	2.365407	2.627468	2.872661	3.176387
98	1.290250	1.660551	1.984467	2.365002	2.626931	2.871977	3.175486
99	1.290161	1.660391	1.984217	2.364606	2.626405	2.871308	3.174604
100	1.290075	1.660234	1.983972	2.364217	2.625891	2.870652	3.173739
101	1.289990	1.660081	1.983731	2.363837	2.625386	2.870009	3.172893
102	1.289907	1.659930	1.983495	2.363464	2.624891	2.869379	3.172063
103	1.289825	1.659782	1.983264	2.363098	2.624407	2.868761	3.171250
104	1.289745	1.659637	1.983038	2.362739	2.623932	2.868156	3.170452
105	1.289666	1.659495	1.982815	2.362388	2.623465	2.867562	3.169670
106	1.289589	1.659356	1.982597	2.362043	2.623008	2.866980	3.168904
107	1.289514	1.659219	1.982383	2.361704	2.622560	2.866409	3.168152
108	1.289439	1.659085	1.982173	2.361372	2.622120	2.865848	3.167414
109	1.289367	1.658953	1.981967	2.361046	2.621688	2.865298	3.166690
110	1.289295	1.658824	1.981765	2.360726	2.621265	2.864759	3.165979
111	1.289225	1.658697	1.981567	2.360412	2.620849	2.864229	3.165282
112	1.289156	1.658573	1.981372	2.360104	2.620440	2.863709	3.164597
113	1.289088	1.658450	1.981180	2.359801	2.620039	2.863198	3.163925
114	1.289022	1.658330	1.980992	2.359504	2.619645	2.862696	3.163265
115	1.288957	1.658212	1.980808	2.359212	2.619258	2.862203	3.162616
116	1.288892	1.658096	1.980626	2.358924	2.618878	2.861719	3.161979
117	1.288829	1.657982	1.980448	2.358642	2.618504	2.861244	3.161353
118	1.288767	1.657870	1.980272	2.358365	2.618137	2.860776	3.160738
119	1.288706	1.657759	1.980100	2.358093	2.617776	2.860317	3.160133
120	1.288646	1.657651	1.979930	2.357825	2.617421	2.859865	3.159539
121	1.288587	1.657544	1.979764	2.357561	2.617072	2.859421	3.158954
122	1.288529	1.657439	1.979600	2.357302	2.616729	2.858984	3.158380
123	1.288472	1.657336	1.979439	2.357047	2.616392	2.858554	3.157815
124	1.288416	1.657235	1.979280	2.356797	2.616060	2.858132	3.157259
125	1.288361	1.657135	1.979124	2.356550	2.615733	2.857716	3.156712
126	1.288307	1.657037	1.978971	2.356307	2.615412	2.857308	3.156175
127	1.288253	1.656940	1.978820	2.356069	2.615096	2.856905	3.155645
128	1.288200	1.656845	1.978671	2.355834	2.614785	2.856509	3.155125
129	1.288149	1.656752	1.978524	2.355602	2.614479	2.856120	3.154612
130	1.288098	1.656665	1.978380	2.355375	2.614177	2.855736	3.154107
131	1.288047	1.656579	1.978239	2.355150	2.613880	2.855358	3.153611
132	1.287998	1.656497	1.978099	2.354930	2.613588	2.854986	3.153122
133	1.287949	1.656419	1.977961	2.354712	2.613300	2.854620	3.152640
134	1.287901	1.656345	1.977826	2.354498	2.613017	2.854260	3.152166
135	1.287854	1.656271	1.977692	2.354287	2.612738	2.853904	3.151699
136	1.287807	1.656198	1.977561	2.354079	2.612463	2.853554	3.151239
137	1.287762	1.656128	1.977431	2.353875	2.612192	2.853210	3.150786
138	1.287716	1.655970	1.977304	2.353673	2.611925	2.852870	3.150339
139	1.287672	1.655890	1.977178	2.353474	2.611662	2.852535	3.149899
140	1.287628	1.655811	1.977054	2.353278	2.611403	2.852206	3.149466
141	1.287585	1.655732	1.976931	2.353085	2.611147	2.851880	3.149038
142	1.287542	1.655655	1.976811	2.352895	2.610895	2.851560	3.148617
143	1.287500	1.655579	1.976692	2.352707	2.610647	2.851244	3.148202
144	1.287458	1.655504	1.976575	2.352522	2.610402	2.850933	3.147792
145	1.287417	1.655430	1.976460	2.352340	2.610161	2.850626	3.147389
146	1.287377	1.655357	1.976346	2.352160	2.609923	2.850323	3.146991
147	1.287337	1.655285	1.976233	2.351983	2.609688	2.850024	3.146598
148	1.287298	1.655215	1.976122	2.351808	2.609456	2.849730	3.146211
149	1.287259	1.655145	1.976013	2.351635	2.609228	2.849439	3.145829
150	1.287221	1.655076	1.975905	2.351465	2.609003	2.849152	3.145453
151	1.287183	1.655007	1.975799	2.351297	2.608780	2.848870	3.145081
152	1.287146	1.654940	1.975694	2.351131	2.608561	2.848591	3.144714
153	1.287109	1.654874	1.975590	2.350967	2.608344	2.848315	3.144353
154	1.287073	1.654808	1.975488	2.350806	2.608131	2.848044	3.143996
155	1.287037	1.654744	1.975387	2.350646	2.607920	2.847776	3.143643
156	1.287002	1.654680	1.975288	2.350489	2.607712	2.847511	3.143296
157	1.286967	1.654617	1.975189	2.350334	2.607506	2.847250	3.142952
158	1.286933	1.654555	1.975092	2.350180	2.607304	2.846992	3.142613
159	1.286899	1.654494	1.974996	2.350029	2.607103	2.846737	3.142279
160	1.286865	1.654433	1.974902	2.349880	2.606906	2.846486	3.141949
161	1.286832	1.654373	1.974808	2.349732	2.606711	2.846238	3.141623

α	0.1	0.05	0.025	0.01	0.005	0.0025	0.001
df							
162	1.286799	1.654314	1.974716	2.349586	2.606518	2.845993	3.141301
163	1.286767	1.654256	1.974625	2.349442	2.606328	2.845751	3.140983
164	1.286735	1.654198	1.974535	2.349300	2.606140	2.845511	3.140669
165	1.286703	1.654141	1.974446	2.349160	2.605954	2.845275	3.140358
166	1.286672	1.654085	1.974358	2.349021	2.605770	2.845042	3.140052
167	1.286641	1.654029	1.974271	2.348884	2.605589	2.844812	3.139749
168	1.286611	1.653974	1.974185	2.348749	2.605410	2.844584	3.139450
169	1.286581	1.653920	1.974100	2.348615	2.605233	2.844359	3.139155
170	1.286551	1.653866	1.974017	2.348483	2.605058	2.844137	3.138863
171	1.286522	1.653813	1.973934	2.348352	2.604886	2.843917	3.138575
172	1.286493	1.653761	1.973852	2.348223	2.604715	2.843700	3.138290
173	1.286464	1.653709	1.973771	2.348096	2.604546	2.843486	3.138008
174	1.286436	1.653658	1.973691	2.347970	2.604379	2.843274	3.137729
175	1.286408	1.653607	1.973612	2.347845	2.604215	2.843064	3.137454
176	1.286380	1.653557	1.973534	2.347722	2.604052	2.842857	3.137182
177	1.286353	1.653508	1.973457	2.347600	2.603891	2.842652	3.136913
178	1.286326	1.653459	1.973381	2.347479	2.603731	2.842450	3.136648
179	1.286299	1.653411	1.973305	2.347360	2.603574	2.842250	3.136385
180	1.286272	1.653363	1.973231	2.347243	2.603418	2.842052	3.136125
181	1.286246	1.653316	1.973157	2.347126	2.603264	2.841856	3.135868
182	1.286220	1.653269	1.973084	2.347011	2.603112	2.841663	3.135614
183	1.286195	1.653223	1.973012	2.346897	2.602961	2.841471	3.135363
184	1.286169	1.653177	1.972941	2.346785	2.602813	2.841282	3.135115
185	1.286144	1.653132	1.972870	2.346673	2.602665	2.841095	3.134868
186	1.286120	1.653087	1.972800	2.346563	2.602520	2.840910	3.134625
187	1.286095	1.653043	1.972731	2.346454	2.602376	2.840726	3.134385
188	1.286071	1.652999	1.972663	2.346346	2.602233	2.840545	3.134147
189	1.286047	1.652956	1.972595	2.346240	2.602092	2.840366	3.133911
190	1.286023	1.652913	1.972528	2.346134	2.601952	2.840189	3.133679
191	1.286000	1.652871	1.972462	2.346030	2.601814	2.840013	3.133448
192	1.285976	1.652829	1.972396	2.345926	2.601678	2.839840	3.133220
193	1.285953	1.652787	1.972332	2.345824	2.601543	2.839668	3.132995
194	1.285931	1.652746	1.972268	2.345723	2.601409	2.839498	3.132772
195	1.285908	1.652705	1.972204	2.345623	2.601276	2.839329	3.132551
196	1.285886	1.652665	1.972141	2.345524	2.601145	2.839163	3.132332
197	1.285864	1.652625	1.972079	2.345425	2.601016	2.838998	3.132116
198	1.285842	1.652586	1.972017	2.345328	2.600887	2.838835	3.131902
199	1.285820	1.652547	1.971957	2.345232	2.600760	2.838674	3.131690
200	1.285799	1.652508	1.971896	2.345137	2.600634	2.838514	3.131480
201	1.285778	1.652470	1.971837	2.345043	2.600510	2.838355	3.131272
202	1.285757	1.652432	1.971777	2.344950	2.600387	2.838199	3.131067
203	1.285736	1.652394	1.971719	2.344857	2.600265	2.838044	3.130863
204	1.285715	1.652357	1.971661	2.344766	2.600144	2.837890	3.130661
205	1.285695	1.652321	1.971603	2.344675	2.600024	2.837738	3.130462
206	1.285675	1.652284	1.971547	2.344586	2.599906	2.837588	3.130264
207	1.285655	1.652248	1.971490	2.344497	2.599788	2.837438	3.130069
208	1.285635	1.652212	1.971435	2.344409	2.599672	2.837291	3.129875
209	1.285615	1.652177	1.971379	2.344322	2.599557	2.837145	3.129683
210	1.285596	1.652142	1.971325	2.344236	2.599443	2.837000	3.129493
211	1.285577	1.652107	1.971271	2.344150	2.599330	2.836856	3.129305
212	1.285558	1.652073	1.971217	2.344066	2.599218	2.836714	3.129118
213	1.285539	1.652039	1.971164	2.343982	2.599108	2.836574	3.128934
214	1.285520	1.652005	1.971111	2.343899	2.598998	2.836434	3.128751
215	1.285502	1.651972	1.971059	2.343817	2.598889	2.836296	3.128570
216	1.285483	1.651939	1.971007	2.343735	2.598782	2.836159	3.128390
217	1.285465	1.651906	1.970956	2.343655	2.598675	2.836024	3.128212
218	1.285447	1.651873	1.970906	2.343575	2.598569	2.835890	3.128036
219	1.285429	1.651841	1.970855	2.343496	2.598465	2.835757	3.127862
220	1.285411	1.651809	1.970806	2.343417	2.598361	2.835625	3.127689
221	1.285394	1.651778	1.970756	2.343339	2.598258	2.835494	3.127517
222	1.285377	1.651746	1.970707	2.343262	2.598156	2.835365	3.127347
223	1.285359	1.651715	1.970659	2.343186	2.598055	2.835237	3.127179
224	1.285342	1.651685	1.970611	2.343110	2.597955	2.835110	3.127013
225	1.285325	1.651654	1.970563	2.343035	2.597856	2.834984	3.126847
226	1.285309	1.651624	1.970516	2.342961	2.597758	2.834859	3.126684
227	1.285292	1.651594	1.970470	2.342887	2.597661	2.834735	3.126521
228	1.285276	1.651564	1.970423	2.342814	2.597564	2.834613	3.126360
229	1.285259	1.651535	1.970377	2.342742	2.597468	2.834491	3.126201
230	1.285243	1.651506	1.970332	2.342670	2.597374	2.834371	3.126043
231	1.285227	1.651477	1.970287	2.342599	2.597280	2.834251	3.125886
232	1.285211	1.651448	1.970242	2.342528	2.597186	2.834133	3.125731
233	1.285196	1.651420	1.970198	2.342458	2.597094	2.834016	3.125577
234	1.285180	1.651391	1.970154	2.342389	2.597002	2.833899	3.125424
235	1.285164	1.651364	1.970110	2.342320	2.596912	2.833784	3.125273
236	1.285149	1.651336	1.970067	2.342252	2.596822	2.833670	3.125123
237	1.285134	1.651308	1.970024	2.342185	2.596732	2.833556	3.124974
238	1.285119	1.651281	1.969982	2.342118	2.596644	2.833444	3.124827
239	1.285104	1.651254	1.969939	2.342051	2.596556	2.833332	3.124681
240	1.285089	1.651227	1.969898	2.341985	2.596469	2.833222	3.124536
241	1.285074	1.651201	1.969856	2.341920	2.596383	2.833112	3.124392
242	1.285060	1.651175	1.969815	2.341855	2.596297	2.833003	3.124249
243	1.285045	1.651148	1.969774	2.341791	2.596212	2.832896	3.124108
244	1.285031	1.651123	1.969734	2.341728	2.596128	2.832789	3.123968
245	1.285017	1.651097	1.969694	2.341664	2.596045	2.832683	3.123829

α	0.1	0.05	0.025	0.01	0.005	0.0025	0.001
df							
246	1.285002	1.651071	1.969654	2.341602	2.595962	2.832578	3.123691
247	1.284988	1.651046	1.969615	2.341540	2.595880	2.832473	3.123554
248	1.284975	1.651021	1.969576	2.341478	2.595799	2.832370	3.123418
249	1.284961	1.650996	1.969537	2.341417	2.595718	2.832267	3.123284
250	1.284947	1.650971	1.969498	2.341356	2.595638	2.832166	3.123150
251	1.284933	1.650947	1.969460	2.341296	2.595558	2.832065	3.123018
252	1.284920	1.650923	1.969422	2.341236	2.595479	2.831964	3.122886
253	1.284907	1.650899	1.969385	2.341177	2.595401	2.831865	3.122756
254	1.284893	1.650875	1.969348	2.341118	2.595323	2.831767	3.122627
255	1.284880	1.650851	1.969311	2.341060	2.595246	2.831669	3.122499
256	1.284867	1.650828	1.969274	2.341002	2.595170	2.831572	3.122371
257	1.284854	1.650804	1.969237	2.340945	2.595094	2.831476	3.122245
258	1.284841	1.650781	1.969201	2.340888	2.595019	2.831380	3.122120
259	1.284829	1.650758	1.969166	2.340831	2.594945	2.831285	3.121996
260	1.284816	1.650735	1.969130	2.340775	2.594870	2.831191	3.121872
261	1.284804	1.650713	1.969095	2.340720	2.594797	2.831098	3.121750
262	1.284791	1.650690	1.969060	2.340665	2.594724	2.831005	3.121629
263	1.284779	1.650668	1.969025	2.340610	2.594652	2.830914	3.121508
264	1.284767	1.650646	1.968990	2.340556	2.594580	2.830822	3.121389
265	1.284754	1.650624	1.968956	2.340502	2.594509	2.830732	3.121270
266	1.284742	1.650602	1.968922	2.340448	2.594438	2.830642	3.121152
267	1.284730	1.650581	1.968889	2.340395	2.594368	2.830553	3.121035
268	1.284718	1.650559	1.968855	2.340342	2.594298	2.830465	3.120919
269	1.284707	1.650538	1.968822	2.340290	2.594229	2.830377	3.120804
270	1.284695	1.650517	1.968789	2.340238	2.594161	2.830290	3.120690
271	1.284683	1.650496	1.968756	2.340187	2.594092	2.830203	3.120577
272	1.284672	1.650475	1.968724	2.340135	2.594025	2.830117	3.120464
273	1.284660	1.650454	1.968692	2.340085	2.593958	2.830032	3.120352
274	1.284649	1.650434	1.968660	2.340034	2.593891	2.829948	3.120241
275	1.284638	1.650413	1.968628	2.339984	2.593825	2.829864	3.120131
276	1.284626	1.650393	1.968596	2.339934	2.593759	2.829780	3.120022
277	1.284615	1.650373	1.968565	2.339885	2.593694	2.829698	3.119914
278	1.284604	1.650353	1.968534	2.339836	2.593630	2.829615	3.119806
279	1.284593	1.650333	1.968503	2.339788	2.593565	2.829534	3.119699
280	1.284582	1.650314	1.968472	2.339739	2.593502	2.829453	3.119593
281	1.284572	1.650294	1.968442	2.339691	2.593438	2.829373	3.119487
282	1.284561	1.650275	1.968412	2.339644	2.593376	2.829293	3.119383
283	1.284550	1.650256	1.968382	2.339597	2.593313	2.829214	3.119279
284	1.284540	1.650237	1.968352	2.339550	2.593251	2.829135	3.119176
285	1.284529	1.650218	1.968323	2.339503	2.593190	2.829057	3.119073
286	1.284519	1.650199	1.968293	2.339457	2.593129	2.828979	3.118972
287	1.284508	1.650180	1.968264	2.339411	2.593068	2.828902	3.118871
288	1.284498	1.650162	1.968235	2.339365	2.593008	2.828826	3.118770
289	1.284488	1.650143	1.968206	2.339320	2.592948	2.828750	3.118671
290	1.284478	1.650125	1.968178	2.339275	2.592888	2.828674	3.118572
291	1.284468	1.650107	1.968150	2.339230	2.592829	2.828599	3.118474
292	1.284458	1.650089	1.968121	2.339186	2.592771	2.828525	3.118376
293	1.284448	1.650071	1.968093	2.339142	2.592713	2.828451	3.118279
294	1.284438	1.650053	1.968066	2.339098	2.592655	2.828378	3.118183
295	1.284428	1.650035	1.968038	2.339055	2.592598	2.828305	3.118088
296	1.284418	1.650018	1.968011	2.339012	2.592541	2.828233	3.117993
297	1.284409	1.650000	1.967984	2.338969	2.592484	2.828161	3.117898
298	1.284399	1.649983	1.967957	2.338926	2.592428	2.828089	3.117805
299	1.284389	1.649966	1.967930	2.338884	2.592372	2.828018	3.117712
300	1.284380	1.649949	1.967903	2.338842	2.592316	2.827948	3.117620

Cara membaca tabel titik kritis distribusi t

1. a. Kasus uji 1-arah

Misal hipotesis yang digunakan adalah:

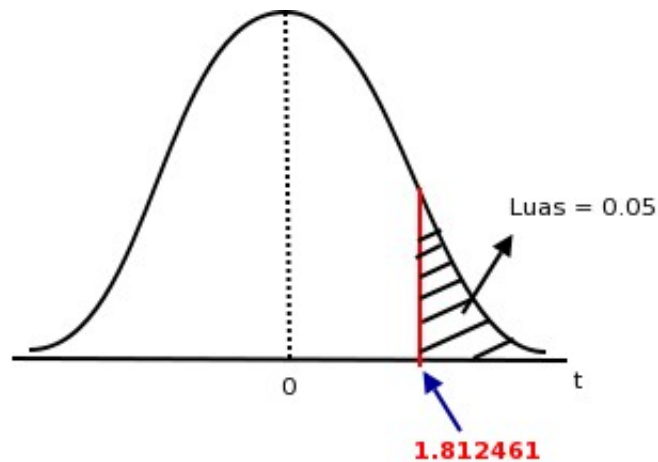
$$H_0 : \mu = 0$$

$$H_1 : \mu > 0$$

Misal ingin dicari titik kritis distribusi (sebaran) t dengan $\alpha = 0.05$ dan derajat bebas (db) atau *degrees of freedom* (df) sebesar 10, maka ikuti langkah-langkah di bawah ini:

- carilah angka 10 pada kolom **df** (paling kiri)
- carilah kolom dengan nilai $\alpha = 0.05$
- tarik garis dari angka 10 pada kolom **df** ke arah kanan, sedangkan dari kolom dengan nilai $\alpha = 0.05$ tarik garis ke bawah. Tentukan titik perpotongan keduanya.
- Titik perpotongan dari kedua garis adalah nilai titik kritis dari distribusi t yang dicari, dalam kasus ini adalah **1.812461**.

Kurva distribusi t beserta titik kritis yang dimaksud digambarkan seperti di bawah ini:



- **Oleh karena tanda pertidaksamaan yang digunakan adalah $>$, maka titik kritis terletak di sebelah kanan dari titik pusat (titik 0).
- **Titik kritis ditunjukkan oleh panah biru dan dipotong oleh garis merah.
- **Daerah yang diarsir pada kurva memiliki luas sebesar nilai α .
- **Daerah yang diarsir ini disebut juga sebagai *Rejection Region* (Daerah Penolakan), sehingga apabila nilai t-hitung berada di dalam luasan ini, maka akan memberikan kesimpulan statistika “TOLAK H_0 ”.

b. Kasus uji 1-arah

Misal hipotesis yang digunakan adalah:

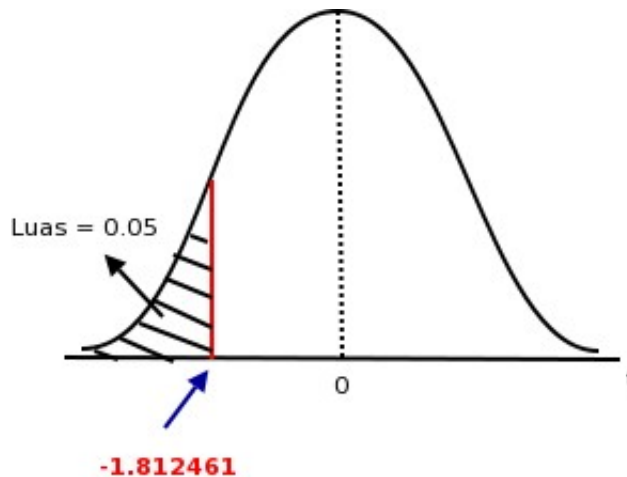
$$H_0 : \mu = 0$$

$$H_1 : \mu < 0$$

Misal ingin dicari titik kritis distribusi (sebaran) t dengan $\alpha = 0.05$ dan derajat bebas (db) atau *degrees of freedom* (df) sebesar 10, maka ikuti langkah-langkah di bawah ini:

- carilah angka 10 pada kolom **df** (paling kiri)
- carilah kolom dengan nilai $\alpha = 0.05$
- tarik garis dari angka 10 pada kolom **df** ke arah kanan, sedangkan dari kolom dengan nilai $\alpha = 0.05$ tarik garis ke bawah. Tentukan titik perpotongan keduanya.
- titik perpotongan dari kedua garis adalah **1.812461**. Namun nilai ini bukanlah titik kritis yang dicari.
- tanda pertidaksamaan yang digunakan pada H_1 adalah $<$, maka titik kritis terletak di sebelah kiri titik pusat, oleh karena itu berikan tanda negatif untuk nilai titik kritis yang diperoleh dari langkah sebelumnya. Dengan demikian, titik kritis yang dimaksud adalah **-1.812461**.
Kemudahan ini didasarkan atas sifat kurva distribusi t yang setangkup (simetris).

Kurva distribusi t beserta titik kritis yang dimaksud digambarkan seperti di bawah ini:



**Titik kritis ditunjukkan oleh panah biru dan dipotong oleh garis merah.

**Daerah yang diarsir pada kurva memiliki luas sebesar nilai α .

**Daerah yang diarsir ini disebut juga sebagai *Rejection Region* (Daerah Penolakan), sehingga apabila nilai t-hitung berada di dalam luasan ini, maka akan memberikan kesimpulan statistika “TOLAK H_0 “.

2. Kasus uji 2-arah

Misal hipotesis yang digunakan adalah:

$$H_0 : \mu = 0$$

$$H_1 : \mu \neq 0$$

atau, di dalam konsep regresi linier, pada uji parsial, hipotesis yang sering ditemui adalah:

$$H_0 : \beta_i = 0$$

$$H_1 : \beta_i \neq 0$$

$$i = 0, 1, 2, \dots, k$$

k = banyaknya parameter (koefisien) regresi linier

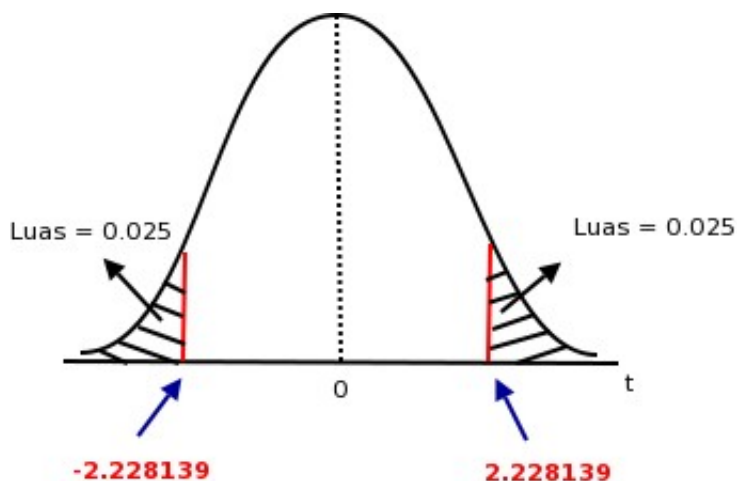
Misal ingin dicari titik kritis distribusi (sebaran) t dengan $\alpha = 0.05$ dan derajat bebas (db) atau *degrees of freedom* (df) sebesar 10, maka ikuti langkah-langkah di bawah ini:

WARNING !! Perhatikan bahwa apabila uji 2-arah yang digunakan, maka untuk mencari titik kritis pada tabel, nilai α yang digunakan adalah nilai $\alpha/2$, sehingga dalam kasus ini, nilai yang digunakan adalah $0.05/2 = 0.025$ sebagai nilai α pada tabel.

- carilah angka 10 pada kolom **df** (paling kiri)
- carilah kolom dengan nilai $\alpha = 0.025$
- tarik garis dari angka 10 pada kolom **df** ke arah kanan, sedangkan dari kolom dengan nilai $\alpha = 0.025$ tarik garis ke bawah. Tentukan titik perpotongan keduanya.
- titik perpotongan dari kedua garis adalah **2.228139**.
- pada uji 2-arah, nilai titik kritis bukanlah 1 buah, melainkan 2 buah nilai titik kritis, sehingga dalam kasus ini titik-titik kritis yang dimaksud adalah **-2.228139** dan **2.228139** .

- Nilai titik kritis **-2.228139** diperoleh secara mudah dengan cara memberikan tanda negatif pada titik kritis yang positif. Kemudahan ini didasarkan atas sifat kurva distribusi t yang setangkup (simetris).

Kurva distribusi t beserta titik-titik kritis yang dimaksud digambarkan seperti di bawah ini:



- **Oleh karena tanda pertidaksamaan yang digunakan adalah $>$, maka titik kritis terletak di sebelah kanan dan kiri dari titik pusat (titik 0).
- **Titik kritis ditunjukkan oleh panah biru dan dipotong oleh garis merah.
- **Daerah yang diarsir pada kurva memiliki luas sebesar nilai $\alpha/2$.
- **Total luas dari 2 daerah yang diarsir pada kurva adalah sebesar α .
- **Daerah-daerah yang diarsir ini disebut juga sebagai *Rejection Regions* (Daerah-daerah Penolakan), sehingga apabila nilai t-hitung berada di dalam luasan ini, maka akan memberikan kesimpulan statistika "TOLAK H_0 ".
- **Langkah ini juga berguna ketika mencari titik kritis bagi selang kepercayaan (*confidence interval*).

Tabel Titik Kritis Distribusi F

F $\alpha = 0.1$

df2	df1	1	2	3	4	5	6	7
1	39.863458	49.500000	53.593245	55.832961	57.240077	58.204416	58.905953	
2	8.526316	9.000000	9.161790	9.243416	9.292626	9.325530	9.349081	
3	5.538319	5.462383	5.390773	5.342644	5.309157	5.284732	5.266195	
4	4.544771	4.324555	4.190860	4.107250	4.050579	4.009749	3.978966	
5	4.060420	3.779716	3.619477	3.520196	3.452982	3.404507	3.367899	
6	3.775950	3.463304	3.288762	3.180763	3.107512	3.054551	3.014457	
7	3.589428	3.257442	3.074072	2.960534	2.883344	2.827392	2.784930	
8	3.457919	3.113118	2.923796	2.806426	2.726447	2.668335	2.624135	
9	3.360303	3.006452	2.812863	2.692680	2.610613	2.550855	2.505313	
10	3.285015	2.924466	2.727673	2.605336	2.521641	2.460582	2.413965	
11	3.225202	2.859511	2.660229	2.536188	2.451184	2.389067	2.341566	
12	3.176549	2.806796	2.605525	2.480102	2.394022	2.331024	2.282780	
13	3.136205	2.763167	2.560273	2.433705	2.346724	2.282979	2.234103	
14	3.102213	2.726468	2.522224	2.394692	2.306943	2.242559	2.193134	
15	3.073186	2.695173	2.489788	2.361433	2.273022	2.208082	2.158178	
16	3.048110	2.668171	2.461811	2.332745	2.243758	2.178329	2.128003	
17	3.026232	2.644638	2.437434	2.307747	2.218253	2.152392	2.101689	
18	3.006977	2.623947	2.416005	2.285772	2.195827	2.129581	2.078541	
19	2.989900	2.605612	2.397022	2.266303	2.175956	2.109364	2.058020	
20	2.974653	2.589254	2.380087	2.248934	2.158227	2.091322	2.039703	
21	2.960956	2.574569	2.364888	2.233345	2.142311	2.075123	2.023252	
22	2.948585	2.561314	2.351170	2.219274	2.127944	2.060497	2.008397	
23	2.937356	2.549290	2.338727	2.206512	2.114911	2.047227	1.994915	
24	2.927117	2.538332	2.327390	2.194882	2.103033	2.035132	1.982625	
25	2.917745	2.528305	2.317017	2.184242	2.092165	2.024062	1.971376	
26	2.909132	2.519096	2.307491	2.174469	2.082182	2.013893	1.961039	
27	2.901192	2.510609	2.298712	2.165463	2.072981	2.004519	1.951510	
28	2.893846	2.502761	2.290595	2.157136	2.064473	1.995851	1.942696	
29	2.887033	2.495483	2.283069	2.149415	2.056583	1.987811	1.934521	
30	2.880695	2.488716	2.276071	2.142235	2.049246	1.980333	1.926916	
31	2.874784	2.482407	2.269548	2.135542	2.042406	1.973361	1.919825	
32	2.869259	2.476512	2.263453	2.129288	2.036014	1.966845	1.913196	
33	2.864083	2.470990	2.257744	2.123430	2.030027	1.960742	1.906987	
34	2.859225	2.465809	2.252387	2.117934	2.024408	1.955014	1.901158	
35	2.854655	2.460936	2.247350	2.112765	2.019124	1.949626	1.895676	
36	2.850349	2.456346	2.242605	2.107896	2.014147	1.944550	1.890511	
37	2.846285	2.452014	2.238128	2.103302	2.009449	1.939760	1.885635	
38	2.842442	2.447920	2.233896	2.098959	2.005009	1.935231	1.881026	
39	2.838804	2.444044	2.229890	2.094848	2.000805	1.930944	1.876661	
40	2.835354	2.440369	2.226092	2.090950	1.996820	1.926879	1.872522	
41	2.832078	2.436880	2.222486	2.087250	1.993036	1.923019	1.868593	
42	2.828964	2.433564	2.219059	2.083732	1.989439	1.919349	1.864856	
43	2.825999	2.430407	2.215796	2.080384	1.986015	1.915856	1.861300	
44	2.823173	2.427399	2.212688	2.077194	1.982752	1.912527	1.857909	
45	2.820476	2.424529	2.209722	2.074151	1.979639	1.909351	1.854675	
46	2.817901	2.421788	2.206890	2.071244	1.976666	1.906317	1.851585	
47	2.815438	2.419168	2.204182	2.068465	1.973823	1.903416	1.848631	
48	2.813081	2.416660	2.201591	2.065805	1.971103	1.900640	1.845803	
49	2.810823	2.414258	2.199109	2.063258	1.968497	1.897981	1.843094	
50	2.808658	2.411955	2.196730	2.060816	1.965999	1.895431	1.840496	
51	2.806580	2.409745	2.194446	2.058472	1.963601	1.892984	1.838003	
52	2.804584	2.407622	2.192254	2.056221	1.961299	1.890634	1.835609	
53	2.802665	2.405582	2.190146	2.054058	1.959085	1.888375	1.833307	
54	2.800819	2.403620	2.188119	2.051977	1.956956	1.886201	1.831093	
55	2.799043	2.401731	2.186167	2.049974	1.954907	1.884109	1.828961	
56	2.797331	2.399911	2.184287	2.048044	1.952933	1.882094	1.826907	
57	2.795681	2.398157	2.182475	2.046184	1.951030	1.880151	1.824928	
58	2.794089	2.396465	2.180727	2.044390	1.949194	1.878277	1.823018	
59	2.792552	2.394832	2.179040	2.042658	1.947422	1.876468	1.821174	
60	2.791068	2.393255	2.177411	2.040986	1.945710	1.874720	1.819393	
61	2.789633	2.391731	2.175836	2.039370	1.944056	1.873032	1.817672	
62	2.788246	2.390257	2.174314	2.037807	1.942457	1.871399	1.816007	
63	2.786904	2.388831	2.172841	2.036295	1.940910	1.869819	1.814397	
64	2.785604	2.387451	2.171415	2.034831	1.939412	1.868289	1.812838	
65	2.784346	2.386114	2.170034	2.033414	1.937961	1.866808	1.811328	
66	2.783127	2.384818	2.168697	2.032040	1.936556	1.865373	1.809865	
67	2.781944	2.383563	2.167399	2.030709	1.935193	1.863981	1.808446	
68	2.780797	2.382344	2.166141	2.029417	1.933871	1.862631	1.807070	
69	2.779684	2.381163	2.164921	2.028164	1.932589	1.861321	1.805735	
70	2.778604	2.380015	2.163735	2.026947	1.931343	1.860049	1.804438	
71	2.777554	2.378901	2.162584	2.025766	1.930134	1.858814	1.803179	
72	2.776535	2.377818	2.161466	2.024618	1.928959	1.857614	1.801955	

