SKRIPSI

ANALISIS PENINGKATAN KUALITAS PELAYANAN JASA PADA NASABAH DI BANK BNI CABANG PATI DENGAN MENGGUNAKAN PENDEKATAN SIX SIGMA -DMAIC

Diajukan kepada Fakultas Sains dan Teknologi UIN Sunan Kalijaga Yogyakarta

Untuk Memenuhi Persyaratan Menyelesaikan Studi Strata Satu Program Studi Teknik Industri dan Memperoleh Gelar Sarjana Teknik (S.T.)

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Universitas Islam Negeri Sunan Kalijaga FM-UINSK-BM-05-07/R0

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Assalamu'alaikum wr. wb.

Setelah membaca, meneliti, memberikan petunjuk dan mengoreksi serta mengadakan perbaikan seperlunya, maka kami selaku pembimbing berpendapat bahwa skripsi Saudara:

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