F $\alpha = 0.1$

df1	1	2	3	4	5	6	7
73	2.775543	2.376765	2.160379	2.023502	1.927817	1.856448	1.800766
74	2.774579	2.375742	2.159322	2.022417	1.926706	1.855313	1.799609
75	2.773642	2.374746	2.158294	2.021361	1.925626	1.854209	1.798483
76	2.772729	2.373778	2.157293	2.020334	1.924574	1.853135	1.797388
77	2.771841	2.372834	2.156319	2.019334	1.923550	1.852090	1.796322
78	2.770975	2.371916	2.155371	2.018360	1.922554	1.851071	1.795284
79	2.770132	2.371021	2.154446	2.017411	1.921582	1.850079	1.794272
80	2.769311	2.370149	2.153546	2.016486	1.920636	1.849113	1.793286
81	2.768510	2.369299	2.152668	2.015585	1.919713	1.848170	1.792325
82	2.767729	2.368470	2.151812	2.014706	1.918814	1.847251	1.791388
83	2.766967	2.367661	2.150977	2.013849	1.917936	1.846354	1.790473
84	2.766223	2.366872	2.150162	2.013012	1.917080	1.845480	1.789581
85	2.765497	2.366102	2.149367	2.012196	1.916244	1.844626	1.788710
86	2.764789	2.365350	2.148590	2.011399	1.915428	1.843792	1.787860
87	2.764097	2.364616	2.147832	2.010620	1.914631	1.842978	1.787029
88	2.763421	2.363899	2.147091	2.009860	1.913852	1.842182	1.786218
89	2.762760	2.363198	2.146368	2.009117	1.913091	1.841405	1.785425
90	2.762115	2.362513	2.145660	2.008390	1.912348	1.840645	1.784650
91	2.761483	2.361843	2.144969	2.007680	1.911621	1.839902	1.783892
92	2.760866	2.361188	2.144292	2.006986	1.910910	1.839176	1.783151
93	2.760262	2.360548	2.143631	2.006307	1.910214	1.838465	1.782427
94	2.759671	2.359921	2.142983	2.005642	1.909534	1.837770	1.781718
95	2.759093	2.359307	2.142350	2.004992	1.908868	1.837090	1.781024
96	2.758527	2.358707	2.141730	2.004355	1.908217	1.836424	1.780344
97	2.757973	2.358119	2.141123	2.003732	1.907578	1.835772	1.779679
98	2.757430	2.357544	2.140529	2.003122	1.906954	1.835134	1.779028
99	2.756899	2.356980	2.139947	2.002524	1.906342	1.834508	1.778390
100	2.756378	2.356427	2.139376	2.001938	1.905742	1.833896	1.777765
101	2.755868	2.355886	2.138817	2.001365	1.905154	1.833295	1.777152
102	2.755368	2.355356	2.138270	2.000802	1.904579	1.832707	1.776552
103	2.754877	2.354836	2.137733	2.000251	1.904014	1.832130	1.775963
104	2.754396	2.354326	2.137206	1.999710	1.903461	1.831564	1.775386
105	2.753925	2.353826	2.136690	1.999180	1.902918	1.831009	1.774820
106	2.753462	2.353335	2.136183	1.998660	1.902385	1.830465	1.774265
107	2.753009	2.352854	2.135687	1.998150	1.901863	1.829932	1.773720
108	2.752564	2.352382	2.135199	1.997650	1.901350	1.829408	1.773186
109	2.752127	2.351919	2.134721	1.997158	1.900847	1.828894	1.772662
110	2.751698	2.351464	2.134251	1.996676	1.900354	1.828389	1.772147
111	2.751277	2.351017	2.133790	1.996203	1.899869	1.827894	1.771641
112	2.750863	2.350579	2.133338	1.995738	1.899393	1.827407	1.771145
113	2.750457	2.350148	2.132893	1.995282	1.898926	1.826930	1.770658
114	2.750058	2.349726	2.132456	1.994833	1.898467	1.826461	1.770179
115	2.749666	2.349310	2.132027	1.994393	1.898016	1.826000	1.769709
116	2.749281	2.348902	2.131606	1.993960	1.897573	1.825547	1.769246
117	2.748903	2.348501	2.131192	1.993535	1.897137	1.825102	1.768792
118	2.748531	2.348107	2.130785	1.993117	1.896709	1.824664	1.768346
119	2.748166	2.347719	2.130385	1.992706	1.896288	1.824234	1.767907
120	2.747807	2.347338	2.129991	1.992302	1.895875	1.823812	1.767476
121	2.747453	2.346964	2.129605	1.991905	1.895468	1.823396	1.767052
122	2.747106	2.346595	2.129224	1.991515	1.895068	1.822987	1.766634
123	2.746764	2.346233	2.128850	1.991131	1.894675	1.822585	1.766224
124	2.746428	2.345877	2.128482	1.990753	1.894288	1.822190	1.765821
125	2.746097	2.345526	2.128120	1.990381	1.893907	1.821801	1.765424
126	2.745772	2.345181	2.127764	1.990015	1.893533	1.821418	1.765033
127	2.745451	2.344842	2.127414	1.989655	1.893164	1.821041	1.764648
128	2.745136	2.344507	2.127069	1.989301	1.892801	1.820670	1.764270
129	2.744826	2.344179	2.126729	1.988953	1.892444	1.820305	1.763898
130	2.744520	2.343855	2.126395	1.988609	1.892093	1.819946	1.763531
131	2.744220	2.343536	2.126066	1.988271	1.891747	1.819592	1.763170
132	2.743924	2.343222	2.125742	1.987939	1.891406	1.819244	1.762814
133	2.743632	2.342913	2.125423	1.987611	1.891070	1.818901	1.762464
134	2.743345	2.342609	2.125108	1.987288	1.890740	1.818563	1.762119
135	2.743062	2.342309	2.124799	1.986970	1.890414	1.818230	1.761780
136	2.742783	2.342013	2.124494	1.986657	1.890094	1.817902	1.761445
137	2.742508	2.341722	2.124193	1.986349	1.889778	1.817579	1.761115
138	2.742238	2.341436	2.123897	1.986045	1.889466	1.817261	1.760791
139	2.741971	2.341153	2.123606	1.985745	1.889159	1.816947	1.760471
140	2.741708	2.340874	2.123318	1.985450	1.888857	1.816638	1.760155
141	2.741449	2.340600	2.123035	1.985159	1.888559	1.816334	1.759844
142	2.741194	2.340329	2.122755	1.984872	1.888265	1.816033	1.759537
143	2.740942	2.340063	2.122480	1.984589	1.887975	1.815737	1.759235
144	2.740694	2.339799	2.122208	1.984310	1.887690	1.815445	1.758937
145	2.740449	2.339540	2.121940	1.984035	1.887408	1.815157	1.758643
146	2.740208	2.339284	2.121676	1.983764	1.887130	1.814873	1.758353
147	2.739970	2.339032	2.121416	1.983496	1.886856	1.814593	1.758068

F $\alpha = 0.1$

df2	df1	1	2	3	4	5	6	7
148	2.739735	2.338783	2.121159	1.983233	1.886586	1.814317	1.757786	
149	2.739503	2.338538	2.120906	1.982972	1.886320	1.814045	1.757508	
150	2.739275	2.338296	2.120656	1.982716	1.886057	1.813776	1.757233	
151	2.739049	2.338057	2.120409	1.982462	1.885797	1.813511	1.756963	
152	2.738827	2.337821	2.120166	1.982213	1.885541	1.813249	1.756695	
153	2.738607	2.337588	2.119925	1.981966	1.885289	1.812991	1.756432	
154	2.738391	2.337359	2.119688	1.981723	1.885040	1.812736	1.756172	
155	2.738177	2.337132	2.119455	1.981482	1.884794	1.812484	1.755915	
156	2.737966	2.336909	2.119224	1.981245	1.884551	1.812236	1.755662	
157	2.737758	2.336688	2.118996	1.981011	1.884311	1.811991	1.755411	
158	2.737552	2.336470	2.118771	1.980780	1.884074	1.811749	1.755164	
159	2.737349	2.336255	2.118549	1.980552	1.883841	1.811510	1.754921	
160	2.737148	2.336042	2.118329	1.980327	1.883610	1.811274	1.754680	
161	2.736950	2.335832	2.118113	1.980104	1.883382	1.811041	1.754442	
162	2.736755	2.335625	2.117899	1.979885	1.883157	1.810811	1.754207	
163	2.736562	2.335421	2.117688	1.979668	1.882935	1.810584	1.753975	
164	2.736371	2.335218	2.117479	1.979454	1.882716	1.810360	1.753746	
165	2.736182	2.335019	2.117273	1.979242	1.882499	1.810138	1.753520	
166	2.735996	2.334822	2.117069	1.979033	1.882285	1.809919	1.753297	
167	2.735812	2.334627	2.116868	1.978826	1.882073	1.809703	1.753076	
168	2.735631	2.334434	2.116669	1.978622	1.881864	1.809489	1.752858	
169	2.735451	2.334244	2.116473	1.978421	1.881658	1.809278	1.752642	
170	2.735274	2.334056	2.116279	1.978222	1.881454	1.809070	1.752429	
171	2.735099	2.333871	2.116087	1.978025	1.881252	1.808863	1.752219	
172	2.734925	2.333687	2.115898	1.977830	1.881053	1.808660	1.752011	
173	2.734754	2.333506	2.115711	1.977638	1.880856	1.808458	1.751805	
174	2.734585	2.333326	2.115526	1.977448	1.880661	1.808259	1.751602	
175	2.734418	2.333149	2.115343	1.977260	1.880469	1.808062	1.751401	
176	2.734252	2.332974	2.115162	1.977074	1.880278	1.807868	1.751203	
177	2.734089	2.332801	2.114983	1.976891	1.880090	1.807676	1.751006	
178	2.733927	2.332630	2.114806	1.976709	1.879904	1.807486	1.750812	
179	2.733767	2.332460	2.114632	1.976530	1.879721	1.807298	1.750620	
180	2.733609	2.332293	2.114459	1.976352	1.879539	1.807112	1.750431	
181	2.733453	2.332127	2.114288	1.976177	1.879359	1.806928	1.750243	
182	2.733298	2.331964	2.114119	1.976003	1.879181	1.806746	1.750057	
183	2.733146	2.331802	2.113952	1.975832	1.879005	1.806566	1.749874	
184	2.732994	2.331642	2.113787	1.975662	1.878832	1.806389	1.749692	
185	2.732845	2.331483	2.113623	1.975494	1.878660	1.806213	1.749513	
186	2.732697	2.331327	2.113461	1.975328	1.878490	1.806039	1.749335	
187	2.732551	2.331172	2.113301	1.975164	1.878321	1.805867	1.749160	
188	2.732406	2.331018	2.113143	1.975001	1.878155	1.805697	1.748986	
189	2.732263	2.330867	2.112987	1.974840	1.877990	1.805528	1.748814	
190	2.732121	2.330717	2.112832	1.974681	1.877827	1.805362	1.748644	
191	2.731981	2.330568	2.112678	1.974524	1.877666	1.805197	1.748475	
192	2.731842	2.330421	2.112527	1.974368	1.877506	1.805034	1.748309	
193	2.731705	2.330276	2.112377	1.974214	1.877348	1.804872	1.748144	
194	2.731569	2.330132	2.112228	1.974061	1.877192	1.804712	1.747981	
195	2.731435	2.329990	2.112081	1.973910	1.877038	1.804554	1.747820	
196	2.731302	2.329849	2.111936	1.973761	1.876885	1.804398	1.747660	
197	2.731170	2.329709	2.111792	1.973613	1.876733	1.804243	1.747502	
198	2.731040	2.329571	2.111649	1.973467	1.876583	1.804090	1.747345	
199	2.730911	2.329435	2.111508	1.973322	1.876435	1.803938	1.747190	
200	2.730783	2.329299	2.111368	1.973179	1.876288	1.803788	1.747037	
201	2.730657	2.329165	2.111230	1.973037	1.876142	1.803639	1.746885	
202	2.730531	2.329033	2.111093	1.972896	1.875998	1.803492	1.746735	
203	2.730407	2.328901	2.110958	1.972757	1.875856	1.803346	1.746586	
204	2.730285	2.328771	2.110824	1.972619	1.875715	1.803202	1.746438	
205	2.730163	2.328643	2.110691	1.972483	1.875575	1.803059	1.746293	
206	2.730043	2.328515	2.110559	1.972348	1.875437	1.802917	1.746148	
207	2.729924	2.328389	2.110429	1.972214	1.875300	1.802777	1.746005	
208	2.729806	2.328264	2.110300	1.972081	1.875164	1.802638	1.745863	
209	2.729689	2.328140	2.110172	1.971950	1.875029	1.802501	1.745723	
210	2.729573	2.328018	2.110046	1.971820	1.874896	1.802365	1.745584	
211	2.729458	2.327896	2.109920	1.971691	1.874764	1.802230	1.745446	
212	2.729345	2.327776	2.109796	1.971564	1.874634	1.802096	1.745310	
213	2.729232	2.327657	2.109673	1.971438	1.874504	1.801964	1.745175	
214	2.729121	2.327539	2.109551	1.971313	1.874376	1.801833	1.745041	
215	2.729011	2.327422	2.109431	1.971189	1.874249	1.801703	1.744908	
216	2.728901	2.327306	2.109311	1.971066	1.874124	1.801575	1.744777	
217	2.728793	2.327192	2.109193	1.970944	1.873999	1.801447	1.744647	
218	2.728686	2.327078	2.109075	1.970824	1.873876	1.801321	1.744518	
219	2.728579	2.326965	2.108959	1.970704	1.873753	1.801196	1.744390	
220	2.728474	2.326854	2.108844	1.970586	1.873632	1.801072	1.744264	
221	2.728370	2.326743	2.108730	1.970469	1.873512	1.800949	1.744139	
222	2.728266	2.326634	2.108617	1.970353	1.873393	1.800827	1.744014	
223	2.728163	2.326525	2.108505	1.970238	1.873275	1.800707	1.743891	
224	2.728062	2.326417	2.108394	1.970123	1.873158	1.800587	1.743769	
225	2.727961	2.326311	2.108284	1.970010	1.873042	1.800469	1.743648	
226	2.727861	2.326205	2.108174	1.969898	1.872928	1.800352	1.743528	
227	2.727762	2.326100	2.108066	1.969787	1.872814	1.800235	1.743410	

F $\alpha = 0.1$

df2	df1	1	2	3	4	5	6	7
228	2	2.727664	2.325996	2.107959	1.969677	1.872701	1.800120	1.743292
229	2	2.727567	2.325893	2.107853	1.969568	1.872589	1.800006	1.743175
230	2	2.727471	2.325791	2.107748	1.969460	1.872478	1.799892	1.743059
231	2	2.727375	2.325690	2.107643	1.969353	1.872369	1.799780	1.742945
232	2	2.727281	2.325590	2.107540	1.969247	1.872260	1.799669	1.742831
233	2	2.727187	2.325491	2.107437	1.969141	1.872152	1.799558	1.742718
234	2	2.727094	2.325392	2.107335	1.969037	1.872045	1.799449	1.742607
235	2	2.727002	2.325294	2.107235	1.968933	1.871939	1.799340	1.742496
236	2	2.726910	2.325198	2.107135	1.968830	1.871834	1.799233	1.742386
237	2	2.726819	2.325102	2.107035	1.968729	1.871729	1.799126	1.742277
238	2	2.726729	2.325006	2.106937	1.968628	1.871626	1.799020	1.742169
239	2	2.726640	2.324912	2.106840	1.968528	1.871523	1.798916	1.742062
240	2	2.726552	2.324818	2.106743	1.968428	1.871422	1.798812	1.741956
241	2	2.726464	2.324725	2.106647	1.968330	1.871321	1.798708	1.741850
242	2	2.726377	2.324633	2.106552	1.968232	1.871221	1.798606	1.741746
243	2	2.726291	2.324542	2.106458	1.968136	1.871122	1.798505	1.741642
244	2	2.726206	2.324452	2.106364	1.968040	1.871023	1.798404	1.741540
245	2	2.726121	2.324362	2.106272	1.967944	1.870926	1.798304	1.741438
246	2	2.726037	2.324273	2.106180	1.967850	1.870829	1.798205	1.741337
247	2	2.725953	2.324184	2.106089	1.967756	1.870733	1.798107	1.741237
248	2	2.725870	2.324097	2.105998	1.967663	1.870638	1.798010	1.741137
249	2	2.725788	2.324010	2.105908	1.967571	1.870543	1.797913	1.741039
250	2	2.725707	2.323924	2.105819	1.967480	1.870450	1.797818	1.740941
df2	df1	8	9	10	11	12	13	14
1	59	4.38981	5.857585	6.019498	6.047267	6.070521	6.090274	6.107266
2	9	3.66770	3.380544	3.391573	3.400603	3.408132	3.414506	3.419972
3	5	2.51671	5.239996	5.230411	5.222405	5.215618	5.209792	5.204739
4	3	9.54940	3.935671	3.919876	3.906694	3.895527	3.885946	3.877636
5	3	3.339276	3.316281	3.297402	3.281623	3.268239	3.256743	3.246760
6	2	9.83036	2.957741	2.936935	2.919517	2.904721	2.891994	2.880930
7	2	7.51580	2.724678	2.702510	2.683924	2.668111	2.654493	2.642641
8	2	5.89349	2.561238	2.538037	2.518554	2.501958	2.487647	2.475178
9	2	4.69406	2.440340	2.416316	2.396114	2.378885	2.364012	2.351040
10	2	3.77150	2.347306	2.322604	2.301808	2.284051	2.268708	2.255313
11	2	3.03997	2.273502	2.248230	2.226930	2.208725	2.192979	2.179221
12	2	2.44575	2.213525	2.187764	2.166031	2.147437	2.131341	2.117267
13	2	1.95350	2.163820	2.137635	2.115522	2.096588	2.080185	2.065831
14	2	1.53904	2.121955	2.095396	2.072950	2.053714	2.037038	2.022434
15	2	1.18530	2.086209	2.059319	2.036575	2.017070	2.000148	1.985321
16	2	0.87982	2.055331	2.028145	2.005134	1.985386	1.968243	1.953212
17	2	0.61336	2.028388	2.000936	1.977683	1.957716	1.940372	1.925157
18	2	0.37889	2.004674	1.976980	1.953508	1.933340	1.915813	1.900428
19	2	0.17098	1.983639	1.955725	1.932053	1.911702	1.894006	1.878467
20	2	0.998534	1.964853	1.936738	1.912882	1.892363	1.874512	1.858829
21	2	0.981858	1.947974	1.919674	1.895649	1.874975	1.856980	1.841165
22	2	0.966796	1.932725	1.904255	1.880073	1.859255	1.841127	1.825189
23	2	0.953124	1.918880	1.890252	1.865926	1.844974	1.826723	1.810670
24	2	0.940658	1.906255	1.877480	1.853018	1.831942	1.813576	1.797415
25	2	0.929246	1.894693	1.865782	1.841195	1.820003	1.801528	1.785267
26	2	0.918758	1.884067	1.855028	1.830324	1.809023	1.790447	1.774092
27	2	0.909087	1.874267	1.845109	1.820295	1.798891	1.780221	1.763777
28	2	0.900141	1.865199	1.835930	1.811012	1.789513	1.770753	1.754226
29	2	0.891842	1.856786	1.827412	1.802397	1.780807	1.761963	1.745356
30	2	0.884121	1.848958	1.819485	1.794379	1.772704	1.753378	1.737098
31	2	0.876920	1.841657	1.812091	1.786898	1.765142	1.746142	1.729390
32	2	0.870189	1.834831	1.805176	1.779901	1.758069	1.738998	1.722179
33	2	0.863882	1.828434	1.798697	1.773344	1.751439	1.732300	1.715417
34	2	0.857961	1.822428	1.792612	1.767185	1.745212	1.726008	1.709065
35	2	0.852392	1.816778	1.786887	1.761390	1.739351	1.720087	1.703085
36	2	0.847144	1.811453	1.781491	1.755928	1.733826	1.714503	1.697447
37	2	0.842190	1.806426	1.776396	1.750769	1.728609	1.709230	1.692121
38	2	0.837505	1.801673	1.771578	1.745891	1.723673	1.704241	1.687082
39	2	0.833070	1.797171	1.767014	1.741270	1.718998	1.699515	1.682307
40	2	0.828863	1.792902	1.762686	1.736886	1.714563	1.695030	1.677777
41	2	0.824869	1.788847	1.758575	1.732722	1.710349	1.690770	1.673472
42	2	0.821071	1.784991	1.754665	1.728762	1.706341	1.686717	1.669377
43	2	0.817455	1.781320	1.750942	1.724990	1.702524	1.682857	1.665476
44	2	0.814008	1.777820	1.747393	1.721395	1.698885	1.679176	1.661756
45	2	0.810719	1.774480	1.744006	1.717963	1.695411	1.675663	1.658205
46	2	0.807577	1.771290	1.740769	1.714684	1.692091	1.672305	1.654811
47	2	0.804573	1.768239	1.737674	1.711548	1.688916	1.669093	1.651564
48	2	0.801697	1.765318	1.734712	1.708545	1.685876	1.666017	1.648455
49	2	0.798942	1.762520	1.731872	1.705667	1.682962	1.663069	1.645474
50	2	0.796300	1.759836	1.729150	1.702908	1.680167	1.660241	1.642615
51	2	0.793764	1.757260	1.726536	1.700258	1.677485	1.657527	1.639870
52	2	0.791328	1.754786	1.724025	1.697713	1.674907	1.654918	1.637232
53	2	0.788987	1.752407	1.721611	1.695266	1.672428	1.652410	1.634696
54	2	0.786734	1.750118	1.719288	1.692911	1.670043	1.649996	1.632254

F $\alpha = 0.1$

df2	df1	8	9	10	11	12	13	14
55	1.784565	1.747914	1.717052	1.690644	1.667746	1.647671	1.629903	
56	1.782475	1.745791	1.714897	1.688459	1.665533	1.645430	1.627637	
57	1.780461	1.743744	1.712819	1.686352	1.663398	1.643270	1.625451	
58	1.778517	1.741769	1.710814	1.684319	1.661339	1.641185	1.623342	
59	1.776641	1.739862	1.708879	1.682356	1.659350	1.639172	1.621306	
60	1.774829	1.738020	1.707009	1.680460	1.657429	1.637227	1.619338	
61	1.773077	1.736240	1.705201	1.678627	1.655571	1.635346	1.617435	
62	1.771383	1.734518	1.703453	1.676854	1.653775	1.633527	1.615595	
63	1.769744	1.732852	1.701762	1.675138	1.652036	1.631767	1.613814	
64	1.768158	1.731239	1.700124	1.673477	1.650353	1.630062	1.612089	
65	1.766621	1.729677	1.698538	1.671868	1.648722	1.628411	1.610418	
66	1.765131	1.728163	1.697000	1.670308	1.647141	1.626810	1.608798	
67	1.763687	1.726695	1.695510	1.668796	1.645609	1.625258	1.607227	
68	1.762286	1.725271	1.694063	1.667329	1.644121	1.623751	1.605703	
69	1.760927	1.723888	1.692660	1.665905	1.642678	1.622289	1.604223	
70	1.759607	1.722546	1.691297	1.664522	1.641276	1.620870	1.602786	
71	1.758325	1.721243	1.689973	1.663179	1.639915	1.619490	1.601390	
72	1.757079	1.719976	1.688686	1.661873	1.638591	1.618150	1.600033	
73	1.755868	1.718745	1.687436	1.660604	1.637305	1.616847	1.598714	
74	1.754690	1.717547	1.686219	1.659370	1.636053	1.615579	1.597430	
75	1.753545	1.716382	1.685036	1.658169	1.634835	1.614345	1.596182	
76	1.752429	1.715248	1.683884	1.657000	1.633650	1.613145	1.594966	
77	1.751344	1.714144	1.682762	1.655862	1.632496	1.611975	1.593783	
78	1.750286	1.713068	1.681670	1.654753	1.631372	1.610837	1.592629	
79	1.749256	1.712021	1.680605	1.653673	1.630277	1.609727	1.591506	
80	1.748252	1.711000	1.679568	1.652620	1.629209	1.608645	1.590411	
81	1.747273	1.710004	1.678557	1.651593	1.628168	1.607590	1.589343	
82	1.746319	1.709033	1.677570	1.650592	1.627153	1.606561	1.588301	
83	1.745387	1.708086	1.676608	1.649615	1.626162	1.605558	1.587285	
84	1.744479	1.707162	1.675669	1.648662	1.625196	1.604578	1.586293	
85	1.743592	1.706259	1.674752	1.647732	1.624252	1.603622	1.585324	
86	1.742726	1.705379	1.673857	1.646823	1.623330	1.602688	1.584378	
87	1.741880	1.704518	1.672982	1.645935	1.622430	1.601776	1.583455	
88	1.741053	1.703677	1.672128	1.645068	1.621551	1.600884	1.582552	
89	1.740246	1.702856	1.671294	1.644221	1.620691	1.600013	1.581670	
90	1.739457	1.702053	1.670478	1.643392	1.619851	1.599162	1.580807	
91	1.738685	1.701268	1.669680	1.642582	1.619029	1.598329	1.579964	
92	1.737930	1.700500	1.668899	1.641790	1.618226	1.597514	1.579139	
93	1.737192	1.699749	1.668136	1.641015	1.617440	1.596718	1.578332	
94	1.736470	1.699014	1.667389	1.640257	1.616670	1.595938	1.577542	
95	1.735763	1.698295	1.666658	1.639515	1.615918	1.595175	1.576769	
96	1.735071	1.697591	1.665943	1.638788	1.615180	1.594428	1.576013	
97	1.734393	1.696901	1.665242	1.638077	1.614459	1.593696	1.575271	
98	1.733730	1.696226	1.664556	1.637380	1.613752	1.592980	1.574546	
99	1.733080	1.695565	1.663884	1.636698	1.613059	1.592278	1.573835	
100	1.732443	1.694917	1.663225	1.636029	1.612381	1.591590	1.573138	
101	1.731819	1.694282	1.662580	1.635374	1.611716	1.590916	1.572455	
102	1.731207	1.693660	1.661947	1.634731	1.611064	1.590255	1.571786	
103	1.730607	1.693049	1.661327	1.634101	1.610425	1.589607	1.571129	
104	1.730020	1.692451	1.660719	1.633484	1.609799	1.588972	1.570486	
105	1.729443	1.691864	1.660122	1.632878	1.609184	1.588349	1.569854	
106	1.728877	1.691289	1.659537	1.632284	1.608581	1.587738	1.569235	
107	1.728322	1.690724	1.658963	1.631701	1.607990	1.587138	1.568628	
108	1.727778	1.690170	1.658400	1.631129	1.607409	1.586549	1.568031	
109	1.727244	1.689626	1.657847	1.630567	1.606840	1.585972	1.567446	
110	1.726719	1.689092	1.657304	1.630016	1.606280	1.585405	1.566871	
111	1.726204	1.688568	1.656772	1.629475	1.605731	1.584848	1.566307	
112	1.725698	1.688054	1.656248	1.628944	1.605192	1.584301	1.565753	
113	1.725202	1.687548	1.655734	1.628422	1.604662	1.583764	1.565209	
114	1.724714	1.687052	1.655230	1.627909	1.604142	1.583236	1.564674	
115	1.724234	1.686564	1.654734	1.627405	1.603631	1.582718	1.564149	
116	1.723764	1.686085	1.654246	1.626910	1.603129	1.582209	1.563633	
117	1.723301	1.685614	1.653768	1.626424	1.602635	1.581708	1.563126	
118	1.722846	1.685151	1.653297	1.625946	1.602150	1.581216	1.562627	
119	1.722399	1.684696	1.652834	1.625476	1.601673	1.580732	1.562137	
120	1.721959	1.684248	1.652379	1.625014	1.601204	1.580257	1.561655	
121	1.721527	1.683808	1.651932	1.624559	1.600743	1.579789	1.561181	
122	1.721102	1.683375	1.651492	1.624113	1.600289	1.579329	1.560715	
123	1.720684	1.682950	1.651059	1.623673	1.599843	1.578877	1.560256	
124	1.720273	1.682531	1.650634	1.623241	1.599404	1.578432	1.559805	
125	1.719868	1.682119	1.650215	1.622815	1.598972	1.577994	1.559362	
126	1.719470	1.681714	1.649803	1.622396	1.598547	1.577563	1.558925	
127	1.719078	1.681315	1.649397	1.621984	1.598129	1.577139	1.558495	
128	1.718692	1.680923	1.648998	1.621579	1.597717	1.576721	1.558072	
129	1.718313	1.680536	1.648605	1.621180	1.597312	1.576310	1.557655	
130	1.717939	1.680156	1.648218	1.620787	1.596913	1.575906	1.557245	
131	1.717571	1.679781	1.647837	1.620400	1.596521	1.575507	1.556841	
132	1.717209	1.679412	1.647462	1.620019	1.596134	1.575115	1.556444	
133	1.716852	1.679049	1.647093	1.619643	1.595753	1.574729	1.556052	

F $\alpha = 0.1$

df1	8	9	10	11	12	13	14
134	1.716500	1.678691	1.646729	1.619274	1.595378	1.574348	1.555666
135	1.716154	1.678339	1.646371	1.618910	1.595008	1.573973	1.555286
136	1.715813	1.677992	1.646018	1.618551	1.594644	1.573604	1.554912
137	1.715477	1.677650	1.645670	1.618198	1.594285	1.573240	1.554543
138	1.715146	1.677313	1.645327	1.617849	1.593931	1.572881	1.554180
139	1.714820	1.676980	1.644989	1.617506	1.593583	1.572528	1.553821
140	1.714498	1.676653	1.644656	1.617168	1.593240	1.572179	1.553468
141	1.714181	1.676330	1.644328	1.616834	1.592901	1.571836	1.553120
142	1.713869	1.676012	1.644004	1.616505	1.592567	1.571497	1.552777
143	1.713561	1.675698	1.643685	1.616181	1.592238	1.571164	1.552438
144	1.713257	1.675389	1.643371	1.615862	1.591914	1.570834	1.552105
145	1.712957	1.675084	1.643061	1.615547	1.591594	1.570510	1.551776
146	1.712662	1.674783	1.642755	1.615236	1.591278	1.570190	1.551451
147	1.712370	1.674487	1.642453	1.614929	1.590967	1.569874	1.551131
148	1.712083	1.674194	1.642155	1.614627	1.590660	1.569563	1.550816
149	1.711800	1.673906	1.641862	1.614329	1.590357	1.569255	1.550504
150	1.711520	1.673621	1.641572	1.614034	1.590058	1.568952	1.550197
151	1.711244	1.673340	1.641286	1.613744	1.589764	1.568653	1.549894
152	1.710972	1.673063	1.641004	1.613457	1.589473	1.568358	1.549594
153	1.710703	1.672789	1.640726	1.613175	1.589186	1.568067	1.549299
154	1.710438	1.672519	1.640452	1.612896	1.588902	1.567779	1.549008
155	1.710176	1.672253	1.640181	1.612620	1.588623	1.567496	1.548720
156	1.709918	1.671990	1.639913	1.612348	1.588347	1.567215	1.548436
157	1.709663	1.671730	1.639649	1.612080	1.588074	1.566939	1.548156
158	1.709411	1.671474	1.639388	1.611815	1.587805	1.566666	1.547879
159	1.709162	1.671220	1.639131	1.611553	1.587539	1.566396	1.547606
160	1.708917	1.670971	1.638876	1.611295	1.587277	1.566130	1.547336
161	1.708675	1.670724	1.638625	1.611040	1.587018	1.565867	1.547069
162	1.708435	1.670480	1.638377	1.610788	1.586762	1.565608	1.546806
163	1.708199	1.670239	1.638133	1.610539	1.586509	1.565352	1.546546
164	1.707965	1.670002	1.637891	1.610293	1.586260	1.565098	1.546290
165	1.707735	1.669767	1.637652	1.610050	1.586013	1.564848	1.546036
166	1.707507	1.669535	1.637416	1.609811	1.585770	1.564601	1.545785
167	1.707282	1.669305	1.637183	1.609574	1.585529	1.564357	1.545538
168	1.707059	1.669079	1.636952	1.609339	1.585291	1.564116	1.545293
169	1.706840	1.668855	1.636725	1.609108	1.585057	1.563877	1.545052
170	1.706623	1.668634	1.636500	1.608879	1.584824	1.563642	1.544813
171	1.706408	1.668416	1.636277	1.608654	1.584595	1.563409	1.544577
172	1.706196	1.668200	1.636058	1.608430	1.584368	1.563179	1.544343
173	1.705986	1.667986	1.635841	1.608210	1.584144	1.562952	1.544113
174	1.705779	1.667775	1.635626	1.607991	1.583923	1.562727	1.543885
175	1.705574	1.667567	1.635414	1.607776	1.583704	1.562505	1.543660
176	1.705372	1.667361	1.635204	1.607563	1.583487	1.562285	1.543437
177	1.705172	1.667157	1.634997	1.607352	1.583273	1.562068	1.543217
178	1.704974	1.666955	1.634792	1.607144	1.583062	1.561853	1.542999
179	1.704778	1.666756	1.634589	1.606938	1.582852	1.561641	1.542784
180	1.704585	1.666559	1.634389	1.606734	1.582646	1.561431	1.542571
181	1.704393	1.666364	1.634190	1.606532	1.582441	1.561223	1.542360
182	1.704204	1.666171	1.633994	1.606333	1.582239	1.561018	1.542152
183	1.704017	1.665981	1.633801	1.606136	1.582039	1.560815	1.541946
184	1.703832	1.665792	1.633609	1.605941	1.581841	1.560614	1.541743
185	1.703649	1.665606	1.633419	1.605749	1.581645	1.560415	1.541541
186	1.703468	1.665422	1.633232	1.605558	1.581451	1.560219	1.541342
187	1.703289	1.665239	1.633046	1.605369	1.581260	1.560025	1.541145
188	1.703112	1.665059	1.632862	1.605183	1.581070	1.559832	1.540950
189	1.702936	1.664880	1.632681	1.604998	1.580883	1.559642	1.540757
190	1.702763	1.664704	1.632501	1.604815	1.580697	1.559454	1.540566
191	1.702591	1.664529	1.632323	1.604635	1.580514	1.559267	1.540377
192	1.702421	1.664356	1.632147	1.604456	1.580332	1.559083	1.540190
193	1.702253	1.664185	1.631973	1.604279	1.580152	1.558901	1.540005
194	1.702087	1.664015	1.631801	1.604103	1.579974	1.558720	1.539822
195	1.701923	1.663848	1.631630	1.603930	1.579798	1.558541	1.539640
196	1.701760	1.663682	1.631461	1.603759	1.579624	1.558364	1.539461
197	1.701598	1.663517	1.631294	1.603589	1.579451	1.558189	1.539284
198	1.701439	1.663355	1.631129	1.603421	1.579281	1.558016	1.539108
199	1.701281	1.663194	1.630965	1.603254	1.579112	1.557845	1.538934
200	1.701124	1.663035	1.630803	1.603089	1.578944	1.557675	1.538762
201	1.700970	1.662877	1.630643	1.602926	1.578779	1.557507	1.538591
202	1.700816	1.662721	1.630484	1.602765	1.578615	1.557340	1.538422
203	1.700665	1.662566	1.630327	1.602605	1.578452	1.557175	1.538255
204	1.700514	1.662413	1.630171	1.602447	1.578291	1.557012	1.538090
205	1.700365	1.662262	1.630017	1.602290	1.578132	1.556851	1.537926
206	1.700218	1.662112	1.629864	1.602135	1.577975	1.556691	1.537764
207	1.700072	1.661963	1.629713	1.601981	1.577818	1.556532	1.537603
208	1.699928	1.661816	1.629563	1.601829	1.577664	1.556375	1.537444
209	1.699785	1.661670	1.629415	1.601678	1.577511	1.556220	1.537286
210	1.699643	1.661526	1.629268	1.601529	1.577359	1.556066	1.537130
211	1.699503	1.661383	1.629122	1.601381	1.577209	1.555913	1.536975
212	1.699363	1.661241	1.628978	1.601234	1.577060	1.555762	1.536822
213	1.699226	1.661101	1.628835	1.601089	1.576913	1.555613	1.536670

F $\alpha = 0.1$

df1	8	9	10	11	12	13	14
214	1.699089	1.660962	1.628694	1.600945	1.576767	1.555465	1.536520
215	1.698954	1.660824	1.628554	1.600803	1.576622	1.555318	1.536371
216	1.698820	1.660688	1.628415	1.600662	1.576479	1.555172	1.536224
217	1.698688	1.660553	1.628278	1.600522	1.576337	1.555028	1.536077
218	1.698556	1.660419	1.628141	1.600384	1.576196	1.554885	1.535933
219	1.698426	1.660286	1.628006	1.600246	1.576057	1.554744	1.535789
220	1.698297	1.660155	1.627873	1.600110	1.575918	1.554604	1.535647
221	1.698169	1.660024	1.627740	1.599976	1.575782	1.554465	1.535506
222	1.698042	1.659895	1.627609	1.599842	1.575646	1.554327	1.535366
223	1.697917	1.659767	1.627479	1.599710	1.575512	1.554191	1.535228
224	1.697792	1.659641	1.627350	1.599579	1.575378	1.554055	1.535091
225	1.697669	1.659515	1.627222	1.599449	1.575246	1.553921	1.534955
226	1.697547	1.659391	1.627095	1.599320	1.575116	1.553789	1.534820
227	1.697426	1.659267	1.626970	1.599192	1.574986	1.553657	1.534687
228	1.697305	1.659145	1.626845	1.599066	1.574857	1.553527	1.534554
229	1.697186	1.659024	1.626722	1.598940	1.574730	1.553397	1.534423
230	1.697068	1.658903	1.626599	1.598816	1.574604	1.553269	1.534293
231	1.696951	1.658784	1.626478	1.598693	1.574478	1.553142	1.534164
232	1.696836	1.658666	1.626358	1.598571	1.574354	1.553016	1.534036
233	1.696721	1.658549	1.626239	1.598449	1.574231	1.552891	1.533910
234	1.696607	1.658433	1.626121	1.598329	1.574109	1.552767	1.533784
235	1.696494	1.658318	1.626004	1.598210	1.573988	1.552644	1.533659
236	1.696382	1.658204	1.625888	1.598092	1.573868	1.552523	1.533536
237	1.696271	1.658091	1.625772	1.597975	1.573749	1.552402	1.533414
238	1.696160	1.657978	1.625658	1.597859	1.573631	1.552282	1.533292
239	1.696051	1.657867	1.625545	1.597744	1.573515	1.552164	1.533172
240	1.695943	1.657757	1.625433	1.597630	1.573399	1.552046	1.533052
241	1.695836	1.657648	1.625321	1.597517	1.573284	1.551929	1.532934
242	1.695729	1.657539	1.625211	1.597404	1.573170	1.551813	1.532817
243	1.695623	1.657431	1.625102	1.597293	1.573057	1.551699	1.532700
244	1.695519	1.657325	1.624993	1.597183	1.572944	1.551585	1.532585
245	1.695415	1.657219	1.624885	1.597073	1.572833	1.551472	1.532470
246	1.695312	1.657114	1.624778	1.596965	1.572723	1.551360	1.532356
247	1.695210	1.657010	1.624673	1.596857	1.572613	1.551249	1.532244
248	1.695108	1.656907	1.624567	1.596750	1.572505	1.551139	1.532132
249	1.695008	1.656804	1.624463	1.596644	1.572397	1.551029	1.532021
250	1.694908	1.656703	1.624360	1.596539	1.572290	1.550921	1.531911

df1	15	16	17	18	19	20
1	61.220343	61.349882	61.464430	61.566446	61.657878	61.740292
2	9.424711	9.428859	9.432520	9.435774	9.438687	9.441309
3	5.200313	5.196405	5.192929	5.189818	5.187017	5.184482
4	3.870360	3.863936	3.858223	3.853110	3.848505	3.844338
5	3.238011	3.230280	3.223398	3.217234	3.211680	3.206650
6	2.871222	2.862635	2.854986	2.848127	2.841944	2.836340
7	2.632230	2.623013	2.614794	2.607420	2.600766	2.594732
8	2.464216	2.454501	2.445831	2.438046	2.431017	2.424637
9	2.339624	2.329499	2.320457	2.312331	2.304989	2.298322
10	2.243515	2.233042	2.223683	2.215267	2.207658	2.200744
11	2.167094	2.156321	2.146687	2.138018	2.130175	2.123046
12	2.104851	2.093815	2.083938	2.075047	2.066998	2.059677
13	2.053160	2.041890	2.031798	2.022707	2.014474	2.006982
14	2.009535	1.998055	1.987769	1.978499	1.970100	1.962453
15	1.972216	1.960546	1.950085	1.940653	1.932102	1.924314
16	1.939921	1.928079	1.917459	1.907878	1.899189	1.891272
17	1.911695	1.899696	1.888929	1.879212	1.870397	1.862361
18	1.886811	1.874667	1.863766	1.853923	1.844991	1.836845
19	1.864705	1.852428	1.841402	1.831444	1.822403	1.814155
20	1.844935	1.832534	1.821394	1.811328	1.802185	1.793843
21	1.827148	1.814632	1.803384	1.793218	1.783981	1.775551
22	1.811057	1.798434	1.787087	1.776827	1.767502	1.758989
23	1.796431	1.783708	1.772267	1.761919	1.752512	1.743921
24	1.783076	1.770260	1.758731	1.748301	1.738817	1.730152
25	1.770834	1.757931	1.746319	1.735812	1.726254	1.717520
26	1.759571	1.746584	1.734896	1.724315	1.714688	1.705890
27	1.749173	1.736108	1.724346	1.713696	1.704005	1.695144
28	1.739543	1.726405	1.714574	1.703859	1.694105	1.685187
29	1.730600	1.717392	1.705495	1.694718	1.684906	1.675932
30	1.722272	1.708998	1.697039	1.686203	1.676336	1.667309
31	1.714497	1.701161	1.689143	1.678251	1.668331	1.659254
32	1.707223	1.693827	1.681753	1.670808	1.660837	1.651712
33	1.700401	1.686949	1.674821	1.663826	1.653807	1.644636
34	1.693992	1.680486	1.668307	1.657263	1.647198	1.637984
35	1.687958	1.674400	1.662172	1.651082	1.640974	1.631718
36	1.682267	1.668660	1.656386	1.645252	1.635101	1.625806
37	1.676891	1.663237	1.650919	1.639742	1.629552	1.620218
38	1.671805	1.658106	1.645745	1.634528	1.624298	1.614928
39	1.666985	1.653243	1.640841	1.629585	1.619319	1.609913
40	1.662411	1.648628	1.636186	1.624893	1.614591	1.605151

F $\alpha = 0.1$

df1	15	16	17	18	19	20
df2						
41	1.658064	1.644242	1.631763	1.620434	1.610098	1.600625
42	1.653929	1.640068	1.627553	1.616190	1.605821	1.596317
43	1.649990	1.636092	1.623542	1.612146	1.601745	1.592211
44	1.646233	1.632300	1.619716	1.608288	1.597857	1.588294
45	1.642646	1.628679	1.616063	1.604604	1.594143	1.584552
46	1.639217	1.625218	1.612571	1.601082	1.590593	1.580975
47	1.635937	1.621906	1.609229	1.597711	1.587195	1.577551
48	1.632796	1.618734	1.606028	1.594483	1.583941	1.574271
49	1.629785	1.615694	1.602960	1.591388	1.580820	1.571126
50	1.626896	1.612777	1.600016	1.588418	1.577825	1.568107
51	1.624122	1.609975	1.597188	1.585565	1.574949	1.565208
52	1.621456	1.607283	1.594471	1.582824	1.572184	1.562421
53	1.618893	1.604694	1.591857	1.580186	1.569524	1.559740
54	1.616425	1.602202	1.589341	1.577647	1.566963	1.557158
55	1.614049	1.599801	1.586917	1.575202	1.564497	1.554671
56	1.611758	1.597487	1.584581	1.572844	1.562119	1.552274
57	1.609549	1.595255	1.582327	1.570570	1.559825	1.549960
58	1.607417	1.593101	1.580152	1.568375	1.557610	1.547727
59	1.605358	1.591021	1.578052	1.566255	1.555471	1.545570
60	1.603368	1.589011	1.576022	1.564206	1.553404	1.543486
61	1.601445	1.587067	1.574059	1.562224	1.551405	1.541470
62	1.599584	1.585187	1.572160	1.560307	1.549471	1.539519
63	1.597783	1.583367	1.570321	1.558452	1.547598	1.537630
64	1.596039	1.581604	1.568541	1.556654	1.545784	1.535801
65	1.594349	1.579896	1.566816	1.554912	1.544027	1.534028
66	1.592711	1.578240	1.565143	1.553224	1.542323	1.532309
67	1.591122	1.576634	1.563521	1.551586	1.540670	1.530641
68	1.589580	1.575076	1.561947	1.549996	1.539065	1.529023
69	1.588083	1.573563	1.560418	1.548453	1.537508	1.527452
70	1.586630	1.572094	1.558934	1.546954	1.535995	1.525925
71	1.585218	1.570667	1.557492	1.545498	1.534525	1.524442
72	1.583845	1.569279	1.556090	1.544082	1.533096	1.523000
73	1.582511	1.567930	1.554727	1.542705	1.531706	1.521598
74	1.581213	1.566617	1.553400	1.541366	1.530354	1.520233
75	1.579949	1.565340	1.552110	1.540062	1.529038	1.518905
76	1.578720	1.564097	1.550853	1.538793	1.527757	1.517612
77	1.577522	1.562886	1.549629	1.537557	1.526509	1.516353
78	1.576355	1.561706	1.548437	1.536353	1.525293	1.515126
79	1.575219	1.560557	1.547276	1.535179	1.524108	1.513930
80	1.574110	1.559436	1.546143	1.534035	1.522953	1.512765
81	1.573030	1.558343	1.545038	1.532919	1.521826	1.511628
82	1.571976	1.557277	1.543961	1.531831	1.520727	1.510518
83	1.570947	1.556237	1.542910	1.530769	1.519655	1.509436
84	1.569943	1.555222	1.541884	1.529732	1.518608	1.508379
85	1.568963	1.554231	1.540882	1.528720	1.517586	1.507347
86	1.568006	1.553263	1.539903	1.527731	1.516587	1.506339
87	1.567071	1.552317	1.538947	1.526766	1.515612	1.505355
88	1.566158	1.551393	1.538013	1.525822	1.514659	1.504393
89	1.565265	1.550490	1.537100	1.524899	1.513727	1.503452
90	1.564392	1.549607	1.536208	1.523997	1.512816	1.502532
91	1.563538	1.548743	1.535335	1.523115	1.511925	1.501633
92	1.562703	1.547899	1.534481	1.522252	1.511054	1.500753
93	1.561887	1.547073	1.533645	1.521408	1.510201	1.499892
94	1.561087	1.546264	1.532828	1.520582	1.509366	1.499050
95	1.560305	1.545472	1.532027	1.519773	1.508549	1.498225
96	1.559539	1.544697	1.531244	1.518981	1.507750	1.497417
97	1.558789	1.543938	1.530476	1.518206	1.506966	1.496626
98	1.558054	1.543195	1.529725	1.517446	1.506199	1.495851
99	1.557334	1.542467	1.528988	1.516702	1.505447	1.495092
100	1.556629	1.541753	1.528267	1.515972	1.504710	1.494348
101	1.555937	1.541054	1.527559	1.515258	1.503988	1.493619
102	1.555260	1.540368	1.526866	1.514557	1.503280	1.492904
103	1.554595	1.539696	1.526186	1.513870	1.502586	1.492203
104	1.553944	1.539036	1.525519	1.513196	1.501905	1.491515
105	1.553304	1.538390	1.524865	1.512534	1.501237	1.490840
106	1.552677	1.537755	1.524224	1.511886	1.500582	1.490179
107	1.552062	1.537133	1.523594	1.511249	1.499939	1.489529
108	1.551458	1.536522	1.522976	1.510625	1.499307	1.488892
109	1.550866	1.535922	1.522370	1.510012	1.498688	1.488266
110	1.550284	1.535333	1.521774	1.509410	1.498080	1.487652
111	1.549713	1.534755	1.521189	1.508819	1.497482	1.487049
112	1.549152	1.534187	1.520615	1.508238	1.496896	1.486456
113	1.548601	1.533630	1.520051	1.507668	1.496320	1.485874
114	1.548059	1.533082	1.519497	1.507108	1.495753	1.485302
115	1.547527	1.532544	1.518953	1.506557	1.495197	1.484740
116	1.547005	1.532015	1.518417	1.506016	1.494651	1.484188
117	1.546491	1.531495	1.517892	1.505485	1.494113	1.483646
118	1.545986	1.530984	1.517375	1.504962	1.493585	1.483112
119	1.545490	1.530481	1.516866	1.504448	1.493066	1.482587
120	1.545002	1.529987	1.516367	1.503943	1.492555	1.482072

F $\alpha = 0.1$

df1	15	16	17	18	19	20
df2						
121	1.544522	1.529501	1.515875	1.503446	1.492053	1.481564
122	1.544050	1.529024	1.515392	1.502957	1.491559	1.481065
123	1.543585	1.528553	1.514916	1.502476	1.491073	1.480574
124	1.543128	1.528091	1.514448	1.502003	1.490595	1.480091
125	1.542679	1.527636	1.513988	1.501538	1.490125	1.479616
126	1.542236	1.527188	1.513535	1.501080	1.489662	1.479149
127	1.541801	1.526748	1.513089	1.500629	1.489206	1.478688
128	1.541372	1.526314	1.512650	1.500185	1.488757	1.478235
129	1.540951	1.525887	1.512218	1.499748	1.488316	1.477789
130	1.540535	1.525466	1.511793	1.499318	1.487881	1.477350
131	1.540126	1.525052	1.511374	1.498894	1.487453	1.476917
132	1.539724	1.524645	1.510962	1.498477	1.487031	1.476491
133	1.539327	1.524243	1.510555	1.498066	1.486616	1.476071
134	1.538936	1.523847	1.510155	1.497662	1.486207	1.475658
135	1.538551	1.523458	1.509761	1.497263	1.485804	1.475251
136	1.538172	1.523074	1.509372	1.496870	1.485407	1.474850
137	1.537798	1.522695	1.508989	1.496483	1.485015	1.474454
138	1.537430	1.522323	1.508612	1.496101	1.484630	1.474064
139	1.537067	1.521955	1.508240	1.495725	1.484250	1.473680
140	1.536709	1.521593	1.507874	1.495355	1.483875	1.473302
141	1.536357	1.521236	1.507513	1.494989	1.483505	1.472929
142	1.536009	1.520884	1.507157	1.494629	1.483141	1.472561
143	1.535666	1.520537	1.506805	1.494274	1.482782	1.472198
144	1.535328	1.520195	1.506459	1.493924	1.482428	1.471840
145	1.534995	1.519857	1.506118	1.493578	1.482079	1.471487
146	1.534666	1.519524	1.505781	1.493238	1.481735	1.471139
147	1.534342	1.519196	1.505448	1.492902	1.481395	1.470796
148	1.534022	1.518872	1.505121	1.492570	1.481060	1.470457
149	1.533706	1.518553	1.504797	1.492243	1.480729	1.470123
150	1.533395	1.518237	1.504478	1.491920	1.480403	1.469793
151	1.533088	1.517926	1.504164	1.491602	1.480081	1.469468
152	1.532785	1.517620	1.503853	1.491288	1.479763	1.469147
153	1.532486	1.517317	1.503546	1.490978	1.479450	1.468830
154	1.532190	1.517018	1.503244	1.490672	1.479140	1.468517
155	1.531899	1.516722	1.502945	1.490370	1.478835	1.468209
156	1.531611	1.516431	1.502650	1.490071	1.478533	1.467904
157	1.531327	1.516144	1.502359	1.489777	1.478236	1.467603
158	1.531047	1.515860	1.502072	1.489486	1.477942	1.467306
159	1.530770	1.515579	1.501788	1.489199	1.477652	1.467013
160	1.530496	1.515302	1.501508	1.488916	1.477365	1.466723
161	1.530226	1.515029	1.501231	1.488636	1.477082	1.466437
162	1.529960	1.514759	1.500958	1.488359	1.476802	1.466155
163	1.529696	1.514492	1.500688	1.488086	1.476526	1.465875
164	1.529436	1.514229	1.500421	1.487817	1.476254	1.465600
165	1.529179	1.513969	1.500158	1.487550	1.475984	1.465327
166	1.528925	1.513711	1.499898	1.487287	1.475718	1.465058
167	1.528675	1.513457	1.499641	1.487027	1.475455	1.464793
168	1.528427	1.513206	1.499387	1.486770	1.475195	1.464530
169	1.528182	1.512958	1.499136	1.486516	1.474938	1.464270
170	1.527940	1.512713	1.498887	1.486265	1.474684	1.464014
171	1.527701	1.512471	1.498642	1.486017	1.474434	1.463760
172	1.527464	1.512232	1.498400	1.485772	1.474186	1.463510
173	1.527231	1.511995	1.498160	1.485529	1.473941	1.463262
174	1.527000	1.511761	1.497924	1.485290	1.473698	1.463017
175	1.526771	1.511530	1.497690	1.485053	1.473459	1.462775
176	1.526546	1.511301	1.497458	1.484819	1.473222	1.462536
177	1.526323	1.511075	1.497230	1.484587	1.472988	1.462299
178	1.526102	1.510852	1.497003	1.484359	1.472757	1.462065
179	1.525884	1.510631	1.496780	1.484132	1.472528	1.461834
180	1.525668	1.510412	1.496559	1.483909	1.472302	1.461605
181	1.525455	1.510196	1.496340	1.483687	1.472078	1.461379
182	1.525244	1.509983	1.496123	1.483468	1.471857	1.461155
183	1.525035	1.509771	1.495910	1.483252	1.471638	1.460934
184	1.524829	1.509562	1.495698	1.483038	1.471421	1.460715
185	1.524624	1.509355	1.495489	1.482826	1.471207	1.460499
186	1.524422	1.509151	1.495281	1.482616	1.470995	1.460284
187	1.524223	1.508949	1.495077	1.482409	1.470785	1.460072
188	1.524025	1.508748	1.494874	1.482204	1.470578	1.459863
189	1.523829	1.508550	1.494673	1.482001	1.470373	1.459655
190	1.523636	1.508354	1.494475	1.481800	1.470170	1.459450
191	1.523444	1.508160	1.494279	1.481602	1.469969	1.459247
192	1.523255	1.507968	1.494084	1.481405	1.469770	1.459046
193	1.523067	1.507778	1.493892	1.481211	1.469573	1.458847
194	1.522882	1.507590	1.493702	1.481018	1.469378	1.458650
195	1.522698	1.507404	1.493513	1.480827	1.469186	1.458455
196	1.522516	1.507220	1.493327	1.480639	1.468995	1.458262
197	1.522336	1.507038	1.493142	1.480452	1.468806	1.458071
198	1.522158	1.506858	1.492960	1.480267	1.468619	1.457882
199	1.521982	1.506679	1.492779	1.480084	1.468434	1.457695
200	1.521807	1.506502	1.492600	1.479903	1.468251	1.457510

F $\alpha = 0.1$

df1	15	16	17	18	19	20
201	1.521635	1.506327	1.492423	1.479724	1.468069	1.457327
202	1.521464	1.506154	1.492247	1.479546	1.467890	1.457145
203	1.521294	1.505982	1.492074	1.479370	1.467712	1.456965
204	1.521126	1.505812	1.491902	1.479196	1.467536	1.456787
205	1.520960	1.505644	1.491731	1.479024	1.467362	1.456611
206	1.520796	1.505477	1.491562	1.478853	1.467189	1.456437
207	1.520633	1.505312	1.491395	1.478684	1.467018	1.456264
208	1.520472	1.505149	1.491230	1.478517	1.466849	1.456092
209	1.520312	1.504987	1.491066	1.478351	1.466681	1.455923
210	1.520154	1.504827	1.490904	1.478187	1.466515	1.455755
211	1.519997	1.504668	1.490743	1.478024	1.466350	1.455588
212	1.519842	1.504511	1.490584	1.477863	1.466187	1.455424
213	1.519688	1.504355	1.490426	1.477703	1.466026	1.455260
214	1.519535	1.504201	1.490270	1.477545	1.465866	1.455099
215	1.519384	1.504048	1.490115	1.477388	1.465707	1.454938
216	1.519235	1.503896	1.489961	1.477233	1.465550	1.454778
217	1.519087	1.503746	1.489810	1.477079	1.465394	1.454622
218	1.518940	1.503597	1.489659	1.476927	1.465240	1.454466
219	1.518794	1.503450	1.489510	1.476776	1.465088	1.454312
220	1.518650	1.503304	1.489362	1.476626	1.464936	1.454159
221	1.518507	1.503159	1.489215	1.476478	1.464786	1.454007
222	1.518366	1.503016	1.489070	1.476331	1.464638	1.453857
223	1.518226	1.502874	1.488926	1.476186	1.464490	1.453708
224	1.518087	1.502733	1.488784	1.476041	1.464344	1.453560
225	1.517949	1.502593	1.488642	1.475898	1.464200	1.453414
226	1.517812	1.502455	1.488502	1.475756	1.464056	1.453269
227	1.517677	1.502318	1.488363	1.475616	1.463914	1.453125
228	1.517543	1.502182	1.488226	1.475477	1.463773	1.452983
229	1.517410	1.502047	1.488089	1.475339	1.463634	1.452842
230	1.517278	1.501914	1.487954	1.475202	1.463495	1.452702
231	1.517147	1.501781	1.487820	1.475066	1.463358	1.452563
232	1.517018	1.501650	1.487687	1.474931	1.463222	1.452425
233	1.516889	1.501520	1.487555	1.474798	1.463087	1.452289
234	1.516762	1.501391	1.487425	1.474666	1.462953	1.452154
235	1.516636	1.501263	1.487295	1.474535	1.462820	1.452020
236	1.516511	1.501136	1.487167	1.474405	1.462689	1.451887
237	1.516386	1.501010	1.487039	1.474276	1.462559	1.451755
238	1.516263	1.500886	1.486913	1.474148	1.462429	1.451624
239	1.516141	1.500762	1.486788	1.474021	1.462301	1.451494
240	1.516020	1.500639	1.486664	1.473896	1.462174	1.451366
241	1.515900	1.500518	1.486541	1.473771	1.462048	1.451238
242	1.515781	1.500397	1.486419	1.473647	1.461923	1.451112
243	1.515663	1.500278	1.486297	1.473525	1.461799	1.450986
244	1.515546	1.500159	1.486177	1.473403	1.461676	1.450862
245	1.515430	1.500041	1.486058	1.473283	1.461554	1.450739
246	1.515315	1.499925	1.485940	1.473163	1.461433	1.450616
247	1.515201	1.499809	1.485823	1.473044	1.461313	1.450495
248	1.515087	1.499694	1.485707	1.472927	1.461194	1.450374
249	1.514975	1.499580	1.485591	1.472810	1.461076	1.450255
250	1.514863	1.499467	1.485477	1.472694	1.460958	1.450137

F $\alpha = 0.05$

df1	1	2	3	4	5	6
1	161.447639	199.500000	215.707345	224.583241	230.161878	233.986000
2	18.512821	19.000000	19.164292	19.246794	19.296410	19.329534
3	10.127964	9.552094	9.276628	9.117182	9.013455	8.940645
4	7.708647	6.944272	6.591382	6.388233	6.256057	6.163132
5	6.607891	5.786135	5.409451	5.192168	5.050329	4.950288
6	5.987378	5.143253	4.757063	4.533677	4.387374	4.283866
7	5.591448	4.737414	4.346831	4.120312	3.971523	3.865969
8	5.317655	4.458970	4.066181	3.837853	3.687499	3.580580
9	5.117355	4.256495	3.862548	3.633089	3.481659	3.373754
10	4.964603	4.102821	3.708265	3.478050	3.325835	3.217175
11	4.844336	3.982298	3.587434	3.356690	3.203874	3.094613
12	4.747225	3.885294	3.490295	3.259167	3.105875	2.996120
13	4.667193	3.805565	3.410534	3.179117	3.025438	2.915269
14	4.600110	3.738892	3.343889	3.112250	2.958249	2.847726
15	4.543077	3.682320	3.287382	3.055568	2.901295	2.790465
16	4.493998	3.633723	3.238872	3.006917	2.852409	2.741311
17	4.451322	3.591531	3.196777	2.964708	2.809996	2.698660
18	4.413873	3.554557	3.159908	2.927744	2.772853	2.661305
19	4.380750	3.521893	3.127350	2.895107	2.740058	2.628318
20	4.351244	3.492828	3.098391	2.866081	2.710890	2.598978
21	4.324794	3.466800	3.072467	2.840100	2.684781	2.572712
22	4.300950	3.443357	3.049125	2.816708	2.661274	2.549061
23	4.279344	3.422132	3.027998	2.795539	2.639999	2.527655
24	4.259677	3.402826	3.008787	2.776289	2.620654	2.508189
25	4.241699	3.385190	2.991241	2.758710	2.602987	2.490410
26	4.225201	3.369016	2.975154	2.742594	2.586790	2.474109
27	4.210008	3.354131	2.960351	2.727765	2.571886	2.459108
28	4.195972	3.340386	2.946685	2.714076	2.558128	2.445259
29	4.182964	3.327654	2.934030	2.701399	2.545386	2.432434
30	4.170877	3.315830	2.922277	2.689628	2.533555	2.420523
31	4.159615	3.304817	2.911334	2.678667	2.522538	2.409432
32	4.149097	3.294537	2.901120	2.668437	2.512255	2.399080
33	4.139252	3.284918	2.891564	2.658867	2.502635	2.389394
34	4.130018	3.275898	2.882604	2.649894	2.493616	2.380313
35	4.121338	3.267424	2.874187	2.641465	2.485143	2.371781
36	4.113165	3.259446	2.866266	2.633532	2.477169	2.363751
37	4.105456	3.251924	2.858796	2.626052	2.469650	2.356179
38	4.098172	3.244818	2.851741	2.618988	2.462548	2.349027
39	4.091279	3.238096	2.845068	2.612306	2.455831	2.342262
40	4.084746	3.231727	2.838745	2.605975	2.449466	2.335852
41	4.078546	3.225684	2.832747	2.599969	2.443429	2.329771
42	4.072654	3.219942	2.827049	2.594263	2.437693	2.323994
43	4.067047	3.214480	2.821628	2.588836	2.432236	2.318498
44	4.061706	3.209278	2.816466	2.583667	2.427040	2.313264
45	4.056612	3.204317	2.811544	2.578739	2.422085	2.308273
46	4.051749	3.199582	2.806845	2.574035	2.417356	2.303509
47	4.047100	3.195056	2.802355	2.569540	2.412837	2.298956
48	4.042652	3.190727	2.798061	2.565241	2.408514	2.294601
49	4.038393	3.186582	2.793949	2.561124	2.404375	2.290432
50	4.034310	3.182610	2.790008	2.557179	2.400409	2.286436
51	4.030393	3.178799	2.786229	2.553395	2.396605	2.282603
52	4.026631	3.175141	2.782600	2.549763	2.392953	2.278923
53	4.023017	3.171626	2.779114	2.546273	2.389444	2.275388
54	4.019541	3.168246	2.775762	2.542918	2.386070	2.271989
55	4.016195	3.164993	2.772537	2.539689	2.382823	2.268717
56	4.012973	3.161861	2.769431	2.536579	2.379697	2.265567
57	4.009868	3.158843	2.766438	2.533583	2.376684	2.262532
58	4.006873	3.155932	2.763552	2.530694	2.373780	2.259605
59	4.003983	3.153123	2.760767	2.527907	2.370977	2.256780
60	4.001191	3.150411	2.758078	2.525215	2.368270	2.254053
61	3.998494	3.147791	2.755481	2.522615	2.365656	2.251418
62	3.995887	3.145258	2.752970	2.520101	2.363128	2.248871
63	3.993365	3.142809	2.750541	2.517670	2.360684	2.246408
64	3.990924	3.140438	2.748191	2.515318	2.358318	2.244024
65	3.988560	3.138142	2.745915	2.513040	2.356028	2.241716
66	3.986269	3.135918	2.743711	2.510833	2.353809	2.239480
67	3.984049	3.133762	2.741574	2.508695	2.351658	2.237312
68	3.981896	3.131672	2.739502	2.506621	2.349573	2.235210
69	3.979807	3.129644	2.737492	2.504609	2.347550	2.233171
70	3.977779	3.127676	2.735541	2.502656	2.345586	2.231192
71	3.975810	3.125764	2.733647	2.500760	2.343680	2.229271
72	3.973897	3.123907	2.731807	2.498919	2.341828	2.227404
73	3.972038	3.122103	2.730019	2.497129	2.340028	2.225590
74	3.970230	3.120349	2.728280	2.495388	2.338278	2.223826
75	3.968471	3.118642	2.726589	2.493696	2.336576	2.222110
76	3.966760	3.116982	2.724944	2.492049	2.334920	2.220441
77	3.965094	3.115366	2.723343	2.490447	2.333308	2.218817
78	3.963472	3.113792	2.721783	2.488886	2.331739	2.217235
79	3.961892	3.112260	2.720265	2.487366	2.330210	2.215694

F $\alpha = 0.05$

df1	1	2	3	4	5	6
80	3.960352	3.110766	2.718785	2.485885	2.328721	2.214193
81	3.958852	3.109311	2.717343	2.484441	2.327269	2.212730
82	3.957388	3.107891	2.715937	2.483034	2.325854	2.211303
83	3.955961	3.106507	2.714565	2.481661	2.324473	2.209911
84	3.954568	3.105157	2.713227	2.480322	2.323126	2.208554
85	3.953209	3.103839	2.711921	2.479015	2.321812	2.207229
86	3.951882	3.102552	2.710647	2.477740	2.320529	2.205936
87	3.950587	3.101296	2.709402	2.476494	2.319277	2.204673
88	3.949321	3.100069	2.708186	2.475277	2.318053	2.203439
89	3.948084	3.098870	2.706999	2.474089	2.316858	2.202234
90	3.946876	3.097698	2.705838	2.472927	2.315689	2.201056
91	3.945694	3.096553	2.704703	2.471791	2.314547	2.199905
92	3.944539	3.095433	2.703594	2.470681	2.313431	2.198779
93	3.943409	3.094337	2.702509	2.469595	2.312339	2.197679
94	3.942303	3.093266	2.701448	2.468533	2.311270	2.196602
95	3.941222	3.092217	2.700409	2.467494	2.310225	2.195548
96	3.940163	3.091191	2.699393	2.466476	2.309202	2.194516
97	3.939126	3.090187	2.698398	2.465480	2.308200	2.193506
98	3.938111	3.089203	2.697423	2.464505	2.307220	2.192518
99	3.937117	3.088240	2.696469	2.463550	2.306259	2.191549
100	3.936143	3.087296	2.695534	2.462615	2.305318	2.190601
101	3.935189	3.086371	2.694618	2.461698	2.304396	2.189672
102	3.934253	3.085465	2.693721	2.460800	2.303493	2.188761
103	3.933337	3.084577	2.692841	2.459920	2.302608	2.187868
104	3.932438	3.083706	2.691979	2.459057	2.301739	2.186993
105	3.931556	3.082852	2.691133	2.458210	2.300888	2.186134
106	3.930692	3.082015	2.690303	2.457380	2.300053	2.185293
107	3.929844	3.081193	2.689490	2.456566	2.299234	2.184467
108	3.929012	3.080387	2.688691	2.455767	2.298431	2.183657
109	3.928195	3.079596	2.687908	2.454983	2.297642	2.182862
110	3.927394	3.078819	2.687139	2.454213	2.296868	2.182082
111	3.926607	3.078057	2.686384	2.453458	2.296109	2.181316
112	3.925834	3.077309	2.685643	2.452716	2.295363	2.180564
113	3.925076	3.076574	2.684916	2.451988	2.294630	2.179825
114	3.924330	3.075853	2.684201	2.451273	2.293911	2.179100
115	3.923599	3.075144	2.683499	2.450571	2.293205	2.178387
116	3.922879	3.074447	2.682809	2.449880	2.292510	2.177687
117	3.922173	3.073763	2.682132	2.449202	2.291828	2.177000
118	3.921478	3.073090	2.681466	2.448536	2.291158	2.176324
119	3.920796	3.072429	2.680811	2.447881	2.290499	2.175659
120	3.920124	3.071779	2.680168	2.447237	2.289851	2.175006
121	3.919465	3.071140	2.679535	2.446603	2.289214	2.174364
122	3.918816	3.070512	2.678913	2.445981	2.288588	2.173733
123	3.918178	3.069894	2.678301	2.445368	2.287972	2.173112
124	3.917550	3.069286	2.677699	2.444766	2.287367	2.172501
125	3.916932	3.068689	2.677107	2.444174	2.286771	2.171900
126	3.916325	3.068100	2.676525	2.443591	2.286184	2.171309
127	3.915727	3.067521	2.675951	2.443017	2.285608	2.170727
128	3.915138	3.066952	2.675387	2.442453	2.285040	2.170155
129	3.914559	3.066391	2.674832	2.441897	2.284481	2.169591
130	3.913989	3.065839	2.674286	2.441350	2.283931	2.169036
131	3.913428	3.065296	2.673748	2.440812	2.283389	2.168490
132	3.912875	3.064761	2.673218	2.440282	2.282856	2.167953
133	3.912331	3.064234	2.672696	2.439760	2.282331	2.167423
134	3.911795	3.063715	2.672182	2.439246	2.281814	2.166902
135	3.911267	3.063204	2.671676	2.438739	2.281305	2.166388
136	3.910747	3.062700	2.671178	2.438240	2.280803	2.165882
137	3.910234	3.062204	2.670687	2.437749	2.280309	2.165384
138	3.909729	3.061716	2.670203	2.437265	2.279822	2.164893
139	3.909232	3.061234	2.669726	2.436788	2.279342	2.164409
140	3.908741	3.060760	2.669256	2.436317	2.278869	2.163932
141	3.908258	3.060292	2.668793	2.435854	2.278403	2.163462
142	3.907782	3.059831	2.668337	2.435397	2.277943	2.162998
143	3.907312	3.059376	2.667887	2.434947	2.277490	2.162542
144	3.906849	3.058928	2.667443	2.434503	2.277044	2.162091
145	3.906392	3.058486	2.667006	2.434065	2.276603	2.161647
146	3.905942	3.058050	2.666574	2.433633	2.276169	2.161209
147	3.905498	3.057621	2.666149	2.433208	2.275741	2.160778
148	3.905060	3.057197	2.665729	2.432788	2.275319	2.160352
149	3.904628	3.056779	2.665315	2.432374	2.274902	2.159932
150	3.904202	3.056366	2.664907	2.431965	2.274491	2.159517
151	3.903781	3.055959	2.664504	2.431562	2.274086	2.159108
152	3.903366	3.055558	2.664107	2.431164	2.273686	2.158705
153	3.902957	3.055162	2.663715	2.430772	2.273291	2.158307
154	3.902553	3.054771	2.663328	2.430385	2.272901	2.157914
155	3.902154	3.054385	2.662946	2.430002	2.272517	2.157526
156	3.901761	3.054004	2.662569	2.429625	2.272137	2.157143
157	3.901372	3.053628	2.662196	2.429253	2.271763	2.156766
158	3.900989	3.053257	2.661829	2.428885	2.271393	2.156393
159	3.900610	3.052891	2.661466	2.428522	2.271028	2.156025

F $\alpha = 0.05$

df1	1	2	3	4	5	6
df2						
160	3.900236	3.052529	2.661108	2.428164	2.270667	2.155661
161	3.899867	3.052172	2.660755	2.427810	2.270312	2.155302
162	3.899502	3.051819	2.660406	2.427461	2.269960	2.154948
163	3.899142	3.051471	2.660061	2.427116	2.269613	2.154598
164	3.898787	3.051127	2.659720	2.426775	2.269270	2.154252
165	3.898436	3.050787	2.659384	2.426438	2.268932	2.153911
166	3.898089	3.050451	2.659052	2.426106	2.268597	2.153573
167	3.897746	3.050120	2.658723	2.425777	2.268267	2.153240
168	3.897407	3.049792	2.658399	2.425453	2.267940	2.152911
169	3.897073	3.049468	2.658079	2.425132	2.267618	2.152586
170	3.896742	3.049149	2.657762	2.424815	2.267299	2.152264
171	3.896415	3.048833	2.657449	2.424502	2.266984	2.151947
172	3.896092	3.048520	2.657140	2.424193	2.266673	2.151633
173	3.895773	3.048212	2.656834	2.423887	2.266366	2.151323
174	3.895458	3.047906	2.656532	2.423585	2.266062	2.151016
175	3.895146	3.047605	2.656234	2.423286	2.265761	2.150713
176	3.894838	3.047307	2.655939	2.422991	2.265464	2.150414
177	3.894533	3.047012	2.655647	2.422699	2.265171	2.150118
178	3.894232	3.046721	2.655359	2.422410	2.264880	2.149825
179	3.893934	3.046433	2.655074	2.422125	2.264593	2.149535
180	3.893640	3.046148	2.654792	2.421843	2.264310	2.149249
181	3.893349	3.045866	2.654513	2.421564	2.264029	2.148966
182	3.893061	3.045588	2.654237	2.421288	2.263752	2.148686
183	3.892776	3.045312	2.653965	2.421016	2.263477	2.148410
184	3.892494	3.045040	2.653695	2.420746	2.263206	2.148136
185	3.892216	3.044771	2.653428	2.420479	2.262937	2.147865
186	3.891940	3.044504	2.653165	2.420215	2.262672	2.147597
187	3.891668	3.044240	2.652904	2.419954	2.262409	2.147332
188	3.891398	3.043980	2.652646	2.419696	2.262149	2.147070
189	3.891131	3.043722	2.652390	2.419440	2.261892	2.146811
190	3.890867	3.043466	2.652138	2.419187	2.261638	2.146555
191	3.890606	3.043214	2.651888	2.418937	2.261387	2.146301
192	3.890348	3.042964	2.651640	2.418690	2.261138	2.146050
193	3.890092	3.042717	2.651396	2.418445	2.260891	2.145801
194	3.889839	3.042472	2.651153	2.418202	2.260647	2.145556
195	3.889589	3.042230	2.650914	2.417963	2.260406	2.145312
196	3.889341	3.041990	2.650677	2.417725	2.260167	2.145071
197	3.889096	3.041753	2.650442	2.417490	2.259931	2.144833
198	3.888853	3.041518	2.650209	2.417258	2.259697	2.144597
199	3.888613	3.041286	2.649979	2.417028	2.259466	2.144364
200	3.888375	3.041056	2.649752	2.416800	2.259237	2.144133
201	3.888139	3.040828	2.649526	2.416574	2.259010	2.143904
202	3.887906	3.040603	2.649303	2.416351	2.258785	2.143677
203	3.887675	3.040379	2.649082	2.416130	2.258563	2.143453
204	3.887447	3.040158	2.648863	2.415911	2.258342	2.143231
205	3.887220	3.039940	2.648647	2.415694	2.258124	2.143011
206	3.886996	3.039723	2.648432	2.415480	2.257909	2.142793
207	3.886774	3.039508	2.648220	2.415267	2.257695	2.142578
208	3.886555	3.039296	2.648010	2.415057	2.257483	2.142364
209	3.886337	3.039085	2.647801	2.414848	2.257274	2.142153
210	3.886121	3.038877	2.647595	2.414642	2.257066	2.141943
211	3.885908	3.038670	2.647391	2.414437	2.256860	2.141736
212	3.885697	3.038466	2.647188	2.414235	2.256657	2.141530
213	3.885487	3.038264	2.646988	2.414034	2.256455	2.141327
214	3.885280	3.038063	2.646790	2.413836	2.256255	2.141125
215	3.885074	3.037864	2.646593	2.413639	2.256057	2.140926
216	3.884870	3.037667	2.646398	2.413444	2.255861	2.140728
217	3.884669	3.037472	2.646205	2.413251	2.255667	2.140532
218	3.884469	3.037279	2.646014	2.413059	2.255474	2.140338
219	3.884271	3.037088	2.645824	2.412870	2.255283	2.140145
220	3.884075	3.036898	2.645637	2.412682	2.255094	2.139955
221	3.883880	3.036710	2.645451	2.412496	2.254907	2.139766
222	3.883688	3.036524	2.645266	2.412311	2.254722	2.139579
223	3.883497	3.036339	2.645084	2.412129	2.254538	2.139393
224	3.883308	3.036156	2.644903	2.411948	2.254356	2.139210
225	3.883120	3.035975	2.644723	2.411768	2.254175	2.139027
226	3.882934	3.035795	2.644545	2.411590	2.253996	2.138847
227	3.882750	3.035617	2.644369	2.411414	2.253819	2.138668
228	3.882568	3.035441	2.644194	2.411239	2.253643	2.138491
229	3.882387	3.035266	2.644021	2.411066	2.253469	2.138315
230	3.882207	3.035092	2.643850	2.410894	2.253296	2.138141
231	3.882030	3.034921	2.643680	2.410724	2.253125	2.137968
232	3.881853	3.034750	2.643511	2.410555	2.252955	2.137797
233	3.881679	3.034581	2.643344	2.410388	2.252787	2.137627
234	3.881505	3.034414	2.643178	2.410222	2.252620	2.137459
235	3.881334	3.034248	2.643014	2.410058	2.252455	2.137292
236	3.881163	3.034083	2.642851	2.409895	2.252291	2.137127
237	3.880995	3.033920	2.642690	2.409733	2.252128	2.136963
238	3.880827	3.033758	2.642529	2.409573	2.251967	2.136800
239	3.880661	3.033598	2.642371	2.409414	2.251807	2.136639

F $\alpha = 0.05$

	df1	1	2	3	4	5	6
df2	240	3.880497	3.033439	2.642213	2.409257	2.251649	2.136479
241	3.880333	3.033281	2.642057	2.409100	2.251492	2.136321	
242	3.880172	3.033125	2.641902	2.408945	2.251336	2.136164	
243	3.880011	3.032969	2.641749	2.408792	2.251181	2.136008	
244	3.879852	3.032816	2.641596	2.408639	2.251028	2.135853	
245	3.879694	3.032663	2.641445	2.408488	2.250876	2.135700	
246	3.879538	3.032512	2.641296	2.408339	2.250725	2.135548	
247	3.879382	3.032361	2.641147	2.408190	2.250576	2.135397	
248	3.879228	3.032213	2.641000	2.408042	2.250427	2.135247	
249	3.879075	3.032065	2.640854	2.407896	2.250280	2.135099	
250	3.878924	3.031918	2.640709	2.407751	2.250134	2.134952	

	df1	7	8	9	10	11	12
df2	1	236.768400	238.882695	240.543255	241.881747	242.983458	243.906038
2	19.353218	19.370993	19.384826	19.395897	19.404958	19.412511	
3	8.886743	8.845238	8.812300	8.785525	8.763333	8.744641	
4	6.094211	6.041044	5.998779	5.964371	5.935813	5.911729	
5	4.875872	4.818320	4.772466	4.735063	4.703967	4.677704	
6	4.206658	4.146804	4.099016	4.059963	4.027442	3.999935	
7	3.787044	3.725725	3.676675	3.636523	3.603037	3.574676	
8	3.500464	3.438101	3.388130	3.347163	3.312951	3.283939	
9	3.292746	3.229583	3.178893	3.137280	3.102485	3.072947	
10	3.135465	3.071658	3.020383	2.978237	2.942957	2.912977	
11	3.012330	2.947990	2.896223	2.853625	2.817930	2.787569	
12	2.913358	2.848565	2.796375	2.753387	2.717331	2.686637	
13	2.832098	2.766913	2.714356	2.671024	2.634650	2.603661	
14	2.764199	2.698672	2.645791	2.602155	2.565497	2.534243	
15	2.706627	2.640797	2.587626	2.543719	2.506806	2.475313	
16	2.657197	2.591096	2.537667	2.493513	2.456369	2.424660	
17	2.614299	2.547955	2.494291	2.449916	2.412561	2.380654	
18	2.576722	2.510158	2.456281	2.411702	2.374156	2.342067	
19	2.543534	2.476770	2.422699	2.377934	2.340210	2.307954	
20	2.514011	2.447064	2.392814	2.347878	2.309991	2.277581	
21	2.487578	2.420462	2.366048	2.320953	2.282916	2.250362	
22	2.463774	2.396503	2.341937	2.296696	2.258518	2.225831	
23	2.442226	2.374812	2.320105	2.274728	2.236419	2.203607	
24	2.422629	2.355081	2.300244	2.254739	2.216309	2.183380	
25	2.404728	2.337057	2.282097	2.236474	2.197929	2.164891	
26	2.388314	2.320527	2.265453	2.219718	2.181067	2.147926	
27	2.373208	2.305313	2.250131	2.204292	2.165540	2.132303	
28	2.359260	2.291264	2.235982	2.190044	2.151197	2.117869	
29	2.346342	2.278251	2.222874	2.176844	2.137908	2.104493	
30	2.334344	2.266163	2.210697	2.164580	2.125559	2.092063	
31	2.323171	2.254906	2.199355	2.153156	2.114054	2.080482	
32	2.312741	2.244396	2.188766	2.142488	2.103311	2.069665	
33	2.302982	2.234562	2.178856	2.132504	2.093254	2.059539	
34	2.293832	2.225340	2.169562	2.123140	2.083822	2.050040	
35	2.285235	2.216675	2.160829	2.114340	2.074956	2.041111	
36	2.277143	2.208518	2.152607	2.106054	2.066608	2.032703	
37	2.269512	2.200826	2.144853	2.098239	2.058734	2.024771	
38	2.262304	2.193559	2.137528	2.090856	2.051294	2.017276	
39	2.255485	2.186685	2.130597	2.083869	2.044253	2.010183	
40	2.249024	2.180170	2.124029	2.077248	2.037580	2.003459	
41	2.242894	2.173989	2.117797	2.070965	2.031247	1.997078	
42	2.237070	2.168117	2.111875	2.064994	2.025229	1.991013	
43	2.231530	2.162530	2.106241	2.059313	2.019502	1.985242	
44	2.226253	2.157208	2.100873	2.053901	2.014046	1.979743	
45	2.221221	2.152133	2.095755	2.048739	2.008842	1.974498	
46	2.216417	2.147288	2.090868	2.043811	2.003873	1.969490	
47	2.211827	2.142658	2.086198	2.039101	1.999124	1.964702	
48	2.207436	2.138229	2.081730	2.034595	1.994580	1.960121	
49	2.203232	2.133988	2.077452	2.030279	1.990228	1.955734	
50	2.199202	2.129923	2.073351	2.026143	1.986056	1.951528	
51	2.195337	2.126023	2.069417	2.022175	1.982054	1.947492	
52	2.191626	2.122280	2.065640	2.018364	1.978211	1.943617	
53	2.188061	2.118682	2.062011	2.014702	1.974518	1.939893	
54	2.184632	2.115223	2.058520	2.011181	1.970965	1.936311	
55	2.181333	2.111894	2.055161	2.007792	1.967547	1.932863	
56	2.178156	2.108688	2.051926	2.004528	1.964254	1.929542	
57	2.175094	2.105599	2.048808	2.001382	1.961080	1.926341	
58	2.172141	2.102620	2.045801	1.998348	1.958019	1.923253	
59	2.169292	2.099744	2.042900	1.995419	1.955065	1.920274	
60	2.166541	2.096968	2.040098	1.992592	1.952212	1.917396	
61	2.163883	2.094286	2.037391	1.989860	1.949455	1.914615	
62	2.161314	2.091693	2.034774	1.987219	1.946790	1.911926	
63	2.158829	2.089185	2.032242	1.984664	1.944212	1.909325	
64	2.156424	2.086758	2.029792	1.982191	1.941716	1.906808	
65	2.154095	2.084407	2.027419	1.979796	1.939300	1.904370	
66	2.151839	2.082130	2.025121	1.977476	1.936958	1.902007	

F $\alpha = 0.05$

df1	7	8	9	10	11	12
67	2.149653	2.079923	2.022893	1.975227	1.934688	1.899717
68	2.147532	2.077783	2.020732	1.973045	1.932487	1.897496
69	2.145475	2.075706	2.018636	1.970929	1.930351	1.895340
70	2.143478	2.073690	2.016601	1.968875	1.928278	1.893248
71	2.141539	2.071733	2.014625	1.966880	1.926264	1.891216
72	2.139656	2.069832	2.012705	1.964942	1.924308	1.889242
73	2.137825	2.067984	2.010839	1.963058	1.922406	1.887323
74	2.136045	2.066187	2.009025	1.961227	1.920557	1.885457
75	2.134314	2.064439	2.007260	1.959445	1.918759	1.883642
76	2.132630	2.062739	2.005543	1.957711	1.917009	1.881876
77	2.130990	2.061084	2.003872	1.956024	1.915305	1.880157
78	2.129394	2.059472	2.002245	1.954381	1.913646	1.878482
79	2.127839	2.057902	2.000659	1.952780	1.912030	1.876851
80	2.126324	2.056373	1.999115	1.951220	1.910456	1.875262
81	2.124848	2.054882	1.997609	1.949700	1.908921	1.873712
82	2.123408	2.053428	1.996141	1.948217	1.907424	1.872201
83	2.122004	2.052010	1.994709	1.946771	1.905964	1.870727
84	2.120633	2.050627	1.993312	1.945361	1.904539	1.869289
85	2.119296	2.049276	1.991949	1.943984	1.903149	1.867886
86	2.117991	2.047958	1.990617	1.942639	1.901791	1.866515
87	2.116717	2.046671	1.989318	1.941327	1.900466	1.865177
88	2.115472	2.045414	1.988048	1.940044	1.899171	1.863870
89	2.114255	2.044186	1.986807	1.938791	1.897906	1.862593
90	2.113067	2.042986	1.985595	1.937567	1.896669	1.861344
91	2.111905	2.041812	1.984410	1.936370	1.895460	1.860124
92	2.110769	2.040665	1.983251	1.935199	1.894278	1.858930
93	2.109657	2.039543	1.982117	1.934054	1.893122	1.857763
94	2.108570	2.038445	1.981008	1.932934	1.891991	1.856621
95	2.107506	2.037370	1.979923	1.931838	1.890884	1.855503
96	2.106465	2.036319	1.978861	1.930765	1.889800	1.854409
97	2.105446	2.035290	1.977821	1.929715	1.888740	1.853338
98	2.104448	2.034282	1.976803	1.928687	1.887701	1.852289
99	2.103471	2.033295	1.975806	1.927679	1.886684	1.851262
100	2.102513	2.032328	1.974829	1.926692	1.885687	1.850255
101	2.101575	2.031380	1.973872	1.925726	1.884710	1.849269
102	2.100656	2.030451	1.972934	1.924778	1.883753	1.848302
103	2.099755	2.029541	1.972014	1.923849	1.882815	1.847355
104	2.098871	2.028649	1.971113	1.922938	1.881895	1.846426
105	2.098005	2.027774	1.970229	1.922045	1.880993	1.845515
106	2.097155	2.026916	1.969362	1.921169	1.880108	1.844621
107	2.096321	2.026074	1.968511	1.920310	1.879240	1.843745
108	2.095504	2.025247	1.967677	1.919467	1.878388	1.842884
109	2.094701	2.024437	1.966858	1.918639	1.877552	1.842040
110	2.093913	2.023641	1.966054	1.917827	1.876732	1.841212
111	2.093140	2.022860	1.965265	1.917030	1.875927	1.840398
112	2.092381	2.022093	1.964490	1.916247	1.875136	1.839599
113	2.091635	2.021340	1.963729	1.915478	1.874359	1.838815
114	2.090903	2.020600	1.962982	1.914723	1.873596	1.838045
115	2.090184	2.019874	1.962247	1.913982	1.872847	1.837288
116	2.089477	2.019160	1.961526	1.913253	1.872111	1.836544
117	2.088783	2.018459	1.960818	1.912537	1.871387	1.835813
118	2.088100	2.017769	1.960121	1.911833	1.870676	1.835095
119	2.087430	2.017092	1.959436	1.911141	1.869978	1.834389
120	2.086770	2.016426	1.958763	1.910461	1.869290	1.833695
121	2.086122	2.015771	1.958102	1.909792	1.868615	1.833013
122	2.085484	2.015127	1.957451	1.909135	1.867951	1.832342
123	2.084858	2.014493	1.956811	1.908488	1.867297	1.831682
124	2.084241	2.013870	1.956181	1.907852	1.866654	1.831033
125	2.083634	2.013257	1.955562	1.907226	1.866022	1.830394
126	2.083037	2.012654	1.954953	1.906610	1.865400	1.829765
127	2.082450	2.012061	1.954353	1.906005	1.864788	1.829147
128	2.081872	2.011477	1.953763	1.905408	1.864185	1.828538
129	2.081303	2.010902	1.953182	1.904821	1.863592	1.827939
130	2.080743	2.010336	1.952610	1.904244	1.863008	1.827349
131	2.080192	2.009779	1.952047	1.903675	1.862434	1.826769
132	2.079649	2.009231	1.951493	1.903115	1.861868	1.826197
133	2.079114	2.008691	1.950947	1.902563	1.861310	1.825634
134	2.078588	2.008159	1.950410	1.902020	1.860761	1.825079
135	2.078069	2.007635	1.949880	1.901485	1.860221	1.824533
136	2.077558	2.007119	1.949359	1.900958	1.859688	1.823995
137	2.077055	2.006610	1.948845	1.900438	1.859163	1.823465
138	2.076559	2.006109	1.948339	1.899927	1.858646	1.822942
139	2.076070	2.005616	1.947840	1.899422	1.858137	1.822428
140	2.075589	2.005129	1.947348	1.898925	1.857635	1.821920
141	2.075114	2.004650	1.946863	1.898436	1.857140	1.821420
142	2.074646	2.004177	1.946386	1.897953	1.856652	1.820927
143	2.074185	2.003711	1.945915	1.897477	1.856171	1.820441
144	2.073730	2.003251	1.945450	1.897007	1.855696	1.819962
145	2.073282	2.002798	1.944992	1.896545	1.855229	1.819490
146	2.072840	2.002352	1.944541	1.896088	1.854768	1.819024

F $\alpha = 0.05$

df2	df1	7	8	9	10	11	12
147	2.072404	2.001911	1.944096	1.895638	1.854313	1.818564	
148	2.071974	2.001476	1.943656	1.895194	1.853864	1.818111	
149	2.071549	2.001048	1.943223	1.894757	1.853422	1.817664	
150	2.071131	2.000625	1.942796	1.894325	1.852985	1.817223	
151	2.070718	2.000208	1.942374	1.893898	1.852554	1.816787	
152	2.070311	1.999796	1.941958	1.893478	1.852129	1.816358	
153	2.069909	1.999390	1.941547	1.893063	1.851710	1.815934	
154	2.069512	1.998989	1.941142	1.892653	1.851296	1.815516	
155	2.069120	1.998593	1.940742	1.892249	1.850888	1.815103	
156	2.068734	1.998203	1.940348	1.891850	1.850485	1.814696	
157	2.068353	1.997817	1.939958	1.891457	1.850087	1.814294	
158	2.067976	1.997437	1.939574	1.891068	1.849694	1.813897	
159	2.067604	1.997061	1.939194	1.890684	1.849306	1.813505	
160	2.067237	1.996690	1.938819	1.890305	1.848923	1.813118	
161	2.066875	1.996324	1.938449	1.889931	1.848545	1.812736	
162	2.066517	1.995962	1.938083	1.889561	1.848171	1.812358	
163	2.066163	1.995605	1.937722	1.889197	1.847802	1.811986	
164	2.065814	1.995253	1.937366	1.888836	1.847438	1.811617	
165	2.065469	1.994904	1.937013	1.888480	1.847078	1.811254	
166	2.065129	1.994560	1.936666	1.888128	1.846723	1.810895	
167	2.064792	1.994220	1.936322	1.887781	1.846372	1.810540	
168	2.064460	1.993884	1.935982	1.887438	1.846025	1.810189	
169	2.064131	1.993552	1.935647	1.887099	1.845682	1.809843	
170	2.063807	1.993224	1.935315	1.886763	1.845343	1.809500	
171	2.063486	1.992900	1.934988	1.886432	1.845009	1.809162	
172	2.063169	1.992580	1.934664	1.886105	1.844678	1.808828	
173	2.062856	1.992263	1.934344	1.885782	1.844351	1.808498	
174	2.062546	1.991950	1.934028	1.885462	1.844028	1.808171	
175	2.062240	1.991641	1.933715	1.885146	1.843708	1.807848	
176	2.061938	1.991335	1.933406	1.884834	1.843393	1.807529	
177	2.061639	1.991033	1.933101	1.884525	1.843080	1.807214	
178	2.061343	1.990734	1.932799	1.884219	1.842772	1.806902	
179	2.061051	1.990439	1.932500	1.883918	1.842467	1.806593	
180	2.060762	1.990147	1.932205	1.883619	1.842165	1.806288	
181	2.060476	1.989858	1.931913	1.883324	1.841867	1.805987	
182	2.060193	1.989572	1.931624	1.883032	1.841572	1.805689	
183	2.059914	1.989290	1.931339	1.882743	1.841280	1.805394	
184	2.059637	1.989011	1.931056	1.882458	1.840991	1.805102	
185	2.059364	1.988734	1.930777	1.882176	1.840706	1.804814	
186	2.059094	1.988461	1.930501	1.881896	1.840423	1.804528	
187	2.058826	1.988191	1.930227	1.881620	1.840144	1.804246	
188	2.058562	1.987923	1.929957	1.881347	1.839868	1.803967	
189	2.058300	1.987659	1.929689	1.881076	1.839595	1.803691	
190	2.058041	1.987397	1.929425	1.880809	1.839324	1.803417	
191	2.057784	1.987138	1.929163	1.880544	1.839057	1.803147	
192	2.057531	1.986881	1.928904	1.880282	1.838792	1.802879	
193	2.057280	1.986628	1.928647	1.880023	1.838530	1.802614	
194	2.057032	1.986377	1.928394	1.879766	1.838271	1.802352	
195	2.056786	1.986129	1.928143	1.879513	1.838014	1.802093	
196	2.056543	1.985883	1.927894	1.879261	1.837760	1.801836	
197	2.056302	1.985639	1.927648	1.879013	1.837509	1.801582	
198	2.056064	1.985399	1.927405	1.878767	1.837260	1.801331	
199	2.055828	1.985160	1.927164	1.878523	1.837014	1.801082	
200	2.055594	1.984924	1.926925	1.878282	1.836770	1.800836	
201	2.055363	1.984691	1.926689	1.878043	1.836528	1.800592	
202	2.055134	1.984460	1.926455	1.877807	1.836289	1.800350	
203	2.054908	1.984231	1.926224	1.877573	1.836053	1.800111	
204	2.054684	1.984004	1.925995	1.877341	1.835819	1.799874	
205	2.054461	1.983779	1.925768	1.877112	1.835587	1.799640	
206	2.054242	1.983557	1.925543	1.876884	1.835357	1.799408	
207	2.054024	1.983337	1.925321	1.876660	1.835130	1.799178	
208	2.053808	1.983119	1.925100	1.876437	1.834904	1.798950	
209	2.053595	1.982903	1.924882	1.876216	1.834681	1.798725	
210	2.053383	1.982690	1.924666	1.875998	1.834461	1.798501	
211	2.053174	1.982478	1.924452	1.875781	1.834242	1.798280	
212	2.052966	1.982268	1.924240	1.875567	1.834025	1.798061	
213	2.052761	1.982060	1.924030	1.875355	1.833810	1.797844	
214	2.052557	1.981855	1.923822	1.875144	1.833598	1.797629	
215	2.052355	1.981651	1.923616	1.874936	1.833387	1.797416	
216	2.052156	1.981449	1.923412	1.874729	1.833178	1.797205	
217	2.051958	1.981249	1.923209	1.874525	1.832972	1.796996	
218	2.051762	1.981051	1.923009	1.874322	1.832767	1.796789	
219	2.051567	1.980854	1.922810	1.874122	1.832564	1.796584	
220	2.051375	1.980660	1.922614	1.873923	1.832363	1.796381	
221	2.051184	1.980467	1.922419	1.873726	1.832164	1.796180	
222	2.050995	1.980276	1.922226	1.873530	1.831966	1.795980	
223	2.050808	1.980087	1.922034	1.873337	1.831770	1.795782	
224	2.050622	1.979899	1.921845	1.873145	1.831576	1.795586	
225	2.050438	1.979713	1.921657	1.872955	1.831384	1.795392	
226	2.050256	1.979529	1.921470	1.872767	1.831194	1.795199	

F $\alpha = 0.05$

df2	df1	7	8	9	10	11	12
227	2.050075	1.979346	1.921286	1.872580	1.831005	1.795009	
228	2.049896	1.979165	1.921103	1.872395	1.830818	1.794819	
229	2.049718	1.978986	1.920921	1.872211	1.830633	1.794632	
230	2.049543	1.978808	1.920741	1.872030	1.830449	1.794446	
231	2.049368	1.978631	1.920563	1.871849	1.830267	1.794262	
232	2.049195	1.978457	1.920386	1.871671	1.830086	1.794079	
233	2.049024	1.978283	1.920211	1.871493	1.829907	1.793898	
234	2.048854	1.978112	1.920038	1.871318	1.829729	1.793719	
235	2.048685	1.977941	1.919865	1.871144	1.829553	1.793541	
236	2.048518	1.977773	1.919695	1.870971	1.829379	1.793364	
237	2.048353	1.977605	1.919525	1.870800	1.829206	1.793190	
238	2.048189	1.977439	1.919358	1.870630	1.829034	1.793016	
239	2.048026	1.977275	1.919191	1.870462	1.828864	1.792844	
240	2.047864	1.977111	1.919026	1.870295	1.828695	1.792674	
241	2.047704	1.976950	1.918863	1.870130	1.828528	1.792505	
242	2.047545	1.976789	1.918700	1.869966	1.828362	1.792337	
243	2.047388	1.976630	1.918539	1.869803	1.828198	1.792170	
244	2.047232	1.976472	1.918380	1.869642	1.828034	1.792006	
245	2.047077	1.976316	1.918222	1.869482	1.827873	1.791842	
246	2.046923	1.976160	1.918065	1.869323	1.827712	1.791680	
247	2.046771	1.976006	1.917909	1.869165	1.827553	1.791519	
248	2.046620	1.975854	1.917754	1.869009	1.827395	1.791359	
249	2.046470	1.975702	1.917601	1.868854	1.827238	1.791201	
250	2.046321	1.975552	1.917449	1.868701	1.827083	1.791044	

df2	df1	13	14	15	16	17	18
1	244.689847	245.363977	245.949926	246.463922	246.918444	247.323244	
2	19.418904	19.424384	19.429135	19.433293	19.436961	19.440223	
3	8.728681	8.714896	8.702870	8.692286	8.682900	8.674519	
4	5.891144	5.873346	5.857805	5.844117	5.831970	5.821116	
5	4.655225	4.635768	4.618759	4.603764	4.590444	4.578534	
6	3.976363	3.955934	3.938058	3.922283	3.908259	3.895709	
7	3.550343	3.529231	3.510740	3.494408	3.479877	3.466863	
8	3.259019	3.237378	3.218406	3.201634	3.186701	3.173317	
9	3.047549	3.025473	3.006102	2.988966	2.973696	2.960003	
10	2.887175	2.864728	2.845017	2.827566	2.812007	2.798045	
11	2.761417	2.738648	2.718640	2.700914	2.685100	2.670901	
12	2.660177	2.637124	2.616851	2.598881	2.582839	2.568428	
13	2.576927	2.553619	2.533110	2.514920	2.498672	2.484069	
14	2.507263	2.483726	2.463003	2.444613	2.428179	2.413401	
15	2.448110	2.424364	2.403447	2.384875	2.368270	2.353332	
16	2.397254	2.373318	2.352223	2.333484	2.316722	2.301636	
17	2.353063	2.328952	2.307693	2.288800	2.271893	2.256671	
18	2.314304	2.290033	2.268622	2.249587	2.232546	2.217197	
19	2.280034	2.255614	2.234063	2.214895	2.197729	2.182263	
20	2.249514	2.224956	2.203274	2.183983	2.166701	2.151124	
21	2.222160	2.197473	2.175670	2.156263	2.138872	2.123193	
22	2.197502	2.172695	2.150778	2.131264	2.113771	2.097994	
23	2.175160	2.150240	2.128217	2.108602	2.091013	2.075145	
24	2.154822	2.129797	2.107673	2.087963	2.070284	2.054331	
25	2.136229	2.111105	2.088887	2.069088	2.051323	2.035289	
26	2.119166	2.093949	2.071642	2.051758	2.033913	2.017802	
27	2.103450	2.078145	2.055755	2.035790	2.017869	2.001686	
28	2.088929	2.063541	2.041071	2.021031	2.003037	1.986785	
29	2.075471	2.050004	2.027458	2.007346	1.989284	1.972966	
30	2.062963	2.037420	2.014804	1.994624	1.976496	1.960116	
31	2.051307	2.025694	2.003009	1.982764	1.964575	1.948135	
32	2.040419	2.014739	1.991990	1.971683	1.953434	1.936938	
33	2.030227	2.004482	1.981671	1.961305	1.943000	1.926449	
34	2.020664	1.994858	1.971988	1.951566	1.933207	1.916605	
35	2.011674	1.985810	1.962884	1.942408	1.923997	1.907346	
36	2.003208	1.977288	1.954308	1.933781	1.915321	1.898622	
37	1.995221	1.969247	1.946216	1.925639	1.907132	1.890388	
38	1.987673	1.961648	1.938568	1.917943	1.899391	1.882603	
39	1.980528	1.954454	1.931327	1.910658	1.892061	1.875232	
40	1.973756	1.947635	1.924463	1.903750	1.885112	1.868242	
41	1.967328	1.941162	1.917946	1.897191	1.878513	1.861604	
42	1.961218	1.935009	1.911751	1.890956	1.872239	1.855293	
43	1.955404	1.929153	1.905855	1.885021	1.866266	1.849285	
44	1.949864	1.923572	1.900236	1.879364	1.860574	1.843558	
45	1.944579	1.918249	1.894875	1.873968	1.855143	1.838093	
46	1.939532	1.913164	1.889755	1.868813	1.849954	1.832872	
47	1.934707	1.908304	1.884859	1.863884	1.844993	1.827880	
48	1.930090	1.903653	1.880175	1.859167	1.840245	1.823102	
49	1.925668	1.899197	1.875687	1.854648	1.835696	1.818523	
50	1.921429	1.894926	1.871384	1.850315	1.831334	1.814133	
51	1.917361	1.890827	1.867255	1.846157	1.827147	1.809919	
52	1.913455	1.886890	1.863289	1.842162	1.823126	1.805871	

F $\alpha = 0.05$

df2	df1	13	14	15	16	17	18
53	1.909701	1.883106	1.859477	1.838323	1.819260	1.801980	
54	1.906089	1.879467	1.855810	1.834629	1.815540	1.798236	
55	1.902613	1.875963	1.852280	1.831074	1.811960	1.794631	
56	1.899265	1.872588	1.848879	1.827648	1.808510	1.791158	
57	1.896037	1.869335	1.845601	1.824345	1.805184	1.787809	
58	1.892924	1.866197	1.842438	1.821159	1.801975	1.784578	
59	1.889919	1.863168	1.839386	1.818084	1.798877	1.781459	
60	1.887018	1.860242	1.836437	1.815113	1.795885	1.778446	
61	1.884213	1.857415	1.833588	1.812242	1.792993	1.775534	
62	1.881502	1.854681	1.830832	1.809466	1.790197	1.772717	
63	1.878878	1.852036	1.828167	1.806780	1.787491	1.769992	
64	1.876339	1.849476	1.825586	1.804179	1.784871	1.767353	
65	1.873880	1.846996	1.823086	1.801660	1.782333	1.764798	
66	1.871497	1.844593	1.820664	1.799219	1.779874	1.762320	
67	1.869187	1.842264	1.818315	1.796852	1.777489	1.759919	
68	1.866946	1.840004	1.816037	1.794556	1.775176	1.757589	
69	1.864772	1.837812	1.813827	1.792328	1.772931	1.755327	
70	1.862661	1.835683	1.811681	1.790165	1.770751	1.753132	
71	1.860612	1.833616	1.809596	1.788064	1.768634	1.750999	
72	1.858620	1.831607	1.807571	1.786022	1.766577	1.748926	
73	1.856684	1.829654	1.805602	1.784038	1.764577	1.746911	
74	1.854801	1.827755	1.803687	1.782108	1.762632	1.744952	
75	1.852970	1.825908	1.801825	1.780230	1.760739	1.743045	
76	1.851188	1.824111	1.800012	1.778402	1.758897	1.741189	
77	1.849453	1.822361	1.798247	1.776623	1.757104	1.739382	
78	1.847763	1.820656	1.796528	1.774890	1.755358	1.737623	
79	1.846117	1.818996	1.794854	1.773202	1.753656	1.735908	
80	1.844513	1.817378	1.793222	1.771557	1.751998	1.734237	
81	1.842950	1.815800	1.791631	1.769953	1.750381	1.732607	
82	1.841425	1.814262	1.790079	1.768388	1.748804	1.731018	
83	1.839938	1.812761	1.788566	1.766862	1.747265	1.729468	
84	1.838486	1.811297	1.787089	1.765373	1.745764	1.727955	
85	1.837070	1.809868	1.785647	1.763919	1.744299	1.726478	
86	1.835687	1.808472	1.784240	1.762500	1.742868	1.725036	
87	1.834336	1.807110	1.782865	1.761114	1.741470	1.723628	
88	1.833017	1.805778	1.781522	1.759759	1.740105	1.722252	
89	1.831728	1.804477	1.780210	1.758436	1.738771	1.720907	
90	1.830467	1.803206	1.778927	1.757142	1.737467	1.719592	
91	1.829236	1.801963	1.777673	1.755878	1.736192	1.718307	
92	1.828031	1.800747	1.776447	1.754641	1.734944	1.717050	
93	1.826852	1.799558	1.775247	1.753431	1.733724	1.715820	
94	1.825699	1.798394	1.774073	1.752247	1.732531	1.714617	
95	1.824571	1.797256	1.772924	1.751088	1.731363	1.713439	
96	1.823467	1.796141	1.771800	1.749954	1.730219	1.712287	
97	1.822386	1.795050	1.770699	1.748844	1.729099	1.711158	
98	1.821327	1.793981	1.769621	1.747756	1.728003	1.710052	
99	1.820290	1.792935	1.768565	1.746691	1.726928	1.708969	
100	1.819274	1.791909	1.767530	1.745647	1.725876	1.707908	
101	1.818278	1.790904	1.766516	1.744624	1.724844	1.706868	
102	1.817302	1.789919	1.765522	1.743622	1.723833	1.705849	
103	1.816345	1.788954	1.764548	1.742639	1.722842	1.704850	
104	1.815407	1.788007	1.763593	1.741675	1.721870	1.703870	
105	1.814488	1.787079	1.762656	1.740730	1.720917	1.702909	
106	1.813585	1.786168	1.761737	1.739803	1.719982	1.701966	
107	1.812700	1.785275	1.760835	1.738894	1.719065	1.701041	
108	1.811832	1.784398	1.759951	1.738001	1.718165	1.700134	
109	1.810979	1.783537	1.759082	1.737125	1.717281	1.699243	
110	1.810143	1.782693	1.758230	1.736265	1.716414	1.698369	
111	1.809321	1.781864	1.757393	1.735421	1.715563	1.697510	
112	1.808515	1.781050	1.756572	1.734592	1.714726	1.696667	
113	1.807723	1.780250	1.755765	1.733778	1.713905	1.695839	
114	1.806945	1.779465	1.754972	1.732978	1.713099	1.695025	
115	1.806181	1.778693	1.754193	1.732193	1.712306	1.694226	
116	1.805430	1.777935	1.753428	1.731421	1.711528	1.693441	
117	1.804692	1.777190	1.752677	1.730662	1.710762	1.692669	
118	1.803967	1.776458	1.751938	1.729917	1.710010	1.691911	
119	1.803254	1.775738	1.751211	1.729184	1.709271	1.691165	
120	1.802553	1.775031	1.750497	1.728463	1.708544	1.690432	
121	1.801864	1.774335	1.749795	1.727754	1.707829	1.689711	
122	1.801186	1.773651	1.749104	1.727057	1.707126	1.689002	
123	1.800519	1.772978	1.748425	1.726372	1.706435	1.688305	
124	1.799864	1.772316	1.747757	1.725698	1.705754	1.687619	
125	1.799219	1.771664	1.747099	1.725034	1.705085	1.686944	
126	1.798584	1.771024	1.746452	1.724382	1.704427	1.686280	
127	1.797959	1.770393	1.745816	1.723739	1.703779	1.685626	
128	1.797345	1.769772	1.745189	1.723107	1.703141	1.684983	
129	1.796740	1.769161	1.744573	1.722485	1.702513	1.684350	
130	1.796144	1.768560	1.743965	1.721872	1.701895	1.683726	
131	1.795557	1.767968	1.743368	1.721269	1.701286	1.683112	
132	1.794980	1.767385	1.742779	1.720675	1.700687	1.682508	

F $\alpha = 0.05$

df1	13	14	15	16	17	18
df2						
133	1.794411	1.766810	1.742199	1.720090	1.700096	1.681912
134	1.793851	1.766245	1.741628	1.719513	1.699515	1.681326
135	1.793299	1.765688	1.741066	1.718946	1.698942	1.680748
136	1.792756	1.765139	1.740512	1.718387	1.698378	1.680179
137	1.792220	1.764598	1.739966	1.717836	1.697822	1.679618
138	1.791693	1.764065	1.739428	1.717293	1.697275	1.679066
139	1.791173	1.763540	1.738898	1.716758	1.696735	1.678521
140	1.790660	1.763023	1.738375	1.716230	1.696203	1.677985
141	1.790155	1.762512	1.737860	1.715711	1.695678	1.677456
142	1.789657	1.762010	1.737353	1.715198	1.695161	1.676934
143	1.789166	1.761514	1.736852	1.714693	1.694651	1.676420
144	1.788682	1.761025	1.736359	1.714195	1.694149	1.675913
145	1.788205	1.760543	1.735872	1.713704	1.693653	1.675413
146	1.787734	1.760068	1.735392	1.713219	1.693164	1.674920
147	1.787270	1.759599	1.734919	1.712742	1.692682	1.674433
148	1.786812	1.759136	1.734452	1.712270	1.692207	1.673954
149	1.786361	1.758680	1.733992	1.711806	1.691738	1.673481
150	1.785915	1.758230	1.733537	1.711347	1.691275	1.673014
151	1.785475	1.757786	1.733089	1.710894	1.690818	1.672553
152	1.785042	1.757348	1.732647	1.710448	1.690368	1.672098
153	1.784613	1.756916	1.732210	1.710007	1.689923	1.671650
154	1.784191	1.756489	1.731779	1.709572	1.689484	1.671207
155	1.783774	1.756068	1.731354	1.709143	1.689051	1.670770
156	1.783363	1.755652	1.730934	1.708720	1.688624	1.670339
157	1.782956	1.755242	1.730520	1.708301	1.688202	1.669913
158	1.782555	1.754837	1.730111	1.707889	1.687785	1.669493
159	1.782159	1.754437	1.729707	1.707481	1.687373	1.669077
160	1.781768	1.754042	1.729308	1.707078	1.686967	1.668668
161	1.781382	1.753652	1.728915	1.706681	1.686566	1.668263
162	1.781001	1.753267	1.728526	1.706288	1.686170	1.667863
163	1.780624	1.752887	1.728142	1.705901	1.685779	1.667468
164	1.780252	1.752511	1.727762	1.705518	1.685392	1.667078
165	1.779885	1.752140	1.727388	1.705139	1.685010	1.666693
166	1.779522	1.751773	1.727018	1.704766	1.684633	1.666313
167	1.779164	1.751411	1.726652	1.704397	1.684261	1.665937
168	1.778809	1.751054	1.726291	1.704032	1.683893	1.665565
169	1.778459	1.750700	1.725934	1.703671	1.683529	1.665198
170	1.778114	1.750351	1.725581	1.703315	1.683169	1.664836
171	1.777772	1.750006	1.725232	1.702963	1.682814	1.664477
172	1.777434	1.749664	1.724888	1.702616	1.682463	1.664123
173	1.777100	1.749327	1.724547	1.702272	1.682116	1.663773
174	1.776770	1.748994	1.724211	1.701932	1.681773	1.663427
175	1.776444	1.748664	1.723878	1.701596	1.681434	1.663085
176	1.776122	1.748339	1.723549	1.701264	1.681099	1.662747
177	1.775803	1.748017	1.723224	1.700936	1.680768	1.662412
178	1.775488	1.747698	1.722902	1.700611	1.680440	1.662082
179	1.775176	1.747384	1.722585	1.700290	1.680116	1.661755
180	1.774868	1.747072	1.722270	1.699973	1.679796	1.661432
181	1.774564	1.746765	1.721959	1.699659	1.679479	1.661112
182	1.774262	1.746460	1.721652	1.699349	1.679166	1.660796
183	1.773964	1.746159	1.721348	1.699042	1.678856	1.660483
184	1.773670	1.745862	1.721047	1.698738	1.678550	1.660174
185	1.773378	1.745567	1.720750	1.698438	1.678247	1.659868
186	1.773090	1.745276	1.720456	1.698141	1.677947	1.659566
187	1.772805	1.744988	1.720165	1.697847	1.677650	1.659267
188	1.772522	1.744703	1.719877	1.697557	1.677357	1.658970
189	1.772243	1.744421	1.719592	1.697269	1.677067	1.658678
190	1.771967	1.744142	1.719310	1.696985	1.676779	1.658388
191	1.771694	1.743866	1.719032	1.696703	1.676495	1.658101
192	1.771423	1.743593	1.718756	1.696424	1.676214	1.657817
193	1.771156	1.743322	1.718483	1.696149	1.675936	1.657536
194	1.770891	1.743055	1.718213	1.695876	1.675660	1.657258
195	1.770629	1.742790	1.717945	1.695606	1.675388	1.656983
196	1.770370	1.742528	1.717680	1.695339	1.675118	1.656711
197	1.770113	1.742269	1.717419	1.695074	1.674851	1.656442
198	1.769859	1.742012	1.717159	1.694812	1.674587	1.656175
199	1.769607	1.741758	1.716903	1.694553	1.674325	1.655911
200	1.769358	1.741506	1.716648	1.694297	1.674066	1.655649
201	1.769112	1.741257	1.716397	1.694043	1.673810	1.655391
202	1.768868	1.741011	1.716148	1.693791	1.673556	1.655135
203	1.768626	1.740766	1.715901	1.693542	1.673305	1.654881
204	1.768387	1.740525	1.715657	1.693296	1.673056	1.654630
205	1.768150	1.740285	1.715415	1.693052	1.672809	1.654381
206	1.767915	1.740048	1.715176	1.692810	1.672565	1.654135
207	1.767683	1.739814	1.714939	1.692571	1.672324	1.653891
208	1.767453	1.739581	1.714704	1.692333	1.672084	1.653649
209	1.767225	1.739351	1.714472	1.692099	1.671847	1.653410
210	1.766999	1.739123	1.714241	1.691866	1.671613	1.653173
211	1.766776	1.738897	1.714013	1.691636	1.671380	1.652938
212	1.766555	1.738674	1.713787	1.691408	1.671150	1.652706

F $\alpha = 0.05$

	df1	13	14	15	16	17	18
df2							
213	1.766335	1.738452	1.713564	1.691182	1.670922	1.652476	
214	1.766118	1.738233	1.713342	1.690958	1.670696	1.652248	
215	1.765903	1.738015	1.713122	1.690736	1.670472	1.652022	
216	1.765690	1.737800	1.712905	1.690516	1.670250	1.651798	
217	1.765478	1.737586	1.712689	1.690299	1.670030	1.651576	
218	1.765269	1.737375	1.712476	1.690083	1.669812	1.651356	
219	1.765062	1.737166	1.712264	1.689869	1.669597	1.651139	
220	1.764856	1.736958	1.712054	1.689658	1.669383	1.650923	
221	1.764653	1.736752	1.711847	1.689448	1.669171	1.650709	
222	1.764451	1.736548	1.711641	1.689240	1.668961	1.650497	
223	1.764251	1.736347	1.711437	1.689034	1.668753	1.650287	
224	1.764053	1.736146	1.711235	1.688830	1.668547	1.650079	
225	1.763857	1.735948	1.711034	1.688627	1.668343	1.649873	
226	1.763662	1.735751	1.710836	1.688427	1.668140	1.649669	
227	1.763469	1.735557	1.710639	1.688228	1.667940	1.649466	
228	1.763278	1.735363	1.710444	1.688031	1.667741	1.649265	
229	1.763089	1.735172	1.710250	1.687836	1.667544	1.649066	
230	1.762901	1.734982	1.710059	1.687642	1.667348	1.648869	
231	1.762715	1.734794	1.709869	1.687450	1.667154	1.648673	
232	1.762530	1.734608	1.709680	1.687260	1.666962	1.648479	
233	1.762347	1.734423	1.709494	1.687071	1.666772	1.648287	
234	1.762166	1.734239	1.709308	1.686884	1.666583	1.648097	
235	1.761986	1.734058	1.709125	1.686699	1.666396	1.647908	
236	1.761808	1.733878	1.708943	1.686515	1.666210	1.647720	
237	1.761631	1.733699	1.708762	1.686333	1.666026	1.647535	
238	1.761456	1.733522	1.708583	1.686152	1.665844	1.647351	
239	1.761282	1.733346	1.708406	1.685973	1.665663	1.647168	
240	1.761110	1.733172	1.708230	1.685795	1.665483	1.646987	
241	1.760939	1.732999	1.708056	1.685619	1.665306	1.646807	
242	1.760769	1.732828	1.707883	1.685444	1.665129	1.646629	
243	1.760601	1.732658	1.707711	1.685271	1.664954	1.646452	
244	1.760434	1.732490	1.707541	1.685099	1.664781	1.646277	
245	1.760269	1.732323	1.707372	1.684929	1.664608	1.646104	
246	1.760105	1.732157	1.707205	1.684760	1.664438	1.645931	
247	1.759942	1.731993	1.707039	1.684592	1.664268	1.645760	
248	1.759781	1.731830	1.706874	1.684426	1.664100	1.645591	
249	1.759621	1.731668	1.706710	1.684261	1.663934	1.645423	
250	1.759462	1.731507	1.706548	1.684097	1.663769	1.645256	

	df1	19	20
df2			
1	247.686054	248.013082	
2	19.443142	19.445768	
3	8.666990	8.660190	
4	5.811359	5.802542	
5	4.567820	4.558131	
6	3.884412	3.874189	
7	3.455140	3.444525	
8	3.161254	3.150324	
9	2.947652	2.936455	
10	2.785445	2.774016	
11	2.658080	2.646445	
12	2.555409	2.543588	
13	2.470871	2.458882	
14	2.400039	2.387896	
15	2.339819	2.327535	
16	2.287985	2.275570	
17	2.242891	2.230354	
18	2.203297	2.190648	
19	2.168252	2.155497	
20	2.137009	2.124155	
21	2.108979	2.096033	
22	2.083689	2.070656	
23	2.060754	2.047638	
24	2.039858	2.026664	
25	2.020738	2.007471	
26	2.003178	1.989842	
27	1.986993	1.973590	
28	1.972027	1.958561	
29	1.958146	1.944620	
30	1.945236	1.931653	
31	1.933198	1.919561	
32	1.921946	1.908258	
33	1.911406	1.897669	
34	1.901512	1.887727	
35	1.892206	1.878375	
36	1.883436	1.869562	
37	1.875159	1.861242	
38	1.867332	1.853375	
39	1.859920	1.845925	

F $\alpha = 0.05$

df2	df1 19	20
40	1.852892	1.838859
41	1.846217	1.832149
42	1.839870	1.825767
43	1.833827	1.819691
44	1.828067	1.813898
45	1.822570	1.808370
46	1.817318	1.803089
47	1.812296	1.798038
48	1.807488	1.793202
49	1.802882	1.788569
50	1.798464	1.784125
51	1.794224	1.779859
52	1.790151	1.775761
53	1.786234	1.771821
54	1.782466	1.768030
55	1.778838	1.764379
56	1.775343	1.760861
57	1.771972	1.757469
58	1.768720	1.754197
59	1.765580	1.751037
60	1.762547	1.747984
61	1.759615	1.745033
62	1.756779	1.742179
63	1.754036	1.739417
64	1.751379	1.736743
65	1.748805	1.734152
66	1.746311	1.731641
67	1.743892	1.729207
68	1.741546	1.726844
69	1.739269	1.724552
70	1.737057	1.722325
71	1.734909	1.720162
72	1.732822	1.718061
73	1.730793	1.716017
74	1.728819	1.714030
75	1.726898	1.712096
76	1.725029	1.710213
77	1.723209	1.708380
78	1.721436	1.706595
79	1.719709	1.704856
80	1.718026	1.703160
81	1.716384	1.701507
82	1.714783	1.699894
83	1.713221	1.698321
84	1.711697	1.696786
85	1.710209	1.695287
86	1.708756	1.693824
87	1.707337	1.692394
88	1.705950	1.690997
89	1.704595	1.689632
90	1.703271	1.688298
91	1.701976	1.686993
92	1.700709	1.685717
93	1.699470	1.684468
94	1.698257	1.683247
95	1.697070	1.682051
96	1.695908	1.680880
97	1.694771	1.679734
98	1.693657	1.678612
99	1.692565	1.677512
100	1.691496	1.676434
101	1.690448	1.675378
102	1.689420	1.674343
103	1.688413	1.673328
104	1.687426	1.672333
105	1.686457	1.671357
106	1.685507	1.670399
107	1.684574	1.669460
108	1.683659	1.668538
109	1.682761	1.667633
110	1.681880	1.666744
111	1.681014	1.665872
112	1.680165	1.665015
113	1.679330	1.664174
114	1.678510	1.663348
115	1.677704	1.662536
116	1.676913	1.661738
117	1.676135	1.660954
118	1.675370	1.660183
119	1.674618	1.659425

F $\alpha = 0.05$

df2	df1 19	20
120	1.673879	1.658680
121	1.673152	1.657948
122	1.672437	1.657227
123	1.671734	1.656518
124	1.671042	1.655821
125	1.670362	1.655135
126	1.669692	1.654460
127	1.669033	1.653796
128	1.668384	1.653142
129	1.667746	1.652498
130	1.667117	1.651864
131	1.666498	1.651240
132	1.665889	1.650626
133	1.665288	1.650020
134	1.664697	1.649424
135	1.664114	1.648837
136	1.663541	1.648258
137	1.662975	1.647688
138	1.662418	1.647127
139	1.661869	1.646573
140	1.661328	1.646027
141	1.660794	1.645489
142	1.660268	1.644959
143	1.659749	1.644436
144	1.659238	1.643921
145	1.658734	1.643412
146	1.658237	1.642911
147	1.657746	1.642416
148	1.657262	1.641928
149	1.656785	1.641447
150	1.656314	1.640972
151	1.655849	1.640504
152	1.655391	1.640041
153	1.654939	1.639585
154	1.654492	1.639135
155	1.654051	1.638691
156	1.653616	1.638252
157	1.653187	1.637819
158	1.652763	1.637391
159	1.652344	1.636969
160	1.651931	1.636552
161	1.651522	1.636140
162	1.651119	1.635734
163	1.650721	1.635332
164	1.650328	1.634936
165	1.649939	1.634544
166	1.649555	1.634157
167	1.649176	1.633774
168	1.648801	1.633396
169	1.648431	1.633023
170	1.648065	1.632654
171	1.647704	1.632289
172	1.647346	1.631929
173	1.646993	1.631573
174	1.646644	1.631221
175	1.646299	1.630873
176	1.645958	1.630529
177	1.645621	1.630188
178	1.645287	1.629852
179	1.644957	1.629520
180	1.644631	1.629191
181	1.644309	1.628866
182	1.643990	1.628544
183	1.643675	1.628226
184	1.643363	1.627911
185	1.643054	1.627600
186	1.642749	1.627292
187	1.642447	1.626988
188	1.642148	1.626686
189	1.641853	1.626388
190	1.641560	1.626093
191	1.641271	1.625801
192	1.640985	1.625513
193	1.640701	1.625227
194	1.640421	1.624944
195	1.640143	1.624664
196	1.639869	1.624387
197	1.639597	1.624113
198	1.639328	1.623841
199	1.639061	1.623573

F $\alpha = 0.05$

df2	df1	19	20
200	1.638798	1.623307	
201	1.638537	1.623043	
202	1.638278	1.622783	
203	1.638022	1.622524	
204	1.637769	1.622269	
205	1.637518	1.622016	
206	1.637269	1.621765	
207	1.637023	1.621517	
208	1.636779	1.621271	
209	1.636538	1.621027	
210	1.636299	1.620786	
211	1.636062	1.620547	
212	1.635828	1.620311	
213	1.635595	1.620076	
214	1.635365	1.619844	
215	1.635137	1.619614	
216	1.634911	1.619386	
217	1.634688	1.619161	
218	1.634466	1.618937	
219	1.634246	1.618715	
220	1.634028	1.618496	
221	1.633813	1.618278	
222	1.633599	1.618062	
223	1.633387	1.617849	
224	1.633177	1.617637	
225	1.632969	1.617427	
226	1.632763	1.617219	
227	1.632558	1.617013	
228	1.632356	1.616808	
229	1.632155	1.616606	
230	1.631956	1.616405	
231	1.631758	1.616206	
232	1.631563	1.616008	
233	1.631369	1.615813	
234	1.631177	1.615618	
235	1.630986	1.615426	
236	1.630797	1.615235	
237	1.630609	1.615046	
238	1.630424	1.614859	
239	1.630239	1.614673	
240	1.630056	1.614488	
241	1.629875	1.614306	
242	1.629696	1.614124	
243	1.629517	1.613944	
244	1.629340	1.613766	
245	1.629165	1.613589	
246	1.628991	1.613414	
247	1.628819	1.613240	
248	1.628648	1.613067	
249	1.628478	1.612896	
250	1.628310	1.612726	

F $\alpha = 0.025$

df1	1	2	3	4	5	6
1	647.789011	799.500000	864.162972	899.583310	921.847903	937.111083
2	38.506329	39.000000	39.165495	39.248418	39.298228	39.331458
3	17.443443	16.044106	15.439182	15.100979	14.884823	14.734718
4	12.217863	10.649111	9.979199	9.604530	9.364471	9.197311
5	10.006982	8.433621	7.763589	7.387886	7.146382	6.977702
6	8.813101	7.259856	6.598799	6.227161	5.987565	5.819757
7	8.072669	6.541520	5.889819	5.522594	5.285237	5.118597
8	7.570882	6.059467	5.415962	5.052632	4.817276	4.651696
9	7.209283	5.714705	5.078119	4.718078	4.484411	4.319722
10	6.936728	5.456396	4.825621	4.468342	4.236086	4.072131
11	6.724130	5.255889	4.630025	4.275072	4.043998	3.880651
12	6.553769	5.095867	4.474185	4.121209	3.891134	3.728292
13	6.414254	4.965266	4.347178	3.995898	3.766674	3.604256
14	6.297939	4.856698	4.241728	3.891914	3.663423	3.501365
15	6.199501	4.765048	4.152804	3.804271	3.576415	3.414665
16	6.115127	4.686665	4.076823	3.729417	3.502116	3.340631
17	6.042013	4.618874	4.011163	3.664754	3.437944	3.276689
18	5.978052	4.559672	3.953863	3.608344	3.381968	3.220915
19	5.921631	4.507528	3.903428	3.558706	3.332718	3.171844
20	5.871494	4.461255	3.858699	3.514695	3.289056	3.128340
21	5.826648	4.419918	3.818761	3.475408	3.250084	3.089509
22	5.786299	4.382768	3.782886	3.440126	3.215087	3.054639
23	5.749805	4.349202	3.750486	3.408268	3.183488	3.023154
24	5.716639	4.318726	3.721080	3.379359	3.154816	2.994586
25	5.686366	4.290932	3.694273	3.353009	3.128684	2.968549
26	5.658624	4.265483	3.669736	3.328894	3.104770	2.944720
27	5.633109	4.242094	3.647192	3.306741	3.082802	2.922831
28	5.609564	4.220525	3.626408	3.286321	3.062554	2.902655
29	5.587768	4.200572	3.607187	3.267438	3.043830	2.883998
30	5.567535	4.182061	3.589359	3.249925	3.026466	2.866696
31	5.548702	4.164840	3.572778	3.233640	3.010319	2.850606
32	5.531129	4.148779	3.557318	3.218456	2.995266	2.835606
33	5.514693	4.133765	3.542868	3.204267	2.981198	2.821588
34	5.499288	4.119700	3.529334	3.190977	2.968023	2.808459
35	5.484820	4.106496	3.516631	3.178505	2.955658	2.796137
36	5.471206	4.094076	3.504685	3.166777	2.944031	2.784551
37	5.458372	4.082372	3.493429	3.155728	2.933078	2.773636
38	5.446254	4.071326	3.482807	3.145301	2.922741	2.763335
39	5.434793	4.060881	3.472766	3.135445	2.912971	2.753599
40	5.423937	4.050992	3.463260	3.126114	2.903722	2.744382
41	5.413640	4.041614	3.454246	3.117268	2.894954	2.735643
42	5.403859	4.032710	3.445689	3.108870	2.886629	2.727347
43	5.394557	4.024243	3.437554	3.100887	2.878716	2.719461
44	5.385699	4.016184	3.429810	3.093288	2.871184	2.711954
45	5.377254	4.008502	3.422430	3.086047	2.864006	2.704801
46	5.369194	4.001172	3.415389	3.079139	2.857159	2.697977
47	5.361494	3.994171	3.408665	3.072541	2.850620	2.691460
48	5.354129	3.987476	3.402236	3.066233	2.844368	2.685229
49	5.347079	3.981069	3.396083	3.060197	2.838385	2.679267
50	5.340323	3.974931	3.390189	3.054415	2.832654	2.673555
51	5.333844	3.969045	3.384538	3.048871	2.827160	2.668079
52	5.327625	3.963396	3.379115	3.043552	2.821887	2.662824
53	5.321650	3.957971	3.373907	3.038443	2.816824	2.657778
54	5.315906	3.952756	3.368901	3.033533	2.811957	2.652927
55	5.310379	3.947739	3.364085	3.028810	2.807276	2.648262
56	5.305057	3.942909	3.359450	3.024263	2.802770	2.643771
57	5.299930	3.938256	3.354984	3.019884	2.798430	2.639445
58	5.294986	3.933770	3.350680	3.015662	2.794246	2.635275
59	5.290216	3.929443	3.346528	3.011590	2.790210	2.631252
60	5.285611	3.925265	3.342520	3.007659	2.786315	2.627370
61	5.281162	3.921231	3.338649	3.003863	2.782553	2.623620
62	5.276862	3.917332	3.334908	3.000195	2.778917	2.619996
63	5.272703	3.913561	3.331291	2.996648	2.775402	2.616493
64	5.268679	3.909913	3.327792	2.993216	2.772001	2.613103
65	5.264783	3.906381	3.324404	2.989895	2.768709	2.609822
66	5.261009	3.902961	3.321123	2.986678	2.765521	2.606644
67	5.257351	3.899646	3.317944	2.983560	2.762432	2.603565
68	5.253805	3.896433	3.314862	2.980538	2.759437	2.600580
69	5.250364	3.893315	3.311873	2.977607	2.756532	2.597684
70	5.247025	3.890290	3.308972	2.974763	2.753714	2.594875
71	5.243783	3.887354	3.306156	2.972002	2.750978	2.592148
72	5.240634	3.884501	3.303421	2.969321	2.748320	2.589499
73	5.237574	3.881730	3.300763	2.966715	2.745738	2.586925
74	5.234599	3.879036	3.298180	2.964183	2.743229	2.584424
75	5.231705	3.876416	3.295668	2.961720	2.740788	2.581991
76	5.228890	3.873867	3.293225	2.959325	2.738414	2.579625
77	5.226151	3.871387	3.290847	2.956994	2.736104	2.577322
78	5.223483	3.868972	3.288532	2.954724	2.733855	2.575080
79	5.220885	3.866620	3.286277	2.952514	2.731665	2.572897
80	5.218354	3.864329	3.284081	2.950361	2.729532	2.570771

F $\alpha = 0.025$

df1	1	2	3	4	5	6
81	5.215887	3.862096	3.281941	2.948263	2.727453	2.568698
82	5.213481	3.859920	3.279855	2.946218	2.725426	2.566678
83	5.211135	3.857797	3.277820	2.944224	2.723450	2.564708
84	5.208847	3.855726	3.275835	2.942278	2.721522	2.562786
85	5.206614	3.853706	3.273899	2.940380	2.719641	2.560911
86	5.204434	3.851734	3.272009	2.938527	2.717805	2.559081
87	5.202305	3.849808	3.270163	2.936718	2.716012	2.557294
88	5.200226	3.847927	3.268361	2.934952	2.714262	2.555549
89	5.198195	3.846090	3.266601	2.933226	2.712552	2.553844
90	5.196210	3.844295	3.264880	2.931540	2.710881	2.552179
91	5.194270	3.842541	3.263199	2.929892	2.709248	2.550551
92	5.192373	3.840825	3.261555	2.928281	2.707652	2.548959
93	5.190518	3.839147	3.259948	2.926705	2.706090	2.547403
94	5.188703	3.837506	3.258375	2.925164	2.704563	2.545881
95	5.186928	3.835901	3.256837	2.923656	2.703069	2.544391
96	5.185190	3.834330	3.255332	2.922181	2.701607	2.542934
97	5.183489	3.832792	3.253858	2.920737	2.700176	2.541507
98	5.181823	3.831286	3.252415	2.919323	2.698775	2.540111
99	5.180192	3.829811	3.251003	2.917938	2.697403	2.538743
100	5.178594	3.828367	3.249619	2.916582	2.696059	2.537403
101	5.177028	3.826952	3.248263	2.915253	2.694742	2.536091
102	5.175494	3.825565	3.246935	2.913951	2.693452	2.534805
103	5.173990	3.824206	3.245633	2.912675	2.692188	2.533544
104	5.172516	3.822874	3.244356	2.911425	2.690948	2.532309
105	5.171071	3.821567	3.243105	2.910198	2.689733	2.531097
106	5.169653	3.820286	3.241878	2.908995	2.688541	2.529909
107	5.168262	3.819030	3.240674	2.907816	2.687373	2.528744
108	5.166898	3.817797	3.239493	2.906659	2.686226	2.527601
109	5.165559	3.816587	3.238334	2.905523	2.685101	2.526479
110	5.164245	3.815400	3.237197	2.904409	2.683996	2.525378
111	5.162955	3.814234	3.236081	2.903315	2.682912	2.524297
112	5.161689	3.813090	3.234985	2.902241	2.681848	2.523237
113	5.160445	3.811967	3.233909	2.901186	2.680804	2.522195
114	5.159224	3.810864	3.232852	2.900151	2.679778	2.521172
115	5.158024	3.809780	3.231815	2.899134	2.678770	2.520168
116	5.156846	3.808715	3.230795	2.898135	2.677780	2.519181
117	5.155688	3.807669	3.229793	2.897153	2.676807	2.518211
118	5.154550	3.806642	3.228809	2.896188	2.675851	2.517258
119	5.153431	3.805631	3.227841	2.895240	2.674912	2.516321
120	5.152331	3.804638	3.226890	2.894308	2.673988	2.515401
121	5.151250	3.803662	3.225955	2.893392	2.673080	2.514496
122	5.150187	3.802702	3.225036	2.892491	2.672188	2.513606
123	5.149142	3.801758	3.224132	2.891606	2.671310	2.512731
124	5.148114	3.800829	3.223243	2.890734	2.670447	2.511870
125	5.147102	3.799916	3.222368	2.889877	2.669597	2.511024
126	5.146107	3.799017	3.221507	2.889034	2.668762	2.510191
127	5.145128	3.798133	3.220661	2.888204	2.667940	2.509371
128	5.144164	3.797263	3.219828	2.887388	2.667131	2.508565
129	5.143216	3.796407	3.219008	2.886584	2.666335	2.507771
130	5.142282	3.795564	3.218200	2.885794	2.665551	2.506990
131	5.141363	3.794734	3.217406	2.885015	2.664780	2.506221
132	5.140458	3.793917	3.216624	2.884249	2.664020	2.505463
133	5.139567	3.793112	3.215853	2.883494	2.663272	2.504718
134	5.138689	3.792320	3.215095	2.882750	2.662536	2.503984
135	5.137825	3.791540	3.214348	2.882018	2.661811	2.503260
136	5.136973	3.790771	3.213612	2.881297	2.661096	2.502548
137	5.136135	3.790014	3.212887	2.880587	2.660392	2.501846
138	5.135308	3.789268	3.212172	2.879887	2.659699	2.501155
139	5.134494	3.788533	3.211469	2.879198	2.659016	2.500474
140	5.133691	3.787808	3.210775	2.878518	2.658342	2.499803
141	5.132900	3.787094	3.210091	2.877848	2.657679	2.499141
142	5.132120	3.786391	3.209418	2.877188	2.657024	2.498489
143	5.131352	3.785697	3.208754	2.876537	2.656380	2.497846
144	5.130594	3.785013	3.208099	2.875896	2.655744	2.497212
145	5.129847	3.784339	3.207453	2.875263	2.655117	2.496587
146	5.129110	3.783674	3.206817	2.874640	2.654499	2.495971
147	5.128383	3.783018	3.206189	2.874025	2.653890	2.495364
148	5.127667	3.782371	3.205570	2.873418	2.653289	2.494765
149	5.126960	3.781733	3.204959	2.872820	2.652696	2.494173
150	5.126262	3.781104	3.204357	2.872229	2.652111	2.493590
151	5.125574	3.780483	3.203762	2.871647	2.651534	2.493015
152	5.124896	3.779871	3.203176	2.871073	2.650965	2.492448
153	5.124226	3.779267	3.202597	2.870506	2.650403	2.491888
154	5.123565	3.778670	3.202027	2.869947	2.649849	2.491335
155	5.122913	3.778082	3.201463	2.869395	2.649302	2.490790
156	5.122269	3.777501	3.200907	2.868850	2.648763	2.490252
157	5.121633	3.776927	3.200358	2.868312	2.648230	2.489721
158	5.121006	3.776361	3.199816	2.867781	2.647704	2.489196
159	5.120387	3.775803	3.199281	2.867257	2.647185	2.488679
160	5.119775	3.775251	3.198753	2.866740	2.646672	2.488168

F $\alpha = 0.025$

df1	1	2	3	4	5	6
161	5.119171	3.774706	3.198232	2.866229	2.646166	2.487663
162	5.118575	3.774168	3.197717	2.865725	2.645666	2.487165
163	5.117986	3.773637	3.197209	2.865226	2.645172	2.486673
164	5.117405	3.773112	3.196706	2.864734	2.644685	2.486187
165	5.116830	3.772594	3.196210	2.864249	2.644203	2.485707
166	5.116263	3.772082	3.195721	2.863769	2.643728	2.485232
167	5.115702	3.771577	3.195237	2.863294	2.643258	2.484764
168	5.115149	3.771077	3.194758	2.862826	2.642794	2.484301
169	5.114602	3.770584	3.194286	2.862363	2.642336	2.483844
170	5.114061	3.770096	3.193819	2.861906	2.641882	2.483393
171	5.113527	3.769614	3.193358	2.861454	2.641435	2.482946
172	5.112999	3.769138	3.192902	2.861008	2.640992	2.482505
173	5.112477	3.768668	3.192452	2.860567	2.640555	2.482069
174	5.111962	3.768203	3.192007	2.860130	2.640123	2.481639
175	5.111452	3.767743	3.191567	2.859699	2.639696	2.481213
176	5.110948	3.767288	3.191132	2.859273	2.639274	2.480792
177	5.110450	3.766839	3.190702	2.858852	2.638857	2.480376
178	5.109958	3.766395	3.190277	2.858436	2.638444	2.479964
179	5.109471	3.765956	3.189857	2.858024	2.638036	2.479558
180	5.108990	3.765522	3.189441	2.857617	2.637633	2.479156
181	5.108514	3.765093	3.189031	2.857215	2.637234	2.478758
182	5.108043	3.764668	3.188624	2.856817	2.636840	2.478365
183	5.107578	3.764249	3.188223	2.856423	2.636450	2.477976
184	5.107117	3.763834	3.187825	2.856034	2.636064	2.477592
185	5.106662	3.763423	3.187433	2.855649	2.635683	2.477212
186	5.106212	3.763017	3.187044	2.855268	2.635306	2.476835
187	5.105766	3.762615	3.186659	2.854892	2.634933	2.476463
188	5.105325	3.762218	3.186279	2.854519	2.634563	2.476095
189	5.104889	3.761825	3.185903	2.854151	2.634198	2.475731
190	5.104458	3.761436	3.185531	2.853786	2.633837	2.475371
191	5.104031	3.761051	3.185162	2.853425	2.633480	2.475015
192	5.103609	3.760670	3.184798	2.853068	2.633126	2.474662
193	5.103191	3.760293	3.184438	2.852715	2.632776	2.474313
194	5.102778	3.759921	3.184081	2.852366	2.632430	2.473968
195	5.102369	3.759552	3.183728	2.852020	2.632087	2.473626
196	5.101964	3.759187	3.183378	2.851678	2.631748	2.473288
197	5.101563	3.758825	3.183032	2.851339	2.631412	2.472954
198	5.101166	3.758468	3.182690	2.851003	2.631080	2.472622
199	5.100774	3.758113	3.182351	2.850672	2.630751	2.472294
200	5.100385	3.757763	3.182016	2.850343	2.630426	2.471970
201	5.100000	3.757416	3.181684	2.850018	2.630103	2.471649
202	5.099619	3.757073	3.181355	2.849696	2.629784	2.471331
203	5.099242	3.756733	3.181030	2.849377	2.629469	2.471016
204	5.098869	3.756396	3.180708	2.849062	2.629156	2.470704
205	5.098499	3.756063	3.180389	2.848749	2.628846	2.470395
206	5.098133	3.755733	3.180073	2.848440	2.628540	2.470090
207	5.097770	3.755406	3.179760	2.848133	2.628236	2.469787
208	5.097411	3.755082	3.179451	2.847830	2.627936	2.469487
209	5.097056	3.754762	3.179144	2.847530	2.627638	2.469191
210	5.096704	3.754444	3.178840	2.847232	2.627343	2.468897
211	5.096355	3.754130	3.178539	2.846937	2.627051	2.468606
212	5.096010	3.753818	3.178241	2.846646	2.626762	2.468317
213	5.095667	3.753510	3.177946	2.846356	2.626476	2.468032
214	5.095329	3.753205	3.177654	2.846070	2.626192	2.467749
215	5.094993	3.752902	3.177364	2.845786	2.625911	2.467469
216	5.094660	3.752602	3.177077	2.845505	2.625633	2.467191
217	5.094331	3.752305	3.176793	2.845227	2.625357	2.466916
218	5.094004	3.752011	3.176512	2.844951	2.625083	2.466644
219	5.093681	3.751719	3.176233	2.844678	2.624813	2.466374
220	5.093361	3.751430	3.175956	2.844407	2.624544	2.466106
221	5.093043	3.751144	3.175682	2.844139	2.624279	2.465841
222	5.092728	3.750861	3.175411	2.843873	2.624015	2.465579
223	5.092417	3.750580	3.175142	2.843610	2.623754	2.465318
224	5.092108	3.750301	3.174876	2.843349	2.623496	2.465061
225	5.091801	3.750025	3.174612	2.843090	2.623239	2.464805
226	5.091498	3.749752	3.174350	2.842834	2.622985	2.464552
227	5.091197	3.749481	3.174091	2.842580	2.622734	2.464301
228	5.090899	3.749212	3.173834	2.842328	2.622484	2.464052
229	5.090604	3.748946	3.173579	2.842078	2.622237	2.463805
230	5.090311	3.748682	3.173326	2.841831	2.621992	2.463561
231	5.090020	3.748420	3.173076	2.841586	2.621749	2.463319
232	5.089733	3.748161	3.172828	2.841343	2.621508	2.463079
233	5.089447	3.747904	3.172582	2.841102	2.621269	2.462841
234	5.089165	3.747649	3.172338	2.840863	2.621033	2.462605
235	5.088884	3.747396	3.172096	2.840626	2.620798	2.462371
236	5.088606	3.747145	3.171856	2.840391	2.620565	2.462139
237	5.088331	3.746897	3.171619	2.840158	2.620335	2.461909
238	5.088057	3.746651	3.171383	2.839927	2.620106	2.461681
239	5.087786	3.746406	3.171149	2.839699	2.619879	2.461455
240	5.087518	3.746164	3.170918	2.839472	2.619654	2.461230

F $\alpha = 0.025$

df1	1	2	3	4	5	6
df2						
241	5.087251	3.745924	3.170688	2.839247	2.619431	2.461008
242	5.086987	3.745686	3.170460	2.839023	2.619210	2.460788
243	5.086725	3.745450	3.170234	2.838802	2.618991	2.460569
244	5.086465	3.745216	3.170010	2.838583	2.618773	2.460352
245	5.086207	3.744983	3.169788	2.838365	2.618558	2.460137
246	5.085952	3.744753	3.169567	2.838149	2.618344	2.459924
247	5.085698	3.744525	3.169349	2.837935	2.618132	2.459712
248	5.085447	3.744298	3.169132	2.837723	2.617921	2.459503
249	5.085197	3.744073	3.168917	2.837512	2.617713	2.459294
250	5.084950	3.743850	3.168704	2.837303	2.617506	2.459088

df1	7	8	9	10	11	12
df2						
1	948.216889	956.656221	963.284579	968.627444	973.025201	976.707950
2	39.355205	39.373022	39.386883	39.397975	39.407051	39.414615
3	14.624395	14.539887	14.473081	14.418942	14.374180	14.336552
4	9.074141	8.979580	8.904682	8.843881	8.793535	8.751159
5	6.853076	6.757172	6.681054	6.619154	6.567819	6.524549
6	5.695470	5.599623	5.523407	5.461324	5.409761	5.366244
7	4.994909	4.899341	4.823217	4.761116	4.709470	4.665830
8	4.528562	4.433260	4.357233	4.295127	4.243413	4.199667
9	4.197047	4.101956	4.025994	3.963865	3.912074	3.868220
10	3.949824	3.854891	3.778963	3.716792	3.664914	3.620945
11	3.758638	3.663819	3.587899	3.525672	3.473699	3.429613
12	3.606515	3.511777	3.435846	3.373553	3.321481	3.277277
13	3.482669	3.387987	3.312032	3.249668	3.197496	3.153175
14	3.379933	3.285288	3.209300	3.146861	3.094590	3.050155
15	3.293360	3.198738	3.122712	3.060197	3.007828	2.963282
16	3.219431	3.124822	3.048753	2.986163	2.933699	2.889048
17	3.155577	3.060973	2.984859	2.922195	2.869639	2.824886
18	3.099877	3.005271	2.929112	2.866376	2.813732	2.768881
19	3.050868	2.956257	2.880052	2.817245	2.764517	2.719574
20	3.007416	2.912797	2.836546	2.773671	2.720862	2.675831
21	2.968630	2.873999	2.797704	2.734764	2.681877	2.636762
22	2.933799	2.839155	2.762815	2.699813	2.646852	2.601657
23	2.902347	2.807689	2.731307	2.668244	2.615213	2.569941
24	2.873808	2.779135	2.702711	2.639590	2.586492	2.541148
25	2.847795	2.753106	2.676642	2.613466	2.560304	2.514890
26	2.823988	2.729283	2.652780	2.589551	2.536328	2.490848
27	2.802118	2.707396	2.630856	2.567576	2.514294	2.468752
28	2.781959	2.687220	2.610643	2.547315	2.493978	2.448375
29	2.763317	2.668562	2.591950	2.528575	2.475184	2.429524
30	2.746027	2.651256	2.574610	2.511191	2.457749	2.412034
31	2.729948	2.635162	2.558483	2.495021	2.441530	2.395763
32	2.714958	2.620155	2.543445	2.479942	2.426404	2.380587
33	2.700949	2.606130	2.529390	2.465848	2.412265	2.366399
34	2.687827	2.592994	2.516224	2.452645	2.399019	2.353107
35	2.675513	2.580664	2.503867	2.440250	2.386583	2.340627
36	2.663932	2.569069	2.492245	2.428593	2.374886	2.328888
37	2.653022	2.558145	2.481294	2.417610	2.363864	2.317825
38	2.642727	2.547836	2.470959	2.407242	2.353460	2.307382
39	2.632994	2.538090	2.461189	2.397441	2.343624	2.297507
40	2.623781	2.528863	2.451939	2.388161	2.334310	2.288157
41	2.615046	2.520115	2.443168	2.379361	2.325477	2.279290
42	2.606753	2.511810	2.434841	2.371006	2.317090	2.270869
43	2.598869	2.503914	2.426924	2.363062	2.309116	2.262862
44	2.591365	2.496398	2.419387	2.355499	2.301524	2.255238
45	2.584214	2.489235	2.412205	2.348292	2.294288	2.247972
46	2.577391	2.482402	2.405352	2.341415	2.287383	2.241038
47	2.570875	2.475875	2.398806	2.334846	2.280788	2.234415
48	2.564646	2.469635	2.392548	2.328565	2.274481	2.228081
49	2.558684	2.463663	2.386559	2.322553	2.268445	2.222018
50	2.552974	2.457942	2.380821	2.316794	2.262662	2.216209
51	2.547499	2.452457	2.375319	2.311272	2.257117	2.210639
52	2.542245	2.447193	2.370040	2.305972	2.251795	2.205293
53	2.537199	2.442138	2.364969	2.300882	2.246683	2.200157
54	2.532349	2.437279	2.360095	2.295989	2.241769	2.195221
55	2.527683	2.432605	2.355406	2.291282	2.237041	2.190471
56	2.523193	2.428105	2.350893	2.286751	2.232490	2.185899
57	2.518867	2.423771	2.346544	2.282386	2.228105	2.181493
58	2.514697	2.419593	2.342353	2.278177	2.223878	2.177246
59	2.510674	2.415562	2.338309	2.274117	2.219799	2.173148
60	2.506792	2.411672	2.334406	2.270198	2.215863	2.169192
61	2.503042	2.407914	2.330636	2.266413	2.212060	2.165371
62	2.499418	2.404283	2.326993	2.262755	2.208385	2.161678
63	2.495914	2.400772	2.323470	2.259217	2.204831	2.158107
64	2.492524	2.397375	2.320061	2.255795	2.201393	2.154651
65	2.489243	2.394087	2.316762	2.252481	2.198064	2.151305
66	2.486065	2.390902	2.313566	2.249272	2.194839	2.148065

F $\alpha = 0.025$

df2	df1	7	8	9	10	11	12
67	2.482985	2.387815	2.310469	2.246162	2.191715	2.144925	2.141880
68	2.480000	2.384824	2.307467	2.243147	2.188685	2.138926	2.136060
69	2.477104	2.381922	2.304555	2.240222	2.185747	2.133277	2.130573
70	2.474294	2.379106	2.301729	2.237384	2.182895	2.127947	2.125393
71	2.471566	2.376372	2.298986	2.234629	2.180126	2.122910	2.120494
72	2.468917	2.373716	2.296321	2.231953	2.177437	2.118143	2.115854
73	2.466343	2.371137	2.293732	2.229352	2.174824	2.113624	2.111452
74	2.463841	2.368629	2.291215	2.226825	2.172283	2.109335	2.107271
75	2.461408	2.366190	2.288768	2.224366	2.169813	2.105258	2.103295
76	2.459041	2.363818	2.286387	2.221975	2.167410	2.101379	2.099508
77	2.456738	2.361509	2.284070	2.219648	2.165071	2.097682	2.095899
78	2.454496	2.359262	2.281814	2.217382	2.162794	2.094156	2.092453
79	2.452312	2.357073	2.279618	2.215175	2.160576	2.090789	2.089162
80	2.450185	2.354941	2.277478	2.213026	2.158416	2.087570	2.086014
81	2.448112	2.352863	2.275392	2.210931	2.156310	2.084490	2.083000
82	2.446091	2.350838	2.273359	2.208888	2.154257	2.081541	2.080112
83	2.444120	2.348862	2.271376	2.206897	2.152255	2.078713	2.077342
84	2.442198	2.346935	2.269442	2.204954	2.150302	2.075999	2.074684
85	2.440323	2.345055	2.267555	2.203058	2.148397	2.073394	2.072129
86	2.438492	2.343220	2.265713	2.201207	2.146537	2.070890	2.069674
87	2.436705	2.341428	2.263915	2.199400	2.144721	2.068481	2.067311
88	2.434959	2.339679	2.262158	2.197636	2.142947	2.066163	2.065036
89	2.433254	2.337969	2.260442	2.195912	2.141214	2.063930	2.062844
90	2.431588	2.336299	2.258766	2.194227	2.139521	2.061777	2.060730
91	2.429959	2.334667	2.257127	2.192581	2.137865	2.059701	2.058691
92	2.428367	2.333070	2.255525	2.190971	2.136247	2.057698	2.056722
93	2.426810	2.331510	2.253958	2.189397	2.134665	2.055763	2.054820
94	2.425288	2.329983	2.252425	2.187857	2.133117	2.053893	2.052981
95	2.423798	2.328489	2.250926	2.186350	2.131602	2.052085	2.051203
96	2.422340	2.327028	2.249458	2.184876	2.130120	2.050336	2.049483
97	2.420912	2.325597	2.248022	2.183433	2.128669	2.048761	2.048171
98	2.419515	2.324196	2.246616	2.182020	2.127248	2.047160	2.046639
99	2.418147	2.322824	2.245238	2.180636	2.125857	2.045615	2.045142
100	2.416807	2.321481	2.243889	2.179280	2.124494	2.044119	2.043682
101	2.415494	2.320164	2.242568	2.177952	2.123159	2.042693	2.042323
102	2.414207	2.318874	2.241273	2.176651	2.121851	2.041312	2.040932
103	2.412946	2.317610	2.240004	2.175376	2.120569	2.040000	2.039639
104	2.411710	2.316371	2.238759	2.174125	2.119311	2.038749	2.038488
105	2.410498	2.315155	2.237539	2.172899	2.118079	2.037551	2.037290
106	2.409309	2.313964	2.236343	2.171697	2.116870	2.036404	2.036143
107	2.408144	2.312795	2.235169	2.170518	2.115684	2.035311	2.035050
108	2.407000	2.311648	2.234018	2.169361	2.114521	2.034271	2.034010
109	2.405878	2.310523	2.232888	2.168225	2.113379	2.033184	2.032923
110	2.404776	2.309419	2.231779	2.167111	2.112259	2.032150	2.031889
111	2.403695	2.308335	2.230691	2.166018	2.111159	2.031177	2.030916
112	2.402634	2.307271	2.229623	2.164944	2.110080	2.030254	2.030000
113	2.401592	2.306226	2.228574	2.163890	2.109019	2.029381	2.029127
114	2.400569	2.305200	2.227543	2.162854	2.107978	2.028458	2.028204
115	2.399563	2.304192	2.226531	2.161837	2.106956	2.027585	2.027331
116	2.398576	2.303202	2.225537	2.160838	2.105951	2.026762	2.026508
117	2.397606	2.302229	2.224560	2.159856	2.104964	2.025989	2.025735
118	2.396652	2.301273	2.223600	2.158892	2.103994	2.025266	2.025012
119	2.395715	2.300333	2.222657	2.157943	2.103040	2.024593	2.024339
120	2.394794	2.299410	2.221730	2.157011	2.102103	2.023970	2.023716
121	2.393889	2.298502	2.220818	2.156095	2.101182	2.023397	2.023143
122	2.392998	2.297609	2.219921	2.155194	2.100275	2.022874	2.022620
123	2.392123	2.296731	2.219040	2.154308	2.099384	2.022401	2.022147
124	2.391262	2.295868	2.218173	2.153437	2.098508	2.021978	2.021724
125	2.390415	2.295018	2.217320	2.152579	2.097646	2.021605	2.021351
126	2.389581	2.294183	2.216481	2.151736	2.096798	2.021282	2.021028
127	2.388761	2.293360	2.215655	2.150906	2.095963	2.020959	2.020705
128	2.387954	2.292551	2.214842	2.150089	2.095142	2.020636	2.020382
129	2.387160	2.291755	2.214043	2.149286	2.094333	2.020313	2.020059
130	2.386379	2.290971	2.213256	2.148494	2.093538	2.020000	2.019746
131	2.385609	2.290199	2.212481	2.147716	2.092754	2.019687	2.019433
132	2.384852	2.289440	2.211718	2.146949	2.091983	2.019374	2.019120
133	2.384106	2.288692	2.210967	2.146194	2.091224	2.019061	2.018807
134	2.383371	2.287955	2.210227	2.145450	2.090476	2.018748	2.018494
135	2.382647	2.287229	2.209498	2.144718	2.089739	2.018435	2.018181
136	2.381935	2.286515	2.208780	2.143996	2.089014	2.018122	2.017868
137	2.381233	2.285810	2.208073	2.143285	2.088299	2.017809	2.017555
138	2.380541	2.285117	2.207377	2.142585	2.087595	2.017496	2.017242
139	2.379859	2.284433	2.206690	2.141895	2.086901	2.017183	2.016929
140	2.379187	2.283760	2.206014	2.141215	2.086217	2.016870	2.016616
141	2.378525	2.283096	2.205347	2.140545	2.085543	2.016557	2.016303
142	2.377873	2.282441	2.204690	2.139884	2.084878	2.016244	2.015990
143	2.377230	2.281796	2.204042	2.139233	2.084223	2.015931	2.015677
144	2.376596	2.281160	2.203403	2.138591	2.083578	2.015618	2.015364
145	2.375970	2.280533	2.202774	2.137958	2.082941	2.015305	2.015051
146	2.375354	2.279915	2.202153	2.137334	2.082313	2.015000	2.014746

F $\alpha = 0.025$

df1	7	8	9	10	11	12
147	2.374746	2.279306	2.201541	2.136719	2.081694	2.034287
148	2.374146	2.278704	2.200937	2.136112	2.081084	2.033672
149	2.373555	2.278111	2.200341	2.135513	2.080481	2.033066
150	2.372972	2.277526	2.199753	2.134922	2.079887	2.032469
151	2.372396	2.276949	2.199174	2.134339	2.079301	2.031879
152	2.371828	2.276379	2.198602	2.133765	2.078723	2.031297
153	2.371268	2.275818	2.198037	2.133197	2.078152	2.030723
154	2.370715	2.275263	2.197481	2.132637	2.077589	2.030156
155	2.370169	2.274716	2.196931	2.132085	2.077033	2.029597
156	2.369631	2.274176	2.196389	2.131540	2.076485	2.029045
157	2.369099	2.273643	2.195853	2.131001	2.075943	2.028500
158	2.368575	2.273116	2.195325	2.130470	2.075409	2.027962
159	2.368057	2.272597	2.194803	2.129946	2.074881	2.027431
160	2.367545	2.272084	2.194288	2.129428	2.074360	2.026907
161	2.367040	2.271578	2.193779	2.128916	2.073846	2.026390
162	2.366542	2.271078	2.193277	2.128411	2.073338	2.025878
163	2.366049	2.270584	2.192781	2.127913	2.072836	2.025374
164	2.365563	2.270096	2.192291	2.127420	2.072341	2.024875
165	2.365083	2.269614	2.191807	2.126934	2.071852	2.024383
166	2.364608	2.269138	2.191329	2.126453	2.071368	2.023896
167	2.364140	2.268668	2.190857	2.125979	2.070891	2.023416
168	2.363677	2.268204	2.190391	2.125510	2.070419	2.022941
169	2.363219	2.267745	2.189930	2.125047	2.069953	2.022472
170	2.362767	2.267292	2.189474	2.124589	2.069493	2.022009
171	2.362321	2.266844	2.189025	2.124136	2.069038	2.021551
172	2.361879	2.266401	2.188580	2.123689	2.068588	2.021098
173	2.361443	2.265964	2.188141	2.123248	2.068144	2.020651
174	2.361012	2.265531	2.187706	2.122811	2.067704	2.020209
175	2.360586	2.265104	2.187277	2.122380	2.067270	2.019772
176	2.360165	2.264682	2.186853	2.121953	2.066841	2.019340
177	2.359748	2.264264	2.186433	2.121531	2.066417	2.018913
178	2.359337	2.263851	2.186019	2.121114	2.065998	2.018491
179	2.358930	2.263443	2.185609	2.120702	2.065583	2.018074
180	2.358527	2.263040	2.185203	2.120295	2.065173	2.017661
181	2.358130	2.262641	2.184803	2.119892	2.064768	2.017253
182	2.357736	2.262246	2.184406	2.119493	2.064367	2.016850
183	2.357347	2.261856	2.184014	2.119099	2.063970	2.016451
184	2.356962	2.261470	2.183627	2.118710	2.063578	2.016056
185	2.356582	2.261088	2.183243	2.118324	2.063190	2.015666
186	2.356206	2.260711	2.182864	2.117943	2.062807	2.015280
187	2.355833	2.260337	2.182489	2.117566	2.062427	2.014898
188	2.355465	2.259968	2.182118	2.117193	2.062052	2.014521
189	2.355101	2.259602	2.181751	2.116824	2.061681	2.014147
190	2.354740	2.259241	2.181388	2.116458	2.061314	2.013777
191	2.354384	2.258883	2.181028	2.116097	2.060950	2.013411
192	2.354031	2.258529	2.180673	2.115740	2.060590	2.013049
193	2.353682	2.258179	2.180321	2.115386	2.060235	2.012691
194	2.353336	2.257833	2.179973	2.115036	2.059882	2.012337
195	2.352994	2.257490	2.179629	2.114690	2.059534	2.011986
196	2.352656	2.257150	2.179288	2.114347	2.059189	2.011639
197	2.352321	2.256814	2.178950	2.114008	2.058848	2.011295
198	2.351989	2.256482	2.178616	2.113672	2.058510	2.010955
199	2.351661	2.256153	2.178286	2.113339	2.058176	2.010619
200	2.351337	2.255827	2.177958	2.113010	2.057844	2.010286
201	2.351015	2.255504	2.177634	2.112685	2.057517	2.009956
202	2.350697	2.255185	2.177314	2.112362	2.057192	2.009629
203	2.350382	2.254869	2.176996	2.112043	2.056871	2.009306
204	2.350070	2.254556	2.176682	2.111727	2.056553	2.008986
205	2.349761	2.254246	2.176371	2.111414	2.056238	2.008669
206	2.349455	2.253940	2.176063	2.111104	2.055927	2.008355
207	2.349152	2.253636	2.175757	2.110797	2.055618	2.008045
208	2.348852	2.253335	2.175455	2.110493	2.055312	2.007737
209	2.348555	2.253037	2.175156	2.110192	2.055009	2.007432
210	2.348261	2.252742	2.174860	2.109894	2.054710	2.007130
211	2.347970	2.252450	2.174566	2.109599	2.054413	2.006831
212	2.347681	2.252160	2.174275	2.109307	2.054118	2.006535
213	2.347395	2.251874	2.173987	2.109017	2.053827	2.006242
214	2.347112	2.251590	2.173702	2.108731	2.053538	2.005952
215	2.346832	2.251308	2.173419	2.108446	2.053253	2.005664
216	2.346554	2.251030	2.173140	2.108165	2.052969	2.005379
217	2.346279	2.250754	2.172862	2.107886	2.052689	2.005096
218	2.346006	2.250480	2.172587	2.107610	2.052411	2.004817
219	2.345736	2.250209	2.172315	2.107336	2.052135	2.004539
220	2.345468	2.249941	2.172046	2.107065	2.051863	2.004265
221	2.345203	2.249675	2.171778	2.106796	2.051592	2.003993
222	2.344940	2.249411	2.171514	2.106530	2.051324	2.003723
223	2.344680	2.249150	2.171251	2.106266	2.051059	2.003456
224	2.344422	2.248891	2.170991	2.106005	2.050796	2.003191
225	2.344166	2.248635	2.170733	2.105745	2.050535	2.002928
226	2.343913	2.248380	2.170478	2.105489	2.050277	2.002668

F $\alpha = 0.025$

df2	7	8	9	10	11	12
227	2.343662	2.248128	2.170225	2.105234	2.050021	2.002410
228	2.343413	2.247879	2.169974	2.104982	2.049767	2.002155
229	2.343166	2.247631	2.169725	2.104732	2.049515	2.001902
230	2.342921	2.247386	2.169479	2.104484	2.049266	2.001651
231	2.342679	2.247143	2.169235	2.104238	2.049019	2.001402
232	2.342438	2.246902	2.168992	2.103995	2.048773	2.001155
233	2.342200	2.246663	2.168752	2.103753	2.048531	2.000911
234	2.341964	2.246426	2.168514	2.103514	2.048290	2.000668
235	2.341730	2.246191	2.168278	2.103277	2.048051	2.000428
236	2.341498	2.245958	2.168044	2.103042	2.047814	2.000190
237	2.341268	2.245727	2.167812	2.102808	2.047580	1.999953
238	2.341039	2.245498	2.167582	2.102577	2.047347	1.999719
239	2.340813	2.245271	2.167354	2.102348	2.047116	1.999487
240	2.340589	2.245046	2.167128	2.102120	2.046887	1.999257
241	2.340366	2.244823	2.166904	2.101895	2.046660	1.999028
242	2.340146	2.244602	2.166682	2.101671	2.046435	1.998802
243	2.339927	2.244382	2.166461	2.101450	2.046212	1.998577
244	2.339710	2.244164	2.166243	2.101230	2.045991	1.998354
245	2.339495	2.243949	2.166026	2.101012	2.045772	1.998133
246	2.339281	2.243734	2.165811	2.100795	2.045554	1.997914
247	2.339070	2.243522	2.165597	2.100581	2.045338	1.997697
248	2.338860	2.243311	2.165386	2.100368	2.045124	1.997482
249	2.338651	2.243103	2.165176	2.100157	2.044912	1.997268
250	2.338445	2.242895	2.164968	2.099948	2.044701	1.997056

df2	13	14	15	16	17	18
1	979.836778	982.527805	984.866841	986.918661	988.733073	990.349006
2	39.421017	39.426505	39.431261	39.435423	39.439096	39.442361
3	14.304480	14.276816	14.252711	14.231520	14.212744	14.195993
4	8.714996	8.683773	8.656541	8.632581	8.611335	8.592368
5	6.487580	6.455625	6.427728	6.403161	6.381360	6.361883
6	5.329020	5.296811	5.268667	5.243860	5.221830	5.202135
7	4.628460	4.596094	4.567787	4.542818	4.520627	4.500773
8	4.162170	4.129665	4.101213	4.076096	4.053759	4.033762
9	3.830596	3.797952	3.769357	3.744097	3.721617	3.701481
10	3.583191	3.550410	3.521673	3.496271	3.473652	3.453379
11	3.391728	3.358810	3.329935	3.304395	3.281639	3.261234
12	3.239263	3.206212	3.177201	3.151527	3.128640	3.108106
13	3.115036	3.081854	3.052713	3.026910	3.003896	2.983239
14	3.011894	2.978588	2.949321	2.923394	2.900258	2.879483
15	2.924904	2.891479	2.862093	2.836047	2.812796	2.791908
16	2.850558	2.817018	2.787518	2.761359	2.737998	2.717003
17	2.786289	2.752641	2.723032	2.696766	2.673300	2.652204
18	2.730183	2.696431	2.666719	2.640351	2.616786	2.595592
19	2.680778	2.646928	2.617118	2.590654	2.566993	2.545708
20	2.636943	2.603000	2.573096	2.546540	2.522790	2.501417
21	2.597787	2.563754	2.533762	2.507119	2.483283	2.461827
22	2.562599	2.528482	2.498405	2.471679	2.447762	2.426226
23	2.530804	2.496607	2.466451	2.439645	2.415651	2.394039
24	2.501935	2.467662	2.437429	2.410548	2.386480	2.364797
25	2.475606	2.441259	2.410954	2.384002	2.359863	2.338111
26	2.451495	2.417079	2.386705	2.359684	2.335479	2.313661
27	2.429334	2.394852	2.364412	2.337326	2.313056	2.291176
28	2.408895	2.374350	2.343847	2.316698	2.292368	2.270428
29	2.389984	2.355379	2.324816	2.297608	2.273219	2.251222
30	2.372437	2.337775	2.307154	2.279889	2.255444	2.233392
31	2.356111	2.321394	2.290718	2.263399	2.238900	2.216796
32	2.340884	2.306113	2.275385	2.248013	2.223463	2.201309
33	2.326646	2.291825	2.261046	2.233625	2.209025	2.186823
34	2.313306	2.278436	2.247609	2.220140	2.195493	2.173244
35	2.300780	2.265864	2.234990	2.207475	2.182783	2.160489
36	2.288997	2.254037	2.223118	2.195558	2.170823	2.148486
37	2.277892	2.242889	2.211927	2.184325	2.159547	2.137170
38	2.267408	2.232364	2.201361	2.173717	2.148899	2.126482
39	2.257495	2.222411	2.191368	2.163685	2.138828	2.116373
40	2.248107	2.212984	2.181903	2.154183	2.129288	2.106796
41	2.239203	2.204044	2.172926	2.145169	2.120238	2.097710
42	2.230747	2.195552	2.164399	2.136606	2.111641	2.089079
43	2.222706	2.187477	2.156290	2.128463	2.103464	2.080869
44	2.215051	2.179789	2.148568	2.120708	2.095676	2.073049
45	2.207753	2.172459	2.141206	2.113314	2.088251	2.065593
46	2.200789	2.165464	2.134180	2.106258	2.081164	2.058476
47	2.194136	2.158781	2.127467	2.099515	2.074392	2.051675
48	2.187773	2.152390	2.121047	2.093066	2.067915	2.045170
49	2.181683	2.146272	2.114901	2.086892	2.061713	2.038941
50	2.175848	2.140409	2.109012	2.080976	2.055770	2.032971
51	2.170252	2.134787	2.103363	2.075301	2.050069	2.027245
52	2.164881	2.129391	2.097941	2.069853	2.044597	2.021748

F $\alpha = 0.025$

	df1	13	14	15	16	17	18
df2							
53	2.159721	2.124207	2.092732	2.064620	2.039339	2.016465	
54	2.154761	2.119222	2.087724	2.059588	2.034283	2.011386	
55	2.149989	2.114427	2.082905	2.054746	2.029418	2.006499	
56	2.145394	2.109810	2.078265	2.050083	2.024733	2.001792	
57	2.140967	2.105361	2.073794	2.045591	2.020218	1.997256	
58	2.136699	2.101071	2.069484	2.041258	2.015865	1.992881	
59	2.132581	2.096933	2.065324	2.037078	2.011664	1.988660	
60	2.128605	2.092937	2.061308	2.033042	2.007608	1.984585	
61	2.124765	2.089077	2.057429	2.029143	2.003690	1.980647	
62	2.121053	2.085347	2.053679	2.025374	1.999902	1.976840	
63	2.117464	2.081739	2.050052	2.021729	1.996238	1.973158	
64	2.113990	2.078247	2.046543	2.018201	1.992692	1.969595	
65	2.110628	2.074867	2.043145	2.014785	1.989259	1.966144	
66	2.107370	2.071592	2.039853	2.011476	1.985933	1.962801	
67	2.104214	2.068419	2.036663	2.008269	1.982709	1.959561	
68	2.101153	2.065342	2.033569	2.005159	1.979583	1.956418	
69	2.098184	2.062357	2.030568	2.002142	1.976550	1.953370	
70	2.095302	2.059460	2.027655	1.999214	1.973606	1.950410	
71	2.092504	2.056647	2.024827	1.996371	1.970748	1.947537	
72	2.089787	2.053914	2.022080	1.993608	1.967971	1.944745	
73	2.087146	2.051259	2.019410	1.990924	1.965272	1.942032	
74	2.084578	2.048678	2.016814	1.988314	1.962648	1.939394	
75	2.082082	2.046167	2.014290	1.985776	1.960096	1.936828	
76	2.079652	2.043724	2.011834	1.983306	1.957612	1.934332	
77	2.077288	2.041347	2.009443	1.980902	1.955195	1.931901	
78	2.074986	2.039032	2.007116	1.978562	1.952842	1.929535	
79	2.072745	2.036778	2.004848	1.976282	1.950549	1.927230	
80	2.070560	2.034581	2.002639	1.974060	1.948315	1.924984	
81	2.068432	2.032441	2.000486	1.971895	1.946138	1.922795	
82	2.066356	2.030353	1.998387	1.969784	1.944015	1.920660	
83	2.064332	2.028318	1.996340	1.967725	1.941945	1.918578	
84	2.062357	2.026332	1.994343	1.965716	1.939924	1.916547	
85	2.060431	2.024394	1.992394	1.963756	1.937953	1.914564	
86	2.058550	2.022502	1.990491	1.961842	1.936028	1.912629	
87	2.056713	2.020655	1.988633	1.959974	1.934149	1.910738	
88	2.054919	2.018851	1.986818	1.958148	1.932313	1.908892	
89	2.053167	2.017088	1.985045	1.956365	1.930520	1.907088	
90	2.051454	2.015365	1.983313	1.954622	1.928767	1.905326	
91	2.049780	2.013682	1.981619	1.952919	1.927053	1.903602	
92	2.048144	2.012035	1.979963	1.951253	1.925378	1.901917	
93	2.046543	2.010425	1.978343	1.949624	1.923739	1.900269	
94	2.044977	2.008850	1.976759	1.948030	1.922136	1.898656	
95	2.043445	2.007309	1.975208	1.946470	1.920567	1.897078	
96	2.041946	2.005801	1.973691	1.944944	1.919032	1.895534	
97	2.040478	2.004324	1.972206	1.943450	1.917528	1.894022	
98	2.039041	2.002879	1.970751	1.941986	1.916057	1.892542	
99	2.037634	2.001463	1.969327	1.940553	1.914615	1.891092	
100	2.036255	2.000076	1.967932	1.939150	1.913203	1.889671	
101	2.034904	1.998717	1.966564	1.937774	1.911819	1.888279	
102	2.033580	1.997385	1.965225	1.936426	1.910463	1.886915	
103	2.032283	1.996080	1.963911	1.935105	1.909134	1.885578	
104	2.031011	1.994800	1.962624	1.933810	1.907831	1.884267	
105	2.029764	1.993545	1.961361	1.932540	1.906553	1.882982	
106	2.028541	1.992315	1.960123	1.931294	1.905299	1.881721	
107	2.027341	1.991107	1.958908	1.930072	1.904070	1.880484	
108	2.026164	1.989923	1.957717	1.928873	1.902863	1.879270	
109	2.025009	1.988761	1.956547	1.927696	1.901680	1.878079	
110	2.023875	1.987620	1.955400	1.926541	1.900518	1.876910	
111	2.022762	1.986500	1.954273	1.925407	1.899377	1.875762	
112	2.021669	1.985401	1.953167	1.924294	1.898257	1.874636	
113	2.020596	1.984322	1.952080	1.923201	1.897157	1.873529	
114	2.019543	1.983261	1.951013	1.922128	1.896077	1.872442	
115	2.018508	1.982220	1.949965	1.921073	1.895016	1.871375	
116	2.017491	1.981197	1.948936	1.920037	1.893973	1.870326	
117	2.016492	1.980191	1.947924	1.919019	1.892949	1.869295	
118	2.015510	1.979203	1.946930	1.918018	1.891942	1.868282	
119	2.014545	1.978232	1.945953	1.917035	1.890953	1.867286	
120	2.013596	1.977277	1.944992	1.916068	1.889980	1.866307	
121	2.012663	1.976339	1.944047	1.915118	1.889023	1.865345	
122	2.011746	1.975416	1.943119	1.914183	1.888083	1.864398	
123	2.010844	1.974508	1.942205	1.913264	1.887158	1.863468	
124	2.009957	1.973615	1.941307	1.912360	1.886248	1.862552	
125	2.009084	1.972737	1.940423	1.911470	1.885353	1.861651	
126	2.008226	1.971873	1.939553	1.910595	1.884472	1.860765	
127	2.007381	1.971023	1.938697	1.909734	1.883605	1.859893	
128	2.006550	1.970186	1.937855	1.908886	1.882752	1.859035	
129	2.005731	1.969363	1.937026	1.908052	1.881913	1.858190	
130	2.004926	1.968552	1.936211	1.907231	1.881086	1.857358	
131	2.004133	1.967754	1.935407	1.906422	1.880273	1.856539	
132	2.003352	1.966968	1.934616	1.905626	1.879472	1.855733	

F $\alpha = 0.025$

df2	df1	13	14	15	16	17	18
133	2.002583	1.966194	1.933838	1.904843	1.878683	1.854939	
134	2.001826	1.965432	1.933071	1.904071	1.877906	1.854157	
135	2.001080	1.964681	1.932315	1.903310	1.877140	1.853387	
136	2.000345	1.963942	1.931571	1.902561	1.876387	1.852629	
137	1.999622	1.963214	1.930838	1.901823	1.875644	1.851881	
138	1.998908	1.962496	1.930115	1.901096	1.874912	1.851145	
139	1.998206	1.961789	1.929403	1.900379	1.874191	1.850419	
140	1.997513	1.961092	1.928702	1.899673	1.873480	1.849703	
141	1.996831	1.960405	1.928010	1.898977	1.872780	1.848998	
142	1.996158	1.959728	1.927329	1.898291	1.872089	1.848304	
143	1.995495	1.959060	1.926657	1.897615	1.871408	1.847618	
144	1.994841	1.958402	1.925994	1.896948	1.870737	1.846943	
145	1.994196	1.957753	1.925341	1.896291	1.870075	1.846277	
146	1.993561	1.957113	1.924697	1.895642	1.869423	1.845620	
147	1.992934	1.956482	1.924062	1.895003	1.868779	1.844972	
148	1.992315	1.955860	1.923435	1.894372	1.868144	1.844333	
149	1.991705	1.955246	1.922817	1.893750	1.867518	1.843703	
150	1.991104	1.954640	1.922208	1.893137	1.866901	1.843081	
151	1.990510	1.954043	1.921606	1.892531	1.866291	1.842468	
152	1.989924	1.953453	1.921013	1.891934	1.865690	1.841863	
153	1.989346	1.952871	1.920427	1.891344	1.865096	1.841265	
154	1.988776	1.952297	1.919849	1.890762	1.864511	1.840676	
155	1.988213	1.951731	1.919279	1.890188	1.863933	1.840094	
156	1.987658	1.951171	1.918716	1.889622	1.863362	1.839520	
157	1.987109	1.950619	1.918160	1.889062	1.862799	1.838953	
158	1.986568	1.950075	1.917612	1.888510	1.862243	1.838394	
159	1.986034	1.949537	1.917070	1.887965	1.861695	1.837841	
160	1.985506	1.949005	1.916536	1.887427	1.861153	1.837296	
161	1.984985	1.948481	1.916008	1.886895	1.860618	1.836757	
162	1.984471	1.947963	1.915486	1.886370	1.860089	1.836225	
163	1.983963	1.947452	1.914971	1.885852	1.859567	1.835700	
164	1.983461	1.946946	1.914463	1.885340	1.859052	1.835181	
165	1.982965	1.946448	1.913961	1.884834	1.858543	1.834669	
166	1.982476	1.945955	1.913464	1.884335	1.858040	1.834162	
167	1.981992	1.945468	1.912974	1.883841	1.857543	1.833662	
168	1.981514	1.944987	1.912490	1.883354	1.857052	1.833168	
169	1.981042	1.944512	1.912011	1.882872	1.856568	1.832680	
170	1.980576	1.944042	1.911539	1.882396	1.856088	1.832198	
171	1.980115	1.943578	1.911072	1.881926	1.855615	1.831721	
172	1.979659	1.943119	1.910610	1.881461	1.855147	1.831250	
173	1.979209	1.942666	1.910154	1.881001	1.854684	1.830784	
174	1.978764	1.942218	1.909703	1.880547	1.854227	1.830324	
175	1.978324	1.941775	1.909257	1.880099	1.853775	1.829869	
176	1.977889	1.941338	1.908816	1.879655	1.853329	1.829420	
177	1.977460	1.940905	1.908381	1.879216	1.852887	1.828975	
178	1.977035	1.940477	1.907950	1.878783	1.852451	1.828536	
179	1.976615	1.940054	1.907524	1.878354	1.852019	1.828101	
180	1.976199	1.939636	1.907103	1.877930	1.851592	1.827672	
181	1.975789	1.939223	1.906687	1.877511	1.851170	1.827247	
182	1.975383	1.938814	1.906275	1.877096	1.850753	1.826827	
183	1.974981	1.938410	1.905868	1.876687	1.850340	1.826411	
184	1.974584	1.938010	1.905465	1.876281	1.849932	1.826000	
185	1.974191	1.937614	1.905067	1.875880	1.849528	1.825594	
186	1.973802	1.937223	1.904673	1.875484	1.849129	1.825192	
187	1.973418	1.936836	1.904283	1.875091	1.848734	1.824794	
188	1.973038	1.936453	1.903898	1.874703	1.848343	1.824400	
189	1.972661	1.936074	1.903517	1.874319	1.847957	1.824011	
190	1.972289	1.935700	1.903139	1.873939	1.847574	1.823626	
191	1.971921	1.935329	1.902766	1.873563	1.847196	1.823245	
192	1.971557	1.934962	1.902397	1.873191	1.846821	1.822868	
193	1.971196	1.934599	1.902031	1.872823	1.846451	1.822495	
194	1.970839	1.934240	1.901669	1.872459	1.846084	1.822126	
195	1.970486	1.933884	1.901311	1.872099	1.845721	1.821760	
196	1.970137	1.933532	1.900957	1.871742	1.845362	1.821399	
197	1.969791	1.933184	1.900606	1.871389	1.845006	1.821041	
198	1.969449	1.932839	1.900259	1.871039	1.844654	1.820686	
199	1.969110	1.932498	1.899916	1.870693	1.844306	1.820336	
200	1.968774	1.932161	1.899576	1.870351	1.843961	1.819989	
201	1.968442	1.931826	1.899239	1.870012	1.843620	1.819645	
202	1.968114	1.931495	1.898906	1.869676	1.843282	1.819305	
203	1.967788	1.931168	1.898576	1.869344	1.842947	1.818968	
204	1.967466	1.930843	1.898249	1.869015	1.842616	1.818634	
205	1.967147	1.930522	1.897926	1.868689	1.842288	1.818304	
206	1.966831	1.930204	1.897605	1.868367	1.841963	1.817977	
207	1.966518	1.929889	1.897288	1.868047	1.841642	1.817653	
208	1.966208	1.929577	1.896974	1.867731	1.841323	1.817332	
209	1.965901	1.929268	1.896663	1.867418	1.841008	1.817015	
210	1.965598	1.928962	1.896355	1.867108	1.840695	1.816700	
211	1.965297	1.928659	1.896050	1.866800	1.840386	1.816389	
212	1.964999	1.928359	1.895748	1.866496	1.840079	1.816080	

F $\alpha = 0.025$

df2	df1	13	14	15	16	17	18
213	1.964703	1.928061	1.895448	1.866195	1.839776	1.815774	
214	1.964411	1.927767	1.895152	1.865896	1.839475	1.815472	
215	1.964121	1.927475	1.894858	1.865600	1.839177	1.815172	
216	1.963834	1.927186	1.894567	1.865307	1.838882	1.814874	
217	1.963550	1.926900	1.894279	1.865017	1.838590	1.814580	
218	1.963268	1.926616	1.893993	1.864729	1.838300	1.814288	
219	1.962989	1.926335	1.893710	1.864444	1.838013	1.813999	
220	1.962713	1.926057	1.893429	1.864162	1.837729	1.813713	
221	1.962439	1.925781	1.893152	1.863882	1.837447	1.813429	
222	1.962167	1.925507	1.892876	1.863605	1.837168	1.813148	
223	1.961898	1.925237	1.892603	1.863330	1.836891	1.812870	
224	1.961631	1.924968	1.892333	1.863057	1.836617	1.812593	
225	1.961367	1.924702	1.892065	1.862788	1.836345	1.812320	
226	1.961105	1.924438	1.891799	1.862520	1.836076	1.812049	
227	1.960846	1.924177	1.891536	1.862255	1.835809	1.811780	
228	1.960588	1.923918	1.891275	1.861992	1.835544	1.811513	
229	1.960333	1.923661	1.891017	1.861732	1.835282	1.811249	
230	1.960081	1.923407	1.890761	1.861474	1.835022	1.810988	
231	1.959830	1.923154	1.890506	1.861218	1.834764	1.810728	
232	1.959582	1.922904	1.890255	1.860964	1.834509	1.810471	
233	1.959336	1.922656	1.890005	1.860713	1.834256	1.810216	
234	1.959091	1.922410	1.889757	1.860464	1.834005	1.809963	
235	1.958850	1.922167	1.889512	1.860216	1.833756	1.809712	
236	1.958610	1.921925	1.889269	1.859971	1.833509	1.809464	
237	1.958372	1.921686	1.889027	1.859728	1.833264	1.809218	
238	1.958136	1.921448	1.888788	1.859488	1.833022	1.808973	
239	1.957902	1.921213	1.888551	1.859249	1.832781	1.808731	
240	1.957670	1.920979	1.888316	1.859012	1.832543	1.808491	
241	1.957440	1.920747	1.888083	1.858777	1.832306	1.808253	
242	1.957212	1.920518	1.887851	1.858544	1.832072	1.808016	
243	1.956986	1.920290	1.887622	1.858313	1.831839	1.807782	
244	1.956762	1.920064	1.887395	1.858084	1.831608	1.807550	
245	1.956539	1.919840	1.887169	1.857857	1.831379	1.807319	
246	1.956319	1.919618	1.886945	1.857631	1.831153	1.807091	
247	1.956100	1.919398	1.886723	1.857408	1.830927	1.806864	
248	1.955883	1.919179	1.886503	1.857186	1.830704	1.806639	
249	1.955668	1.918962	1.886285	1.856966	1.830483	1.806416	
250	1.955454	1.918747	1.886068	1.856748	1.830263	1.806195	

df2	df1	19	20
1	991.797323	993.102805	
2	39.445282	39.447911	
3	14.180955	14.167381	
4	8.575331	8.559943	
5	6.344376	6.328555	
6	5.184420	5.168401	
7	4.482906	4.466740	
8	4.015754	3.999453	
9	3.683338	3.666906	
10	3.435104	3.418544	
11	3.242830	3.226145	
12	3.089577	3.072773	
13	2.964591	2.947671	
14	2.860722	2.843691	
15	2.773037	2.755902	
16	2.698029	2.680793	
17	2.633130	2.615799	
18	2.576425	2.559003	
19	2.526451	2.508943	
20	2.482075	2.464484	
21	2.442404	2.424735	
22	2.406726	2.388983	
23	2.374466	2.356652	
24	2.345154	2.327271	
25	2.318402	2.300455	
26	2.293888	2.275879	
27	2.271342	2.253274	
28	2.250535	2.232411	
29	2.231274	2.213095	
30	2.213391	2.195160	
31	2.196743	2.178463	
32	2.181207	2.162879	
33	2.166674	2.148300	
34	2.153050	2.134632	
35	2.140252	2.121792	
36	2.128207	2.109706	
37	2.116850	2.098309	
38	2.106124	2.087545	

F $\alpha = 0.025$

df1	19	20
39	2.095977	2.077362
40	2.086364	2.067714
41	2.077244	2.058560
42	2.068579	2.049862
43	2.060336	2.041587
44	2.052485	2.033706
45	2.044999	2.026190
46	2.037852	2.019014
47	2.031023	2.012157
48	2.024490	2.005597
49	2.018234	1.999315
50	2.012239	1.993294
51	2.006487	1.987519
52	2.000966	1.981973
53	1.995660	1.976644
54	1.990558	1.971519
55	1.985648	1.966587
56	1.980919	1.961837
57	1.976362	1.957260
58	1.971967	1.952845
59	1.967726	1.948584
60	1.963631	1.944470
61	1.959674	1.940495
62	1.955849	1.936651
63	1.952149	1.932933
64	1.948568	1.929335
65	1.945100	1.925851
66	1.941741	1.922475
67	1.938484	1.919202
68	1.935326	1.916028
69	1.932262	1.912949
70	1.929287	1.909959
71	1.926399	1.907057
72	1.923593	1.904236
73	1.920866	1.901495
74	1.918214	1.898830
75	1.915634	1.896237
76	1.913125	1.893714
77	1.910682	1.891258
78	1.908303	1.888867
79	1.905985	1.886537
80	1.903727	1.884267
81	1.901526	1.882054
82	1.899380	1.879897
83	1.897286	1.877792
84	1.895243	1.875738
85	1.893250	1.873734
86	1.891304	1.871777
87	1.889403	1.869866
88	1.887547	1.868000
89	1.885733	1.866176
90	1.883960	1.864393
91	1.882227	1.862651
92	1.880532	1.860946
93	1.878875	1.859280
94	1.877253	1.857649
95	1.875666	1.856053
96	1.874113	1.854491
97	1.872592	1.852962
98	1.871103	1.851464
99	1.869645	1.849998
100	1.868216	1.848561
101	1.866816	1.847153
102	1.865444	1.845773
103	1.864099	1.844420
104	1.862780	1.843094
105	1.861487	1.841793
106	1.860219	1.840517
107	1.858974	1.839266
108	1.857754	1.838038
109	1.856555	1.836833
110	1.855379	1.835650
111	1.854225	1.834489
112	1.853091	1.833348
113	1.851978	1.832228
114	1.850885	1.831129
115	1.849811	1.830048
116	1.848756	1.828987
117	1.847719	1.827943
118	1.846699	1.826918

F $\alpha = 0.025$

df1	19	20
119	1.845698	1.825910
120	1.844713	1.824920
121	1.843744	1.823945
122	1.842792	1.822987
123	1.841856	1.822045
124	1.840934	1.821118
125	1.840028	1.820207
126	1.839136	1.819309
127	1.838259	1.818427
128	1.837395	1.817558
129	1.836545	1.816702
130	1.835708	1.815860
131	1.834884	1.815031
132	1.834073	1.814215
133	1.833274	1.813411
134	1.832487	1.812620
135	1.831712	1.811840
136	1.830949	1.811072
137	1.830197	1.810315
138	1.829456	1.809569
139	1.828725	1.808834
140	1.828005	1.808110
141	1.827296	1.807396
142	1.826597	1.806692
143	1.825907	1.805998
144	1.825227	1.805314
145	1.824557	1.804640
146	1.823896	1.803975
147	1.823244	1.803318
148	1.822601	1.802671
149	1.821967	1.802033
150	1.821341	1.801403
151	1.820723	1.800782
152	1.820114	1.800169
153	1.819513	1.799564
154	1.818920	1.798967
155	1.818334	1.798378
156	1.817757	1.797796
157	1.817186	1.797222
158	1.816623	1.796655
159	1.816067	1.796096
160	1.815518	1.795543
161	1.814976	1.794998
162	1.814440	1.794459
163	1.813912	1.793927
164	1.813389	1.793401
165	1.812874	1.792882
166	1.812364	1.792369
167	1.811861	1.791862
168	1.811363	1.791362
169	1.810872	1.790867
170	1.810386	1.790379
171	1.809907	1.789896
172	1.809432	1.789418
173	1.808964	1.788947
174	1.808501	1.788480
175	1.808043	1.788020
176	1.807590	1.787564
177	1.807143	1.787114
178	1.806700	1.786668
179	1.806263	1.786228
180	1.805830	1.785793
181	1.805403	1.785362
182	1.804980	1.784936
183	1.804561	1.784515
184	1.804148	1.784099
185	1.803738	1.783687
186	1.803334	1.783280
187	1.802933	1.782877
188	1.802537	1.782478
189	1.802145	1.782083
190	1.801758	1.781693
191	1.801374	1.781307
192	1.800994	1.780925
193	1.800619	1.780547
194	1.800247	1.780173
195	1.799879	1.779802
196	1.799515	1.779436
197	1.799155	1.779073
198	1.798798	1.778714

F $\alpha = 0.025$

df2	df1	19	20
199	1.798445	1.778359	
200	1.798096	1.778007	
201	1.797750	1.777658	
202	1.797407	1.777314	
203	1.797068	1.776972	
204	1.796732	1.776634	
205	1.796400	1.776299	
206	1.796070	1.775968	
207	1.795744	1.775640	
208	1.795421	1.775315	
209	1.795102	1.774993	
210	1.794785	1.774674	
211	1.794471	1.774358	
212	1.794160	1.774045	
213	1.793853	1.773735	
214	1.793548	1.773428	
215	1.793246	1.773124	
216	1.792947	1.772823	
217	1.792650	1.772525	
218	1.792357	1.772229	
219	1.792066	1.771936	
220	1.791777	1.771646	
221	1.791492	1.771358	
222	1.791209	1.771073	
223	1.790928	1.770791	
224	1.790650	1.770511	
225	1.790374	1.770234	
226	1.790101	1.769959	
227	1.789831	1.769686	
228	1.789562	1.769416	
229	1.789297	1.769148	
230	1.789033	1.768883	
231	1.788772	1.768620	
232	1.788513	1.768359	
233	1.788256	1.768101	
234	1.788001	1.767844	
235	1.787749	1.767590	
236	1.787499	1.767338	
237	1.787251	1.767089	
238	1.787005	1.766841	
239	1.786761	1.766595	
240	1.786519	1.766352	
241	1.786279	1.766110	
242	1.786041	1.765871	
243	1.785805	1.765633	
244	1.785571	1.765398	
245	1.785339	1.765164	
246	1.785109	1.764932	
247	1.784881	1.764702	
248	1.784654	1.764474	
249	1.784430	1.764248	
250	1.784207	1.764024	

F $\alpha = 0.01$

df2	df1	1	2	3	4	5	6
1	4052.180695	4999.500000	5403.352014	5624.583330	5763.649554	5858.986107	
2	98.502513	99.000000	99.166201	99.249372	99.299296	99.332589	
3	34.116222	30.816520	29.456695	28.709898	28.237081	27.910657	
4	21.197690	18.000000	16.694369	15.977025	15.521858	15.206865	
5	16.258177	13.273934	12.059954	11.391928	10.967021	10.672255	
6	13.745023	10.924767	9.779538	9.148301	8.745895	8.466125	
7	12.246383	9.546578	8.451285	7.846645	7.460435	7.191405	
8	11.258624	8.649111	7.590992	7.006077	6.631825	6.370681	
9	10.561431	8.021517	6.991917	6.422085	6.056941	5.801770	
10	10.044289	7.559432	6.552313	5.994339	5.636326	5.385811	
11	9.646034	7.205713	6.216730	5.668300	5.316009	5.069210	
12	9.330212	6.926608	5.952545	5.411951	5.064343	4.820574	
13	9.073806	6.700965	5.739380	5.205330	4.861621	4.620363	
14	8.861593	6.514884	5.563886	5.035378	4.694964	4.455820	
15	8.683117	6.358873	5.416965	4.893210	4.555614	4.318273	
16	8.530965	6.226235	5.292214	4.772578	4.437420	4.201634	
17	8.399740	6.112114	5.185000	4.668968	4.335939	4.101505	
18	8.285420	6.012905	5.091890	4.579036	4.247882	4.014637	

F $\alpha = 0.01$

df2	df1	1	2	3	4	5	6
19	8.184947	5.925879	5.010287	4.500258	4.170767	3.938573	3.871427
20	8.095958	5.848932	4.938193	4.430690	4.102685	3.871427	3.811725
21	8.016597	5.780416	4.874046	4.368815	4.042144	3.811725	3.758301
22	7.945386	5.719022	4.816606	4.313429	3.987963	3.758301	3.710218
23	7.881134	5.663699	4.764877	4.263567	3.939195	3.710218	3.666717
24	7.822871	5.613591	4.718051	4.218445	3.895070	3.666717	3.627174
25	7.769798	5.567997	4.675465	4.177420	3.854957	3.627174	3.591075
26	7.721254	5.526335	4.636570	4.139960	3.818336	3.591075	3.557991
27	7.676684	5.488118	4.600907	4.105622	3.784770	3.557991	3.527559
28	7.635619	5.452937	4.568091	4.074032	3.753895	3.527559	3.499475
29	7.597663	5.420445	4.537795	4.044873	3.725399	3.499475	3.473477
30	7.562476	5.390346	4.509740	4.017877	3.699019	3.473477	3.449341
31	7.529766	5.362385	4.483686	3.992811	3.674528	3.449341	3.426876
32	7.499281	5.336343	4.459429	3.969477	3.651731	3.426876	3.405914
33	7.470801	5.312029	4.436787	3.947701	3.630458	3.405914	3.386309
34	7.444136	5.289277	4.415606	3.927333	3.610562	3.386309	3.367935
35	7.419117	5.267941	4.395749	3.908241	3.591914	3.367935	3.350677
36	7.395597	5.247894	4.377096	3.890308	3.574399	3.350677	3.334440
37	7.373445	5.229022	4.359540	3.873433	3.557918	3.334440	3.319133
38	7.352545	5.211225	4.342988	3.857524	3.542383	3.319133	3.304681
39	7.332794	5.194413	4.327356	3.842502	3.527713	3.304681	3.291012
40	7.314100	5.178508	4.312569	3.828294	3.513840	3.291012	3.278067
41	7.296380	5.163438	4.298562	3.814835	3.500699	3.278067	3.265787
42	7.279561	5.149139	4.285273	3.802069	3.488235	3.265787	3.254125
43	7.263575	5.135553	4.272650	3.789942	3.476396	3.254125	3.243033
44	7.248362	5.122628	4.260643	3.778409	3.465137	3.243033	3.232472
45	7.233868	5.110318	4.249208	3.767427	3.454416	3.232472	3.222404
46	7.220042	5.098579	4.238306	3.756957	3.444196	3.222404	3.212796
47	7.206839	5.087373	4.227901	3.746964	3.434442	3.212796	3.203617
48	7.194218	5.076664	4.217958	3.737417	3.425123	3.203617	3.194838
49	7.182143	5.066420	4.208448	3.728286	3.416211	3.194838	3.186434
50	7.170577	5.056611	4.199343	3.719545	3.407680	3.186434	3.178382
51	7.159489	5.047210	4.190619	3.711169	3.399505	3.178382	3.170660
52	7.148852	5.038193	4.182251	3.703136	3.391665	3.170660	3.163248
53	7.138636	5.029535	4.174218	3.695426	3.384140	3.163248	3.156128
54	7.128819	5.021217	4.166501	3.688018	3.376912	3.156128	3.149283
55	7.119377	5.013219	4.159081	3.680897	3.369962	3.149283	3.142698
56	7.110288	5.005522	4.151941	3.674045	3.363276	3.142698	3.136357
57	7.101535	4.998110	4.145066	3.667447	3.356838	3.136357	3.130247
58	7.093097	4.990967	4.138442	3.661090	3.350635	3.130247	3.124357
59	7.084960	4.984079	4.132055	3.654961	3.344654	3.124357	3.118674
60	7.077106	4.977432	4.125892	3.649047	3.338884	3.118674	3.113188
61	7.069521	4.971015	4.119942	3.643339	3.333314	3.113188	3.107889
62	7.062192	4.964814	4.114194	3.637824	3.327933	3.107889	3.102767
63	7.055106	4.958821	4.108638	3.632493	3.322733	3.102767	3.097813
64	7.048252	4.953024	4.103264	3.627338	3.317703	3.097813	3.093020
65	7.041617	4.947413	4.098064	3.622349	3.312836	3.093020	3.088380
66	7.035191	4.941981	4.093030	3.617520	3.308125	3.088380	3.083885
67	7.028966	4.936718	4.088153	3.612842	3.303561	3.083885	3.079529
68	7.022931	4.931617	4.083426	3.608308	3.299138	3.079529	3.075306
69	7.017078	4.926671	4.078843	3.603912	3.294849	3.075306	3.071209
70	7.011399	4.921872	4.074397	3.599647	3.290689	3.071209	3.067233
71	7.005886	4.917215	4.070082	3.595508	3.286652	3.067233	3.063372
72	7.000532	4.912692	4.065892	3.591490	3.282732	3.063372	3.059623
73	6.995331	4.908298	4.061822	3.587587	3.278924	3.059623	3.055979
74	6.990275	4.904029	4.057867	3.583794	3.275224	3.055979	3.052437
75	6.985359	4.899877	4.054022	3.580106	3.271628	3.052437	3.048992
76	6.980578	4.895840	4.050282	3.576520	3.268130	3.048992	3.045641
77	6.975925	4.891911	4.046644	3.573031	3.264727	3.045641	3.042379
78	6.971395	4.888088	4.043103	3.569636	3.261414	3.042379	3.039204
79	6.966985	4.884365	4.039655	3.566330	3.258190	3.039204	3.036111
80	6.962688	4.880738	4.036297	3.563110	3.255049	3.036111	3.033098
81	6.958501	4.877205	4.033025	3.559973	3.251990	3.033098	3.030161
82	6.954420	4.873761	4.029836	3.556915	3.249007	3.030161	3.027298
83	6.950440	4.870403	4.026727	3.553934	3.246100	3.027298	3.024506
84	6.946558	4.867128	4.023695	3.551027	3.243265	3.024506	3.021782
85	6.942771	4.863933	4.020737	3.548191	3.240499	3.021782	3.019124
86	6.939074	4.860814	4.017850	3.545424	3.237800	3.019124	3.016530
87	6.935466	4.857770	4.015032	3.542722	3.235165	3.016530	3.013997
88	6.931941	4.854798	4.012281	3.540085	3.232593	3.013997	3.011523
89	6.928499	4.851895	4.009594	3.537508	3.230080	3.011523	3.009106
90	6.925135	4.849058	4.006968	3.534992	3.227626	3.009106	3.006744
91	6.921848	4.846286	4.004402	3.532532	3.225227	3.006744	3.004435
92	6.918634	4.843576	4.001894	3.530128	3.222883	3.004435	3.002178
93	6.915491	4.840927	3.999442	3.527777	3.220591	3.002178	2.999971
94	6.912417	4.838336	3.997044	3.525479	3.218349	2.999971	2.997811
95	6.909410	4.835801	3.994698	3.523230	3.216156	2.997811	2.995699
96	6.906467	4.833320	3.992403	3.521030	3.214010	2.995699	2.993631
97	6.903587	4.830893	3.990156	3.518877	3.211911	2.993631	2.991607
98	6.900767	4.828516	3.987957	3.516769	3.209855	2.991607	

F $\alpha = 0.01$

df2	df1	1	2	3	4	5	6
99	6.898006	4.826189	3.985804	3.514705	3.207843	2.989625	
100	6.895301	4.823910	3.983695	3.512684	3.205872	2.987684	
101	6.892651	4.821677	3.981630	3.510704	3.203941	2.985783	
102	6.890055	4.819490	3.979606	3.508765	3.202050	2.983921	
103	6.887511	4.817346	3.977622	3.506864	3.200196	2.982096	
104	6.885017	4.815245	3.975678	3.505001	3.198380	2.980307	
105	6.882571	4.813185	3.973773	3.503174	3.196599	2.978553	
106	6.880173	4.811165	3.971904	3.501383	3.194852	2.976834	
107	6.877821	4.809183	3.970071	3.499627	3.193140	2.975147	
108	6.875514	4.807240	3.968273	3.497904	3.191460	2.973493	
109	6.873250	4.805333	3.966509	3.496214	3.189811	2.971870	
110	6.871028	4.803462	3.964779	3.494555	3.188194	2.970278	
111	6.868847	4.801625	3.963080	3.492927	3.186607	2.968715	
112	6.866706	4.799823	3.961412	3.491329	3.185049	2.967181	
113	6.864604	4.798053	3.959775	3.489761	3.183519	2.965675	
114	6.862540	4.796315	3.958168	3.488220	3.182017	2.964196	
115	6.860512	4.794607	3.956589	3.486707	3.180542	2.962743	
116	6.858521	4.792931	3.955038	3.485221	3.179093	2.961316	
117	6.856564	4.791283	3.953514	3.483761	3.177670	2.959915	
118	6.854641	4.789664	3.952017	3.482327	3.176271	2.958538	
119	6.852751	4.788073	3.950546	3.480917	3.174896	2.957184	
120	6.850893	4.786510	3.949100	3.479531	3.173545	2.955854	
121	6.849067	4.784973	3.947678	3.478169	3.172217	2.954546	
122	6.847272	4.783461	3.946281	3.476830	3.170912	2.953261	
123	6.845506	4.781975	3.944906	3.475514	3.169628	2.951997	
124	6.843769	4.780513	3.943555	3.474219	3.168366	2.950754	
125	6.842061	4.779076	3.942226	3.472945	3.167124	2.949531	
126	6.840381	4.777662	3.940918	3.471692	3.165902	2.948328	
127	6.838727	4.776270	3.939631	3.470459	3.164700	2.947145	
128	6.837100	4.774901	3.938365	3.469247	3.163518	2.945981	
129	6.835499	4.773554	3.937119	3.468053	3.162354	2.944835	
130	6.833923	4.772227	3.935893	3.466878	3.161209	2.943707	
131	6.832371	4.770922	3.934686	3.465722	3.160081	2.942597	
132	6.830843	4.769637	3.933498	3.464583	3.158972	2.941504	
133	6.829339	4.768371	3.932328	3.463462	3.157879	2.940428	
134	6.827858	4.767125	3.931176	3.462359	3.156803	2.939369	
135	6.826399	4.765898	3.930041	3.461272	3.155743	2.938325	
136	6.824962	4.764689	3.928924	3.460201	3.154699	2.937298	
137	6.823547	4.763498	3.927823	3.459147	3.153671	2.936285	
138	6.822152	4.762325	3.926738	3.458108	3.152658	2.935288	
139	6.820778	4.761169	3.925670	3.457084	3.151660	2.934305	
140	6.819424	4.760030	3.924617	3.456075	3.150677	2.933337	
141	6.818090	4.758908	3.923579	3.455081	3.149708	2.932383	
142	6.816774	4.757801	3.922557	3.454102	3.148753	2.931443	
143	6.815478	4.756711	3.921549	3.453136	3.147811	2.930516	
144	6.814199	4.755636	3.920555	3.452184	3.146883	2.929602	
145	6.812939	4.754576	3.919575	3.451246	3.145969	2.928701	
146	6.811696	4.753531	3.918609	3.450320	3.145066	2.927813	
147	6.810471	4.752500	3.917657	3.449408	3.144177	2.926937	
148	6.809262	4.751484	3.916717	3.448508	3.143300	2.926073	
149	6.808070	4.750482	3.915791	3.447620	3.142434	2.925222	
150	6.806894	4.749493	3.914877	3.446745	3.141581	2.924381	
151	6.805734	4.748517	3.913975	3.445881	3.140739	2.923552	
152	6.804590	4.747555	3.913086	3.445029	3.139909	2.922735	
153	6.803461	4.746606	3.912208	3.444189	3.139089	2.921928	
154	6.802346	4.745669	3.911342	3.443359	3.138281	2.921132	
155	6.801247	4.744744	3.910488	3.442541	3.137483	2.920346	
156	6.800161	4.743832	3.909644	3.441733	3.136695	2.919571	
157	6.799090	4.742931	3.908812	3.440936	3.135918	2.918806	
158	6.798033	4.742042	3.907990	3.440149	3.135151	2.918050	
159	6.796989	4.741164	3.907179	3.439372	3.134394	2.917305	
160	6.795958	4.740298	3.906379	3.438605	3.133646	2.916569	
161	6.794940	4.739443	3.905588	3.437848	3.132908	2.915842	
162	6.793935	4.738598	3.904807	3.437100	3.132179	2.915124	
163	6.792943	4.737764	3.904037	3.436362	3.131459	2.914416	
164	6.791963	4.736940	3.903275	3.435633	3.130748	2.913716	
165	6.790995	4.736126	3.902523	3.434913	3.130046	2.913025	
166	6.790039	4.735323	3.901781	3.434201	3.129353	2.912342	
167	6.789095	4.734529	3.901047	3.433499	3.128668	2.911668	
168	6.788162	4.733745	3.900323	3.432805	3.127992	2.911002	
169	6.787240	4.732970	3.899607	3.432119	3.127323	2.910343	
170	6.786329	4.732205	3.898899	3.431442	3.126663	2.909693	
171	6.785429	4.731448	3.898201	3.430772	3.126010	2.909051	
172	6.784540	4.730701	3.897510	3.430111	3.125366	2.908416	
173	6.783661	4.729962	3.896827	3.429457	3.124728	2.907789	
174	6.782792	4.729232	3.896153	3.428811	3.124099	2.907169	
175	6.781934	4.728511	3.895486	3.428173	3.123476	2.906556	
176	6.781085	4.727798	3.894827	3.427542	3.122861	2.905950	
177	6.780246	4.727093	3.894176	3.426918	3.122253	2.905352	
178	6.779417	4.726396	3.893532	3.426301	3.121652	2.904760	

F $\alpha = 0.01$

df2	df1	1	2	3	4	5	6
179	6.778597	4.725707	3.892896	3.425692	3.121058	2.904175	
180	6.777786	4.725026	3.892266	3.425089	3.120470	2.903596	
181	6.776985	4.724352	3.891644	3.424493	3.119889	2.903024	
182	6.776192	4.723686	3.891029	3.423904	3.119315	2.902459	
183	6.775409	4.723028	3.890420	3.423321	3.118747	2.901899	
184	6.774633	4.722376	3.889818	3.422745	3.118185	2.901346	
185	6.773867	4.721732	3.889223	3.422175	3.117629	2.900799	
186	6.773108	4.721095	3.888634	3.421611	3.117080	2.900258	
187	6.772358	4.720465	3.888052	3.421053	3.116536	2.899723	
188	6.771616	4.719841	3.887476	3.420502	3.115999	2.899194	
189	6.770882	4.719225	3.886907	3.419956	3.115467	2.898670	
190	6.770156	4.718615	3.886343	3.419416	3.114941	2.898152	
191	6.769438	4.718011	3.885785	3.418882	3.114420	2.897640	
192	6.768727	4.717414	3.885234	3.418354	3.113905	2.897133	
193	6.768023	4.716823	3.884688	3.417831	3.113396	2.896631	
194	6.767327	4.716238	3.884148	3.417314	3.112892	2.896135	
195	6.766639	4.715660	3.883613	3.416802	3.112393	2.895643	
196	6.765957	4.715087	3.883084	3.416295	3.111899	2.895157	
197	6.765282	4.714520	3.882560	3.415794	3.111410	2.894676	
198	6.764615	4.713960	3.882042	3.415298	3.110927	2.894200	
199	6.763954	4.713404	3.881529	3.414807	3.110448	2.893729	
200	6.763299	4.712855	3.881022	3.414321	3.109974	2.893262	
201	6.762652	4.712311	3.880519	3.413839	3.109505	2.892800	
202	6.762011	4.711772	3.880022	3.413363	3.109041	2.892343	
203	6.761376	4.711239	3.879529	3.412891	3.108581	2.891891	
204	6.760748	4.710711	3.879042	3.412424	3.108126	2.891442	
205	6.760125	4.710189	3.878559	3.411962	3.107675	2.890999	
206	6.759509	4.709671	3.878081	3.411504	3.107229	2.890560	
207	6.758899	4.709159	3.877608	3.411051	3.106787	2.890125	
208	6.758295	4.708652	3.877139	3.410602	3.106350	2.889694	
209	6.757697	4.708149	3.876675	3.410158	3.105917	2.889267	
210	6.757104	4.707651	3.876215	3.409718	3.105488	2.888845	
211	6.756518	4.707159	3.875760	3.409282	3.105063	2.888427	
212	6.755936	4.706671	3.875309	3.408850	3.104642	2.888013	
213	6.755361	4.706187	3.874862	3.408423	3.104225	2.887602	
214	6.754791	4.705708	3.874420	3.407999	3.103812	2.887196	
215	6.754226	4.705234	3.873982	3.407580	3.103403	2.886793	
216	6.753666	4.704764	3.873548	3.407164	3.102998	2.886394	
217	6.753112	4.704299	3.873118	3.406752	3.102597	2.885999	
218	6.752563	4.703837	3.872692	3.406344	3.102199	2.885608	
219	6.752019	4.703380	3.872270	3.405940	3.101806	2.885220	
220	6.751480	4.702928	3.871852	3.405540	3.101415	2.884836	
221	6.750945	4.702479	3.871438	3.405143	3.101029	2.884455	
222	6.750416	4.702035	3.871027	3.404750	3.100646	2.884078	
223	6.749892	4.701594	3.870620	3.404361	3.100266	2.883704	
224	6.749372	4.701158	3.870217	3.403975	3.099890	2.883334	
225	6.748857	4.700726	3.869818	3.403592	3.099517	2.882967	
226	6.748346	4.700297	3.869422	3.403213	3.099147	2.882603	
227	6.747841	4.699872	3.869030	3.402837	3.098781	2.882243	
228	6.747339	4.699451	3.868641	3.402465	3.098418	2.881885	
229	6.746842	4.699034	3.868255	3.402096	3.098059	2.881531	
230	6.746350	4.698620	3.867873	3.401730	3.097702	2.881180	
231	6.745861	4.698210	3.867495	3.401368	3.097349	2.880832	
232	6.745377	4.697804	3.867119	3.401008	3.096999	2.880488	
233	6.744898	4.697401	3.866747	3.400652	3.096651	2.880146	
234	6.744422	4.697002	3.866379	3.400299	3.096307	2.879807	
235	6.743950	4.696606	3.866013	3.399949	3.095966	2.879471	
236	6.743483	4.696213	3.865650	3.399602	3.095628	2.879138	
237	6.743019	4.695824	3.865291	3.399258	3.095292	2.878808	
238	6.742560	4.695438	3.864935	3.398917	3.094960	2.878480	
239	6.742104	4.695056	3.864581	3.398578	3.094630	2.878156	
240	6.741652	4.694676	3.864231	3.398243	3.094303	2.877834	
241	6.741204	4.694300	3.863884	3.397910	3.093979	2.877515	
242	6.740760	4.693927	3.863539	3.397580	3.093657	2.877198	
243	6.740319	4.693557	3.863197	3.397253	3.093339	2.876884	
244	6.739882	4.693191	3.862859	3.396929	3.093022	2.876573	
245	6.739449	4.692827	3.862523	3.396607	3.092709	2.876264	
246	6.739019	4.692466	3.862189	3.396288	3.092398	2.875958	
247	6.738593	4.692108	3.861859	3.395972	3.092090	2.875655	
248	6.738170	4.691753	3.861531	3.395658	3.091784	2.875353	
249	6.737751	4.691401	3.861206	3.395347	3.091480	2.875055	
250	6.737335	4.691052	3.860884	3.395038	3.091179	2.874758	
df2	df1	7	8	9	10	11	12
1	5928.355732	5981.070308	6022.473245	6055.846707	6083.316783	6106.320708	
2	99.356374	99.374215	99.388093	99.399196	99.408281	99.415852	
3	27.671696	27.489177	27.345206	27.228734	27.132567	27.051819	
4	14.975758	14.798889	14.659134	14.545901	14.452284	14.373587	
5	10.455511	10.289311	10.157762	10.051017	9.962648	9.888275	

F $\alpha = 0.01$

df2	df1	7	8	9	10	11	12
6	8.259995	8.101651	7.976121	7.874119	7.789570	7.718333	
7	6.992833	6.840049	6.718752	6.620063	6.538166	6.469091	
8	6.177624	6.028870	5.910619	5.814294	5.734275	5.666719	
9	5.612865	5.467123	5.351129	5.256542	5.177890	5.111431	
10	5.200121	5.056693	4.942421	4.849147	4.771518	4.705870	
11	4.886072	4.744468	4.631540	4.539282	4.462436	4.397401	
12	4.639502	4.499365	4.387510	4.296054	4.219820	4.155258	
13	4.440997	4.302062	4.191078	4.100267	4.024518	3.960326	
14	4.277882	4.139946	4.029680	3.939396	3.864039	3.800141	
15	4.141546	4.004453	3.894788	3.804940	3.729902	3.666240	
16	4.025947	3.889572	3.780415	3.690931	3.616157	3.552687	
17	3.926719	3.790964	3.682242	3.593066	3.518512	3.455198	
18	3.840639	3.705422	3.597074	3.508162	3.433793	3.370608	
19	3.765269	3.630525	3.522503	3.433817	3.359605	3.296527	
20	3.698740	3.564412	3.456676	3.368186	3.294108	3.231120	
21	3.639590	3.505632	3.398147	3.309830	3.235867	3.172953	
22	3.586660	3.453034	3.345773	3.257606	3.183742	3.120891	
23	3.539024	3.405695	3.298634	3.210599	3.136822	3.074025	
24	3.495928	3.362867	3.255985	3.168069	3.094367	3.031615	
25	3.456754	3.323937	3.217217	3.129406	3.055771	2.993056	
26	3.420993	3.288399	3.181824	3.094108	3.020530	2.957848	
27	3.388219	3.255827	3.149385	3.061754	2.988228	2.925573	
28	3.358073	3.225868	3.119547	3.031992	2.958512	2.895881	
29	3.330252	3.198219	3.092009	3.004524	2.931084	2.868472	
30	3.304499	3.172624	3.066516	2.979094	2.905690	2.843095	
31	3.280591	3.148863	3.042849	2.955484	2.882112	2.819532	
32	3.258338	3.126746	3.020818	2.933506	2.860163	2.797595	
33	3.237573	3.106108	3.000261	2.912997	2.839680	2.777122	
34	3.218154	3.086807	2.981033	2.893814	2.820521	2.757971	
35	3.199952	3.068716	2.963012	2.875833	2.802561	2.740018	
36	3.182858	3.051726	2.946086	2.858945	2.785692	2.723155	
37	3.166774	3.035738	2.930159	2.843053	2.769817	2.707284	
38	3.151612	3.020668	2.915145	2.828072	2.754851	2.692322	
39	3.137296	3.006438	2.900968	2.813925	2.740719	2.678192	
40	3.123757	2.992981	2.887560	2.800545	2.727352	2.664827	
41	3.110934	2.980234	2.874861	2.787871	2.714690	2.652167	
42	3.098771	2.968144	2.862814	2.775850	2.702679	2.640156	
43	3.087218	2.956661	2.851373	2.764431	2.691269	2.628747	
44	3.076232	2.945740	2.840491	2.753570	2.680418	2.617896	
45	3.065771	2.935341	2.830129	2.743229	2.670084	2.607562	
46	3.055798	2.925427	2.820251	2.733369	2.660232	2.597709	
47	3.046281	2.915966	2.810823	2.723960	2.650829	2.588305	
48	3.037188	2.906927	2.801816	2.714969	2.641845	2.579319	
49	3.028492	2.898283	2.793202	2.706371	2.633253	2.570725	
50	3.020168	2.890008	2.784956	2.698139	2.625026	2.562497	
51	3.012192	2.882079	2.777054	2.690252	2.617144	2.554612	
52	3.004544	2.874475	2.769476	2.682687	2.609583	2.547050	
53	2.997202	2.867176	2.762202	2.675426	2.602326	2.539790	
54	2.990149	2.860164	2.755215	2.668451	2.595354	2.532816	
55	2.983369	2.853424	2.748497	2.661744	2.588651	2.526110	
56	2.976845	2.846938	2.742033	2.655291	2.582201	2.519658	
57	2.970564	2.840694	2.735810	2.649078	2.575991	2.513445	
58	2.964513	2.834677	2.729814	2.643092	2.570007	2.507458	
59	2.958678	2.828877	2.724032	2.637320	2.564237	2.501686	
60	2.953049	2.823280	2.718454	2.631751	2.558670	2.496116	
61	2.947615	2.817877	2.713069	2.626374	2.553296	2.490739	
62	2.942366	2.812658	2.707868	2.621181	2.548104	2.485544	
63	2.937292	2.807614	2.702840	2.616160	2.543085	2.480522	
64	2.932385	2.802736	2.697977	2.611305	2.538231	2.475666	
65	2.927638	2.798015	2.693272	2.606607	2.533535	2.470966	
66	2.923041	2.793445	2.688717	2.602059	2.528987	2.466416	
67	2.918589	2.789018	2.684304	2.597653	2.524582	2.462008	
68	2.914274	2.784728	2.680028	2.593383	2.520313	2.457736	
69	2.910090	2.780568	2.675881	2.589242	2.516174	2.453593	
70	2.906032	2.776533	2.671859	2.585226	2.512158	2.449575	
71	2.902093	2.772617	2.667956	2.581328	2.508260	2.445674	
72	2.898270	2.768815	2.664166	2.577543	2.504476	2.441887	
73	2.894555	2.765122	2.660484	2.573867	2.500800	2.438209	
74	2.890946	2.761533	2.656907	2.570294	2.497228	2.434634	
75	2.887437	2.758044	2.653429	2.566821	2.493756	2.431158	
76	2.884025	2.754652	2.650047	2.563443	2.490378	2.427778	
77	2.880705	2.751351	2.646756	2.560157	2.487092	2.424489	
78	2.877475	2.748138	2.643553	2.556959	2.483894	2.421288	
79	2.874329	2.745010	2.640435	2.553845	2.480780	2.418172	
80	2.871265	2.741964	2.637398	2.550812	2.477747	2.415136	
81	2.868281	2.738996	2.634440	2.547857	2.474792	2.412178	
82	2.865372	2.736104	2.631556	2.544977	2.471912	2.409296	
83	2.862536	2.733284	2.628745	2.542169	2.469105	2.406485	
84	2.859770	2.730534	2.626003	2.539431	2.466366	2.403744	
85	2.857072	2.727851	2.623328	2.536759	2.463695	2.401070	

F $\alpha = 0.01$

df2	df1	7	8	9	10	11	12
86	2.854439	2.725233	2.620718	2.534153	2.461088	2.398461	
87	2.851869	2.722677	2.618170	2.531608	2.458543	2.395913	
88	2.849360	2.720182	2.615683	2.529123	2.456058	2.393426	
89	2.846909	2.717745	2.613253	2.526697	2.453631	2.390997	
90	2.844515	2.715364	2.610879	2.524326	2.451260	2.388623	
91	2.842175	2.713037	2.608560	2.522009	2.448943	2.386304	
92	2.839888	2.710763	2.606292	2.519744	2.446678	2.384036	
93	2.837652	2.708540	2.604076	2.517530	2.444463	2.381819	
94	2.835466	2.706365	2.601908	2.515364	2.442298	2.379651	
95	2.833327	2.704238	2.599787	2.513246	2.440179	2.377530	
96	2.831234	2.702157	2.597712	2.511174	2.438106	2.375455	
97	2.829186	2.700120	2.595681	2.509145	2.436077	2.373424	
98	2.827181	2.698127	2.593693	2.507159	2.434091	2.371436	
99	2.825218	2.696175	2.591747	2.505215	2.432147	2.369489	
100	2.823295	2.694263	2.589841	2.503311	2.430242	2.367582	
101	2.821412	2.692390	2.587973	2.501446	2.428377	2.365714	
102	2.819567	2.690555	2.586144	2.499619	2.426549	2.363885	
103	2.817759	2.688757	2.584351	2.497828	2.424758	2.362091	
104	2.815987	2.686995	2.582594	2.496073	2.423002	2.360334	
105	2.814250	2.685268	2.580872	2.494352	2.421281	2.358610	
106	2.812547	2.683574	2.579183	2.492665	2.419593	2.356921	
107	2.810876	2.681912	2.577526	2.491010	2.417938	2.355263	
108	2.809237	2.680283	2.575901	2.489387	2.416315	2.353638	
109	2.807630	2.678684	2.574307	2.487794	2.414722	2.352043	
110	2.806052	2.677115	2.572743	2.486232	2.413158	2.350478	
111	2.804504	2.675576	2.571208	2.484698	2.411624	2.348942	
112	2.802984	2.674064	2.569701	2.483193	2.410118	2.347434	
113	2.801492	2.672580	2.568221	2.481714	2.408640	2.345953	
114	2.800027	2.671123	2.566768	2.480263	2.407188	2.344500	
115	2.798588	2.669692	2.565341	2.478838	2.405762	2.343072	
116	2.797175	2.668287	2.563940	2.477438	2.404362	2.341670	
117	2.795787	2.666906	2.562563	2.476062	2.402986	2.340292	
118	2.794422	2.665549	2.561210	2.474710	2.401634	2.338938	
119	2.793082	2.664216	2.559881	2.473382	2.400305	2.337608	
120	2.791764	2.662906	2.558574	2.472077	2.398999	2.336300	
121	2.790469	2.661617	2.557289	2.470793	2.397715	2.335014	
122	2.789195	2.660351	2.556026	2.469532	2.396453	2.333750	
123	2.787943	2.659106	2.554785	2.468291	2.395212	2.332508	
124	2.786712	2.657881	2.553563	2.467071	2.393991	2.331285	
125	2.785500	2.656676	2.552362	2.465871	2.392791	2.330083	
126	2.784309	2.655491	2.551181	2.464690	2.391610	2.328901	
127	2.783137	2.654326	2.550018	2.463529	2.390448	2.327737	
128	2.781983	2.653178	2.548874	2.462386	2.389304	2.326592	
129	2.780848	2.652050	2.547748	2.461261	2.388179	2.325465	
130	2.779731	2.650939	2.546640	2.460155	2.387072	2.324356	
131	2.778632	2.649845	2.545550	2.459065	2.385982	2.323265	
132	2.777549	2.648768	2.544476	2.457992	2.384909	2.322190	
133	2.776483	2.647708	2.543419	2.456936	2.383852	2.321132	
134	2.775434	2.646664	2.542378	2.455896	2.382812	2.320090	
135	2.774400	2.645636	2.541353	2.454872	2.381787	2.319064	
136	2.773382	2.644624	2.540343	2.453863	2.380778	2.318053	
137	2.772379	2.643627	2.539349	2.452869	2.379783	2.317058	
138	2.771391	2.642644	2.538369	2.451890	2.378804	2.316077	
139	2.770418	2.641676	2.537404	2.450926	2.377839	2.315110	
140	2.769459	2.640722	2.536452	2.449975	2.376888	2.314158	
141	2.768514	2.639782	2.535515	2.449039	2.375951	2.313219	
142	2.767582	2.638856	2.534591	2.448116	2.375027	2.312294	
143	2.766664	2.637942	2.533680	2.447206	2.374117	2.311383	
144	2.765759	2.637042	2.532782	2.446309	2.373219	2.310484	
145	2.764866	2.636155	2.531897	2.445424	2.372335	2.309598	
146	2.763986	2.635279	2.531025	2.444552	2.371462	2.308724	
147	2.763119	2.634417	2.530164	2.443692	2.370602	2.307862	
148	2.762263	2.633566	2.529315	2.442844	2.369753	2.307013	
149	2.761419	2.632726	2.528478	2.442008	2.368917	2.306175	
150	2.760587	2.631898	2.527653	2.441183	2.368091	2.305348	
151	2.759766	2.631082	2.526838	2.440369	2.367277	2.304532	
152	2.758956	2.630276	2.526035	2.439567	2.366474	2.303728	
153	2.758156	2.629481	2.525242	2.438774	2.365681	2.302934	
154	2.757368	2.628697	2.524460	2.437993	2.364899	2.302151	
155	2.756589	2.627923	2.523688	2.437221	2.364127	2.301378	
156	2.755821	2.627159	2.522926	2.436460	2.363366	2.300615	
157	2.755063	2.626405	2.522174	2.435709	2.362614	2.299862	
158	2.754315	2.625661	2.521432	2.434967	2.361872	2.299119	
159	2.753576	2.624926	2.520699	2.434235	2.361139	2.298385	
160	2.752847	2.624201	2.519976	2.433512	2.360416	2.297661	
161	2.752127	2.623485	2.519262	2.432799	2.359702	2.296946	
162	2.751416	2.622778	2.518556	2.432094	2.358997	2.296240	
163	2.750714	2.622079	2.517860	2.431398	2.358301	2.295542	
164	2.750021	2.621390	2.517172	2.430711	2.357614	2.294854	
165	2.749336	2.620709	2.516493	2.430033	2.356935	2.294174	

F $\alpha = 0.01$

df2	df1	7	8	9	10	11	12
166	2.748660	2.620036	2.515822	2.429362	2.356264	2.293502	
167	2.747992	2.619372	2.515160	2.428700	2.355601	2.292838	
168	2.747332	2.618715	2.514505	2.428046	2.354947	2.292183	
169	2.746680	2.618067	2.513859	2.427400	2.354300	2.291535	
170	2.746036	2.617426	2.513220	2.426762	2.353661	2.290895	
171	2.745400	2.616793	2.512588	2.426131	2.353030	2.290263	
172	2.744771	2.616168	2.511965	2.425507	2.352406	2.289638	
173	2.744150	2.615550	2.511348	2.424891	2.351790	2.289021	
174	2.743535	2.614939	2.510739	2.424283	2.351181	2.288411	
175	2.742928	2.614335	2.510137	2.423681	2.350579	2.287808	
176	2.742328	2.613738	2.509542	2.423086	2.349984	2.287212	
177	2.741735	2.613149	2.508953	2.422498	2.349395	2.286622	
178	2.741149	2.612565	2.508372	2.421917	2.348814	2.286040	
179	2.740569	2.611989	2.507797	2.421343	2.348239	2.285464	
180	2.739996	2.611419	2.507228	2.420774	2.347670	2.284895	
181	2.739430	2.610855	2.506666	2.420213	2.347108	2.284332	
182	2.738870	2.610298	2.506110	2.419657	2.346553	2.283775	
183	2.738315	2.609747	2.505561	2.419108	2.346003	2.283224	
184	2.737768	2.609202	2.505017	2.418565	2.345460	2.282680	
185	2.737226	2.608663	2.504480	2.418028	2.344922	2.282142	
186	2.736690	2.608130	2.503948	2.417497	2.344390	2.281609	
187	2.736160	2.607603	2.503422	2.416971	2.343865	2.281082	
188	2.735635	2.607081	2.502902	2.416451	2.343344	2.280561	
189	2.735117	2.606565	2.502387	2.415937	2.342830	2.280046	
190	2.734603	2.606055	2.501878	2.415428	2.342321	2.279536	
191	2.734096	2.605550	2.501375	2.414925	2.341817	2.279031	
192	2.733594	2.605050	2.500876	2.414427	2.341319	2.278532	
193	2.733097	2.604556	2.500383	2.413935	2.340826	2.278038	
194	2.732605	2.604067	2.499895	2.413447	2.340338	2.277550	
195	2.732118	2.603583	2.499413	2.412965	2.339855	2.277066	
196	2.731636	2.603104	2.498935	2.412487	2.339377	2.276587	
197	2.731160	2.602630	2.498462	2.412015	2.338905	2.276114	
198	2.730688	2.602161	2.497994	2.411547	2.338437	2.275645	
199	2.730221	2.601696	2.497531	2.411084	2.337973	2.275181	
200	2.729759	2.601236	2.497072	2.410626	2.337515	2.274722	
201	2.729302	2.600781	2.496618	2.410172	2.337061	2.274267	
202	2.728849	2.600331	2.496169	2.409723	2.336612	2.273817	
203	2.728400	2.599885	2.495724	2.409279	2.336167	2.273371	
204	2.727956	2.599443	2.495284	2.408839	2.335726	2.272930	
205	2.727517	2.599006	2.494848	2.408403	2.335290	2.272493	
206	2.727082	2.598574	2.494416	2.407972	2.334859	2.272061	
207	2.726651	2.598145	2.493989	2.407544	2.334431	2.271633	
208	2.726224	2.597721	2.493566	2.407121	2.334008	2.271209	
209	2.725802	2.597300	2.493146	2.406702	2.333589	2.270789	
210	2.725383	2.596884	2.492731	2.406288	2.333173	2.270373	
211	2.724969	2.596472	2.492320	2.405877	2.332762	2.269961	
212	2.724559	2.596064	2.491913	2.405470	2.332355	2.269553	
213	2.724152	2.595659	2.491510	2.405067	2.331952	2.269149	
214	2.723749	2.595259	2.491110	2.404668	2.331552	2.268749	
215	2.723351	2.594862	2.490715	2.404272	2.331157	2.268352	
216	2.722955	2.594469	2.490323	2.403880	2.330764	2.267960	
217	2.722564	2.594080	2.489934	2.403492	2.330376	2.267570	
218	2.722176	2.593694	2.489550	2.403108	2.329991	2.267185	
219	2.721792	2.593312	2.489168	2.402727	2.329610	2.266803	
220	2.721412	2.592933	2.488791	2.402350	2.329233	2.266425	
221	2.721034	2.592558	2.488417	2.401976	2.328858	2.266050	
222	2.720661	2.592187	2.488046	2.401605	2.328488	2.265679	
223	2.720290	2.591818	2.487679	2.401238	2.328120	2.265311	
224	2.719924	2.591453	2.487315	2.400874	2.327756	2.264946	
225	2.719560	2.591092	2.486954	2.400514	2.327395	2.264584	
226	2.719200	2.590733	2.486596	2.400157	2.327038	2.264226	
227	2.718843	2.590378	2.486242	2.399803	2.326683	2.263871	
228	2.718489	2.590026	2.485891	2.399452	2.326332	2.263519	
229	2.718138	2.589677	2.485543	2.399104	2.325984	2.263171	
230	2.717790	2.589331	2.485198	2.398759	2.325639	2.262825	
231	2.717446	2.588989	2.484856	2.398417	2.325297	2.262482	
232	2.717104	2.588649	2.484517	2.398079	2.324958	2.262143	
233	2.716765	2.588312	2.484181	2.397743	2.324622	2.261806	
234	2.716430	2.587978	2.483848	2.397410	2.324289	2.261472	
235	2.716097	2.587647	2.483518	2.397080	2.323959	2.261141	
236	2.715767	2.587319	2.483190	2.396753	2.323631	2.260813	
237	2.715440	2.586993	2.482866	2.396428	2.323307	2.260488	
238	2.715115	2.586671	2.482544	2.396107	2.322985	2.260166	
239	2.714794	2.586351	2.482225	2.395788	2.322666	2.259846	
240	2.714475	2.586034	2.481909	2.395472	2.322349	2.259529	
241	2.714159	2.585719	2.481595	2.395158	2.322035	2.259215	
242	2.713845	2.585407	2.481284	2.394847	2.321724	2.258903	
243	2.713534	2.585098	2.480975	2.394539	2.321416	2.258594	
244	2.713226	2.584791	2.480669	2.394233	2.321110	2.258287	
245	2.712920	2.584487	2.480366	2.393930	2.320806	2.257983	

F $\alpha = 0.01$

df2	df1	7	8	9	10	11	12
246	2.712617	2.584185	2.480065	2.393629	2.320505	2.257682	
247	2.712316	2.583886	2.479767	2.393331	2.320207	2.257383	
248	2.712018	2.583590	2.479471	2.393035	2.319911	2.257086	
249	2.711722	2.583295	2.479177	2.392742	2.319617	2.256792	
250	2.711428	2.583003	2.478886	2.392451	2.319326	2.256500	

df2	df1	13	14	15	16	17	18
1	6125.864665	6142.673972	6157.284615	6170.101195	6181.434838	6191.528702	
2	99.422259	99.427751	99.432511	99.436676	99.440351	99.443617	
3	26.983057	26.923797	26.872195	26.826857	26.786708	26.750905	
4	14.306502	14.248633	14.198202	14.153860	14.114566	14.079505	
5	9.824811	9.770014	9.722219	9.680164	9.642872	9.609575	
6	7.657483	7.604897	7.558994	7.518574	7.482706	7.450663	
7	6.410034	6.358954	6.314331	6.275010	6.240096	6.208885	
8	5.608911	5.558871	5.515125	5.476551	5.442280	5.411627	
9	5.054514	5.005210	4.962078	4.924022	4.890192	4.859916	
10	4.649605	4.600833	4.558140	4.520448	4.486923	4.456907	
11	4.341624	4.293243	4.250867	4.213436	4.180125	4.150286	
12	4.099851	4.051762	4.009619	3.972374	3.939214	3.909496	
13	3.905204	3.857337	3.815365	3.778255	3.745199	3.715562	
14	3.745241	3.697541	3.655697	3.618682	3.585697	3.556113	
15	3.611514	3.563943	3.522194	3.485246	3.452308	3.422755	
16	3.498100	3.450628	3.408947	3.372046	3.339137	3.309599	
17	3.400721	3.353325	3.311694	3.274823	3.241930	3.212396	
18	3.316219	3.268881	3.227286	3.190433	3.157545	3.128006	
19	3.242209	3.194915	3.153343	3.116499	3.083609	3.054058	
20	3.176859	3.129597	3.088041	3.051198	3.018299	2.988733	
21	3.118737	3.071500	3.029951	2.993105	2.960193	2.930607	
22	3.066712	3.019492	2.977946	2.941091	2.908163	2.878554	
23	3.019875	2.972666	2.931118	2.894252	2.861304	2.831672	
24	2.977488	2.930285	2.888732	2.851852	2.818884	2.789225	
25	2.938947	2.891747	2.850186	2.813290	2.780300	2.750615	
26	2.903753	2.856553	2.814982	2.778068	2.745055	2.715343	
27	2.871488	2.824286	2.782703	2.745771	2.712734	2.682994	
28	2.841802	2.794596	2.753000	2.716048	2.682987	2.653220	
29	2.814399	2.767187	2.725577	2.688605	2.655519	2.625725	
30	2.789025	2.741805	2.700180	2.663188	2.630078	2.600257	
31	2.765463	2.718235	2.676594	2.639582	2.606448	2.576599	
32	2.743526	2.696288	2.654632	2.617599	2.584441	2.554566	
33	2.723051	2.675804	2.634132	2.597078	2.563896	2.533994	
34	2.703897	2.656640	2.614952	2.577877	2.544672	2.514744	
35	2.685941	2.638673	2.596969	2.559874	2.526645	2.496693	
36	2.669074	2.621795	2.580074	2.542959	2.509708	2.479730	
37	2.653199	2.605908	2.564172	2.527037	2.493763	2.463761	
38	2.638232	2.590930	2.549177	2.512023	2.478727	2.448701	
39	2.624209	2.576783	2.535014	2.497841	2.464523	2.434474	
40	2.610726	2.563400	2.521616	2.484424	2.451085	2.421013	
41	2.598059	2.550722	2.508922	2.471711	2.438352	2.408258	
42	2.586042	2.538694	2.496878	2.459649	2.426270	2.396155	
43	2.574627	2.527267	2.485436	2.448190	2.414790	2.384654	
44	2.563768	2.516397	2.474552	2.437288	2.403869	2.373712	
45	2.553428	2.506045	2.464185	2.426904	2.393466	2.363289	
46	2.543568	2.496174	2.454300	2.417002	2.383546	2.353349	
47	2.534157	2.486752	2.444863	2.407549	2.374075	2.343859	
48	2.525165	2.477749	2.435846	2.398516	2.365024	2.334789	
49	2.516563	2.469137	2.427220	2.389874	2.356366	2.326112	
50	2.508328	2.460891	2.418961	2.381600	2.348074	2.317803	
51	2.500437	2.452989	2.411046	2.373670	2.340128	2.309839	
52	2.492867	2.445410	2.403454	2.366063	2.332505	2.302199	
53	2.485601	2.438133	2.396165	2.358759	2.325186	2.294863	
54	2.478620	2.431142	2.389161	2.351742	2.318153	2.287814	
55	2.471908	2.424420	2.382427	2.344994	2.311390	2.281035	
56	2.465449	2.417951	2.375947	2.338500	2.304881	2.274511	
57	2.459229	2.411722	2.369706	2.332246	2.298613	2.268228	
58	2.453236	2.405720	2.363692	2.326220	2.292572	2.262173	
59	2.447457	2.399932	2.357893	2.320408	2.286747	2.256333	
60	2.441881	2.394347	2.352297	2.314799	2.281125	2.250697	
61	2.436497	2.388954	2.346894	2.309384	2.275697	2.245255	
62	2.431296	2.383744	2.341674	2.304152	2.270452	2.239996	
63	2.426269	2.378708	2.336627	2.299094	2.265382	2.234913	
64	2.421406	2.373837	2.331746	2.294202	2.260477	2.229995	
65	2.416700	2.369123	2.327023	2.289467	2.255730	2.225236	
66	2.412144	2.364559	2.322449	2.284882	2.251134	2.220627	
67	2.407730	2.360138	2.318018	2.280441	2.246681	2.216162	
68	2.403453	2.355852	2.313723	2.276135	2.242364	2.211833	
69	2.399305	2.351696	2.309558	2.271960	2.238178	2.207636	
70	2.395280	2.347665	2.305517	2.267910	2.234117	2.203563	
71	2.391375	2.343752	2.301595	2.263978	2.230174	2.199610	

F $\alpha = 0.01$

df2	df1 13	14	15	16	17	18
72	2.387582	2.339952	2.297787	2.260160	2.226346	2.195771
73	2.383898	2.336261	2.294088	2.256451	2.222627	2.192041
74	2.380318	2.332674	2.290492	2.252847	2.219013	2.188416
75	2.376837	2.329186	2.286997	2.249342	2.215498	2.184891
76	2.373452	2.325794	2.283597	2.245933	2.212080	2.181463
77	2.370158	2.322494	2.280288	2.242616	2.208754	2.178127
78	2.366953	2.319282	2.277069	2.239388	2.205516	2.174879
79	2.363831	2.316154	2.273933	2.236244	2.202363	2.171717
80	2.360791	2.313107	2.270879	2.233182	2.199292	2.168637
81	2.357829	2.310139	2.267904	2.230198	2.196300	2.165635
82	2.354941	2.307245	2.265003	2.227290	2.193383	2.162710
83	2.352126	2.304424	2.262175	2.224454	2.190539	2.159857
84	2.349381	2.301673	2.259417	2.221688	2.187765	2.157074
85	2.346702	2.298989	2.256726	2.218990	2.185058	2.154359
86	2.344088	2.296369	2.254100	2.216356	2.182417	2.151710
87	2.341537	2.293812	2.251536	2.213785	2.179838	2.149123
88	2.339045	2.291315	2.249033	2.211275	2.177320	2.146597
89	2.336612	2.288876	2.246587	2.208822	2.174860	2.144129
90	2.334234	2.286493	2.244198	2.206426	2.172457	2.141718
91	2.331911	2.284165	2.241863	2.204085	2.170108	2.139362
92	2.329639	2.281888	2.239581	2.201796	2.167812	2.137058
93	2.327418	2.279662	2.237349	2.199558	2.165567	2.134805
94	2.325246	2.277485	2.235167	2.197368	2.163371	2.132602
95	2.323122	2.275356	2.233031	2.195227	2.161222	2.130447
96	2.321043	2.273272	2.230942	2.193131	2.159120	2.128338
97	2.319008	2.271232	2.228897	2.191080	2.157063	2.126273
98	2.317016	2.269236	2.226895	2.189072	2.155048	2.124252
99	2.315066	2.267281	2.224935	2.187106	2.153076	2.122273
100	2.313155	2.265366	2.223015	2.185180	2.151144	2.120335
101	2.311284	2.263491	2.221134	2.183294	2.149251	2.118436
102	2.309451	2.261653	2.219291	2.181445	2.147397	2.116575
103	2.307654	2.259852	2.217485	2.179634	2.145580	2.114751
104	2.305893	2.258087	2.215715	2.177858	2.143798	2.112964
105	2.304167	2.256356	2.213979	2.176117	2.142051	2.111211
106	2.302474	2.254659	2.212278	2.174410	2.140339	2.109492
107	2.300813	2.252994	2.210608	2.172736	2.138659	2.107807
108	2.299185	2.251362	2.208971	2.171093	2.137011	2.106153
109	2.297587	2.249760	2.207364	2.169482	2.135394	2.104530
110	2.296018	2.248188	2.205788	2.167900	2.133807	2.102938
111	2.294479	2.246645	2.204241	2.166348	2.132250	2.101375
112	2.292969	2.245130	2.202722	2.164824	2.130721	2.099841
113	2.291485	2.243643	2.201230	2.163328	2.129220	2.098334
114	2.290029	2.242183	2.199766	2.161859	2.127745	2.096855
115	2.288598	2.240749	2.198327	2.160416	2.126297	2.095402
116	2.287193	2.239340	2.196914	2.158999	2.124875	2.093975
117	2.285812	2.237956	2.195526	2.157606	2.123478	2.092572
118	2.284456	2.236596	2.194162	2.156238	2.122105	2.091194
119	2.283122	2.235259	2.192822	2.154893	2.120755	2.089840
120	2.281812	2.233945	2.191504	2.153571	2.119428	2.088508
121	2.280524	2.232654	2.190209	2.152271	2.118124	2.087200
122	2.279257	2.231384	2.188935	2.150993	2.116842	2.085913
123	2.278012	2.230135	2.187683	2.149737	2.115581	2.084647
124	2.276787	2.228907	2.186451	2.148501	2.114341	2.083403
125	2.275583	2.227700	2.185240	2.147286	2.113122	2.082178
126	2.274397	2.226511	2.184048	2.146090	2.111922	2.080974
127	2.273231	2.225342	2.182875	2.144913	2.110741	2.079789
128	2.272084	2.224192	2.181721	2.143756	2.109579	2.078623
129	2.270955	2.223060	2.180586	2.142616	2.108436	2.077475
130	2.269844	2.221946	2.179468	2.141495	2.107310	2.076346
131	2.268750	2.220849	2.178368	2.140391	2.106202	2.075234
132	2.267673	2.219769	2.177285	2.139304	2.105112	2.074139
133	2.266612	2.218706	2.176218	2.138234	2.104038	2.073061
134	2.265568	2.217659	2.175168	2.137180	2.102980	2.071999
135	2.264540	2.216627	2.174134	2.136143	2.101939	2.070954
136	2.263527	2.215612	2.173115	2.135120	2.100913	2.069924
137	2.262529	2.214611	2.172111	2.134113	2.099902	2.068910
138	2.261546	2.213626	2.171122	2.133121	2.098906	2.067910
139	2.260578	2.212654	2.170148	2.132144	2.097925	2.066925
140	2.259623	2.211697	2.169188	2.131180	2.096958	2.065955
141	2.258683	2.210754	2.168242	2.130231	2.096005	2.064998
142	2.257756	2.209825	2.167310	2.129295	2.095066	2.064056
143	2.256842	2.208908	2.166390	2.128373	2.094141	2.063126
144	2.255941	2.208005	2.165484	2.127464	2.093228	2.062210
145	2.255053	2.207115	2.164591	2.126567	2.092328	2.061307
146	2.254177	2.206236	2.163710	2.125683	2.091441	2.060416
147	2.253314	2.205370	2.162841	2.124811	2.090566	2.059538
148	2.252462	2.204516	2.161985	2.123952	2.089703	2.058672
149	2.251622	2.203674	2.161140	2.123104	2.088852	2.057817
150	2.250794	2.202843	2.160306	2.122267	2.088012	2.056974
151	2.249976	2.202024	2.159484	2.121442	2.087184	2.056143

F $\alpha = 0.01$

df2	df1	13	14	15	16	17	18
152	2.249170	2.201215	2.158673	2.120628	2.086367	2.055323	
153	2.248374	2.200417	2.157872	2.119825	2.085561	2.054513	
154	2.247589	2.199630	2.157082	2.119032	2.084765	2.053715	
155	2.246815	2.198853	2.156303	2.118250	2.083980	2.052927	
156	2.246050	2.198086	2.155534	2.117478	2.083205	2.052149	
157	2.245295	2.197330	2.154775	2.116716	2.082441	2.051381	
158	2.244550	2.196583	2.154025	2.115964	2.081686	2.050623	
159	2.243815	2.195845	2.153285	2.115222	2.080940	2.049875	
160	2.243089	2.195117	2.152555	2.114489	2.080205	2.049136	
161	2.242372	2.194398	2.151834	2.113765	2.079478	2.048407	
162	2.241664	2.193688	2.151121	2.113050	2.078761	2.047686	
163	2.240966	2.192987	2.150418	2.112344	2.078052	2.046975	
164	2.240275	2.192295	2.149724	2.111647	2.077353	2.046273	
165	2.239594	2.191612	2.149038	2.110959	2.076662	2.045579	
166	2.238920	2.190936	2.148360	2.110279	2.075979	2.044894	
167	2.238255	2.190269	2.147691	2.109607	2.075305	2.044217	
168	2.237598	2.189610	2.147030	2.108944	2.074639	2.043548	
169	2.236949	2.188959	2.146377	2.108288	2.073981	2.042887	
170	2.236308	2.188316	2.145731	2.107641	2.073330	2.042234	
171	2.235674	2.187680	2.145094	2.107001	2.072688	2.041589	
172	2.235048	2.187052	2.144463	2.106368	2.072053	2.040952	
173	2.234429	2.186432	2.143841	2.105743	2.071426	2.040322	
174	2.233817	2.185818	2.143225	2.105125	2.070805	2.039699	
175	2.233213	2.185212	2.142617	2.104515	2.070193	2.039084	
176	2.232615	2.184613	2.142016	2.103911	2.069587	2.038476	
177	2.232024	2.184020	2.141421	2.103315	2.068988	2.037874	
178	2.231440	2.183435	2.140834	2.102725	2.068396	2.037280	
179	2.230863	2.182856	2.140253	2.102142	2.067810	2.036692	
180	2.230292	2.182283	2.139678	2.101566	2.067232	2.036111	
181	2.229728	2.181717	2.139110	2.100996	2.066660	2.035537	
182	2.229170	2.181158	2.138549	2.100432	2.066094	2.034968	
183	2.228618	2.180604	2.137994	2.099875	2.065534	2.034407	
184	2.228073	2.180057	2.137444	2.099323	2.064981	2.033851	
185	2.227533	2.179515	2.136901	2.098778	2.064433	2.033301	
186	2.226999	2.178980	2.136364	2.098239	2.063892	2.032758	
187	2.226471	2.178450	2.135833	2.097706	2.063357	2.032220	
188	2.225949	2.177927	2.135307	2.097178	2.062827	2.031688	
189	2.225432	2.177408	2.134787	2.096656	2.062303	2.031162	
190	2.224921	2.176896	2.134272	2.096140	2.061785	2.030642	
191	2.224415	2.176388	2.133764	2.095629	2.061272	2.030127	
192	2.223915	2.175887	2.133260	2.095123	2.060764	2.029617	
193	2.223420	2.175390	2.132762	2.094623	2.060262	2.029113	
194	2.222930	2.174899	2.132269	2.094128	2.059765	2.028614	
195	2.222445	2.174412	2.131781	2.093638	2.059273	2.028120	
196	2.221965	2.173931	2.131298	2.093154	2.058787	2.027632	
197	2.221490	2.173455	2.130820	2.092674	2.058305	2.027148	
198	2.221020	2.172983	2.130347	2.092199	2.057829	2.026669	
199	2.220555	2.172517	2.129879	2.091729	2.057357	2.026195	
200	2.220095	2.172055	2.129415	2.091264	2.056890	2.025726	
201	2.219639	2.171598	2.128956	2.090804	2.056427	2.025262	
202	2.219188	2.171145	2.128502	2.090348	2.055970	2.024803	
203	2.218741	2.170697	2.128053	2.089896	2.055516	2.024348	
204	2.218299	2.170253	2.127607	2.089450	2.055068	2.023897	
205	2.217861	2.169814	2.127167	2.089007	2.054624	2.023451	
206	2.217427	2.169379	2.126730	2.088569	2.054184	2.023009	
207	2.216998	2.168949	2.126298	2.088135	2.053748	2.022572	
208	2.216573	2.168522	2.125870	2.087706	2.053317	2.022139	
209	2.216152	2.168100	2.125447	2.087280	2.052890	2.021710	
210	2.215735	2.167682	2.125027	2.086859	2.052467	2.021285	
211	2.215322	2.167268	2.124611	2.086442	2.052048	2.020865	
212	2.214913	2.166857	2.124200	2.086029	2.051633	2.020448	
213	2.214508	2.166451	2.123792	2.085620	2.051222	2.020035	
214	2.214107	2.166049	2.123388	2.085214	2.050815	2.019627	
215	2.213709	2.165650	2.122988	2.084812	2.050412	2.019222	
216	2.213316	2.165255	2.122592	2.084415	2.050013	2.018821	
217	2.212926	2.164864	2.122199	2.084021	2.049617	2.018423	
218	2.212539	2.164476	2.121810	2.083630	2.049225	2.018029	
219	2.212156	2.164092	2.121425	2.083243	2.048836	2.017639	
220	2.211777	2.163712	2.121043	2.082860	2.048452	2.017253	
221	2.211401	2.163335	2.120665	2.082480	2.048070	2.016870	
222	2.211029	2.162961	2.120290	2.082104	2.047692	2.016491	
223	2.210660	2.162591	2.119918	2.081731	2.047318	2.016115	
224	2.210294	2.162224	2.119550	2.081362	2.046947	2.015742	
225	2.209932	2.161861	2.119185	2.080995	2.046579	2.015373	
226	2.209573	2.161501	2.118824	2.080632	2.046215	2.015007	
227	2.209217	2.161144	2.118466	2.080273	2.045854	2.014644	
228	2.208864	2.160790	2.118111	2.079916	2.045496	2.014285	
229	2.208515	2.160439	2.117759	2.079563	2.045141	2.013928	
230	2.208168	2.160091	2.117410	2.079213	2.044790	2.013575	
231	2.207825	2.159747	2.117064	2.078866	2.044441	2.013225	

F $\alpha = 0.01$

df2	df1	13	14	15	16	17	18
232	2.207484	2.159405	2.116721	2.078522	2.044095	2.012878	
233	2.207146	2.159067	2.116381	2.078180	2.043753	2.012534	
234	2.206812	2.158731	2.116044	2.077842	2.043413	2.012193	
235	2.206480	2.158398	2.115711	2.077507	2.043077	2.011855	
236	2.206151	2.158068	2.115379	2.077175	2.042743	2.011520	
237	2.205825	2.157741	2.115051	2.076845	2.042412	2.011188	
238	2.205502	2.157417	2.114726	2.076518	2.042084	2.010858	
239	2.205181	2.157095	2.114403	2.076194	2.041759	2.010531	
240	2.204864	2.156777	2.114083	2.075873	2.041436	2.010207	
241	2.204548	2.156460	2.113766	2.075555	2.041116	2.009886	
242	2.204236	2.156147	2.113451	2.075239	2.040799	2.009568	
243	2.203926	2.155836	2.113139	2.074926	2.040485	2.009252	
244	2.203619	2.155528	2.112830	2.074615	2.040173	2.008938	
245	2.203314	2.155222	2.112523	2.074307	2.039863	2.008628	
246	2.203011	2.154919	2.112218	2.074001	2.039556	2.008320	
247	2.202712	2.154618	2.111917	2.073698	2.039252	2.008014	
248	2.202414	2.154319	2.111617	2.073398	2.038950	2.007711	
249	2.202119	2.154024	2.111320	2.073099	2.038651	2.007410	
250	2.201827	2.153730	2.111026	2.072804	2.038354	2.007112	

df2	df1	19	20
1	6200.575564	6208.730222	
2	99.446540	99.449171	
3	26.718779	26.689791	
4	14.048027	14.019609	
5	9.579664	9.552646	
6	7.421861	7.395832	
7	6.180817	6.155438	
8	5.384045	5.359095	
9	4.832662	4.807995	
10	4.429872	4.405395	
11	4.123400	4.099046	
12	3.882708	3.858433	
13	3.688836	3.664609	
14	3.529424	3.505222	
15	3.396085	3.371892	
16	3.282934	3.258737	
17	3.185726	3.161518	
18	3.101323	3.077097	
19	3.027358	3.003109	
20	2.962011	2.937735	
21	2.903860	2.879556	
22	2.851781	2.827447	
23	2.804869	2.780504	
24	2.762394	2.737997	
25	2.723754	2.699325	
26	2.688452	2.663991	
27	2.656073	2.631580	
28	2.626269	2.601744	
29	2.598744	2.574188	
30	2.573246	2.548659	
31	2.549560	2.524942	
32	2.527498	2.502850	
33	2.506898	2.482222	
34	2.487621	2.462916	
35	2.469543	2.444810	
36	2.452554	2.427794	
37	2.436559	2.411773	
38	2.421474	2.396662	
39	2.407223	2.382385	
40	2.393738	2.368876	
41	2.380960	2.356074	
42	2.368833	2.343924	
43	2.357310	2.332378	
44	2.346347	2.321392	
45	2.335903	2.310926	
46	2.325942	2.300945	
47	2.316432	2.291414	
48	2.307343	2.282305	
49	2.298647	2.273589	
50	2.290319	2.265243	
51	2.282337	2.257242	
52	2.274679	2.249566	
53	2.267326	2.242195	
54	2.260260	2.235112	
55	2.253465	2.228300	
56	2.246925	2.221743	
57	2.240626	2.215428	

F $\alpha = 0.01$

df2	df1	19	20
58	2.234555	2.209342	
59	2.228700	2.203471	
60	2.223050	2.197806	
61	2.217593	2.192335	
62	2.212321	2.187048	
63	2.207224	2.181937	
64	2.202293	2.176992	
65	2.197520	2.172206	
66	2.192899	2.167572	
67	2.188421	2.163081	
68	2.184080	2.158728	
69	2.179871	2.154506	
70	2.175786	2.150410	
71	2.171821	2.146433	
72	2.167971	2.142571	
73	2.164230	2.138819	
74	2.160594	2.135172	
75	2.157059	2.131626	
76	2.153620	2.128177	
77	2.150274	2.124820	
78	2.147017	2.121552	
79	2.143845	2.118370	
80	2.140755	2.115271	
81	2.137744	2.112250	
82	2.134809	2.109306	
83	2.131947	2.106434	
84	2.129156	2.103634	
85	2.126432	2.100901	
86	2.123774	2.098234	
87	2.121178	2.095630	
88	2.118644	2.093087	
89	2.116168	2.090603	
90	2.113749	2.088176	
91	2.111385	2.085804	
92	2.109074	2.083485	
93	2.106814	2.081217	
94	2.104603	2.078999	
95	2.102440	2.076829	
96	2.100324	2.074705	
97	2.098252	2.072626	
98	2.096224	2.070591	
99	2.094238	2.068598	
100	2.092293	2.066646	
101	2.090388	2.064734	
102	2.088521	2.062860	
103	2.086691	2.061023	
104	2.084897	2.059223	
105	2.083138	2.057458	
106	2.081413	2.055727	
107	2.079721	2.054029	
108	2.078062	2.052363	
109	2.076433	2.050729	
110	2.074835	2.049125	
111	2.073267	2.047551	
112	2.071727	2.046005	
113	2.070215	2.044487	
114	2.068730	2.042997	
115	2.067272	2.041533	
116	2.065839	2.040095	
117	2.064431	2.038682	
118	2.063048	2.037294	
119	2.061689	2.035929	
120	2.060352	2.034588	
121	2.059039	2.033269	
122	2.057747	2.031973	
123	2.056477	2.030698	
124	2.055228	2.029444	
125	2.053999	2.028210	
126	2.052790	2.026996	
127	2.051600	2.025802	
128	2.050430	2.024627	
129	2.049278	2.023471	
130	2.048144	2.022332	
131	2.047028	2.021212	
132	2.045929	2.020109	
133	2.044847	2.019022	
134	2.043781	2.017952	
135	2.042731	2.016899	
136	2.041697	2.015861	
137	2.040679	2.014838	

F $\alpha = 0.01$

df2	df1	19	20
138	2.039676	2.013831	
139	2.038687	2.012838	
140	2.037713	2.011860	
141	2.036752	2.010896	
142	2.035806	2.009946	
143	2.034873	2.009009	
144	2.033953	2.008086	
145	2.033047	2.007175	
146	2.032152	2.006277	
147	2.031271	2.005392	
148	2.030401	2.004519	
149	2.029543	2.003658	
150	2.028697	2.002808	
151	2.027862	2.001970	
152	2.027039	2.001143	
153	2.026226	2.000327	
154	2.025424	1.999522	
155	2.024633	1.998727	
156	2.023852	1.997943	
157	2.023081	1.997169	
158	2.022320	1.996405	
159	2.021569	1.995650	
160	2.020827	1.994906	
161	2.020094	1.994170	
162	2.019371	1.993444	
163	2.018657	1.992727	
164	2.017952	1.992019	
165	2.017255	1.991319	
166	2.016567	1.990628	
167	2.015887	1.989946	
168	2.015216	1.989271	
169	2.014552	1.988605	
170	2.013897	1.987947	
171	2.013249	1.987296	
172	2.012609	1.986653	
173	2.011977	1.986018	
174	2.011351	1.985390	
175	2.010733	1.984770	
176	2.010123	1.984156	
177	2.009519	1.983550	
178	2.008922	1.982951	
179	2.008332	1.982358	
180	2.007748	1.981772	
181	2.007171	1.981193	
182	2.006601	1.980620	
183	2.006037	1.980053	
184	2.005479	1.979493	
185	2.004927	1.978938	
186	2.004381	1.978390	
187	2.003841	1.977848	
188	2.003307	1.977311	
189	2.002778	1.976781	
190	2.002256	1.976256	
191	2.001738	1.975736	
192	2.001227	1.975222	
193	2.000720	1.974714	
194	2.000219	1.974211	
195	1.999723	1.973713	
196	1.999233	1.973220	
197	1.998747	1.972732	
198	1.998266	1.972249	
199	1.997791	1.971771	
200	1.997320	1.971298	
201	1.996853	1.970830	
202	1.996392	1.970366	
203	1.995935	1.969907	
204	1.995482	1.969453	
205	1.995034	1.969003	
206	1.994591	1.968558	
207	1.994152	1.968116	
208	1.993717	1.967680	
209	1.993286	1.967247	
210	1.992859	1.966818	
211	1.992437	1.966394	
212	1.992018	1.965974	
213	1.991604	1.965558	
214	1.991193	1.965145	
215	1.990787	1.964737	
216	1.990384	1.964332	
217	1.989985	1.963931	

F $\alpha = 0.01$

df2	df1	19	20
218	1.989589	1.963534	
219	1.989198	1.963140	
220	1.988809	1.962751	
221	1.988425	1.962364	
222	1.988044	1.961981	
223	1.987666	1.961602	
224	1.987292	1.961226	
225	1.986921	1.960854	
226	1.986553	1.960485	
227	1.986189	1.960119	
228	1.985828	1.959756	
229	1.985470	1.959397	
230	1.985116	1.959040	
231	1.984764	1.958687	
232	1.984415	1.958337	
233	1.984070	1.957990	
234	1.983727	1.957646	
235	1.983388	1.957305	
236	1.983051	1.956967	
237	1.982717	1.956631	
238	1.982386	1.956299	
239	1.982058	1.955969	
240	1.981733	1.955642	
241	1.981410	1.955318	
242	1.981090	1.954997	
243	1.980773	1.954678	
244	1.980458	1.954362	
245	1.980146	1.954048	
246	1.979837	1.953738	
247	1.979530	1.953429	
248	1.979225	1.953123	
249	1.978923	1.952820	
250	1.978624	1.952519	

Cara membaca tabel titik kritis distribusi F

Misal ingin dicari titik kritis distribusi (sebaran) F dengan $\alpha = 0.05$, $df1 = 10$ dan $df2 = 100$, maka ikuti langkah-langkah di bawah ini:

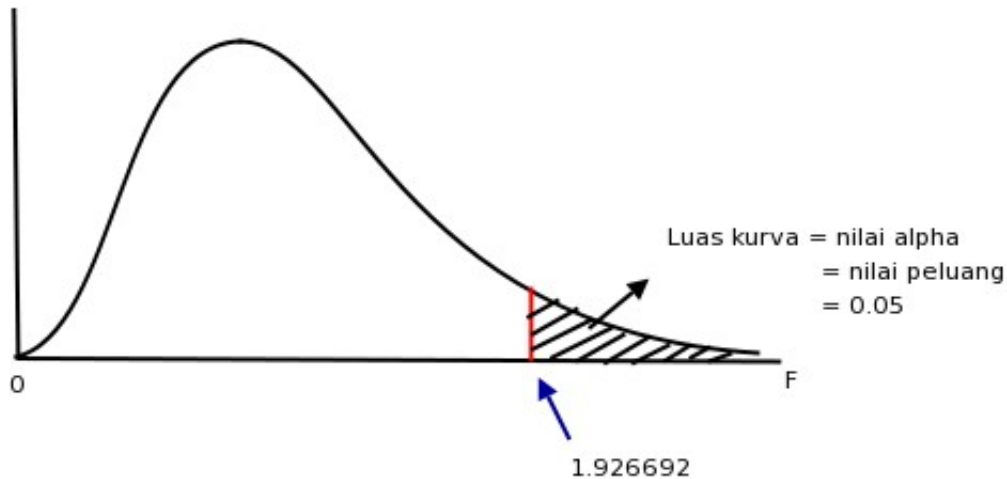
- periksa tabel distribusi F dengan $\alpha = 0.05$
- carilah angka 10 pada kolom **df1** (deret atas)
- carilah angka 100 pada kolom paling kiri (kolom **df2**) dari tabel
- tarik garis ke bawah dari posisi angka 10 pada kolom **df1** (deret atas), sedangkan dari kolom **df2** tarik garis ke kanan. Tentukan titik perpotongan keduanya.
- Titik perpotongan dari kedua garis adalah nilai titik kritis dari distribusi F yang dicari, dalam kasus ini adalah **1.926692**.

Keterangan:

$df = \text{degrees of freedom}$

= derajat bebas

Ilustrasi:



Perhatikan bahwa:

- kurva distribusi (sebaran) F tidak setangkup atau disebut juga asimetris. Jadi tidak seperti kurva distribusi t maupun z.
- kurva distribusi (sebaran) F dimulai dari nol. Dengan demikian **tidak mungkin** ada nilai F-tabel yang bertanda negatif.

Dalam membandingkan nilai tabel distribusi F (F-tabel) dengan nilai F-hitung di dalam konsep ANOVA dan regresi, apabila nilai F-hitung lebih besar dari F-tabel, maka menghasilkan kesimpulan statistika “TOLAK H_0 ”.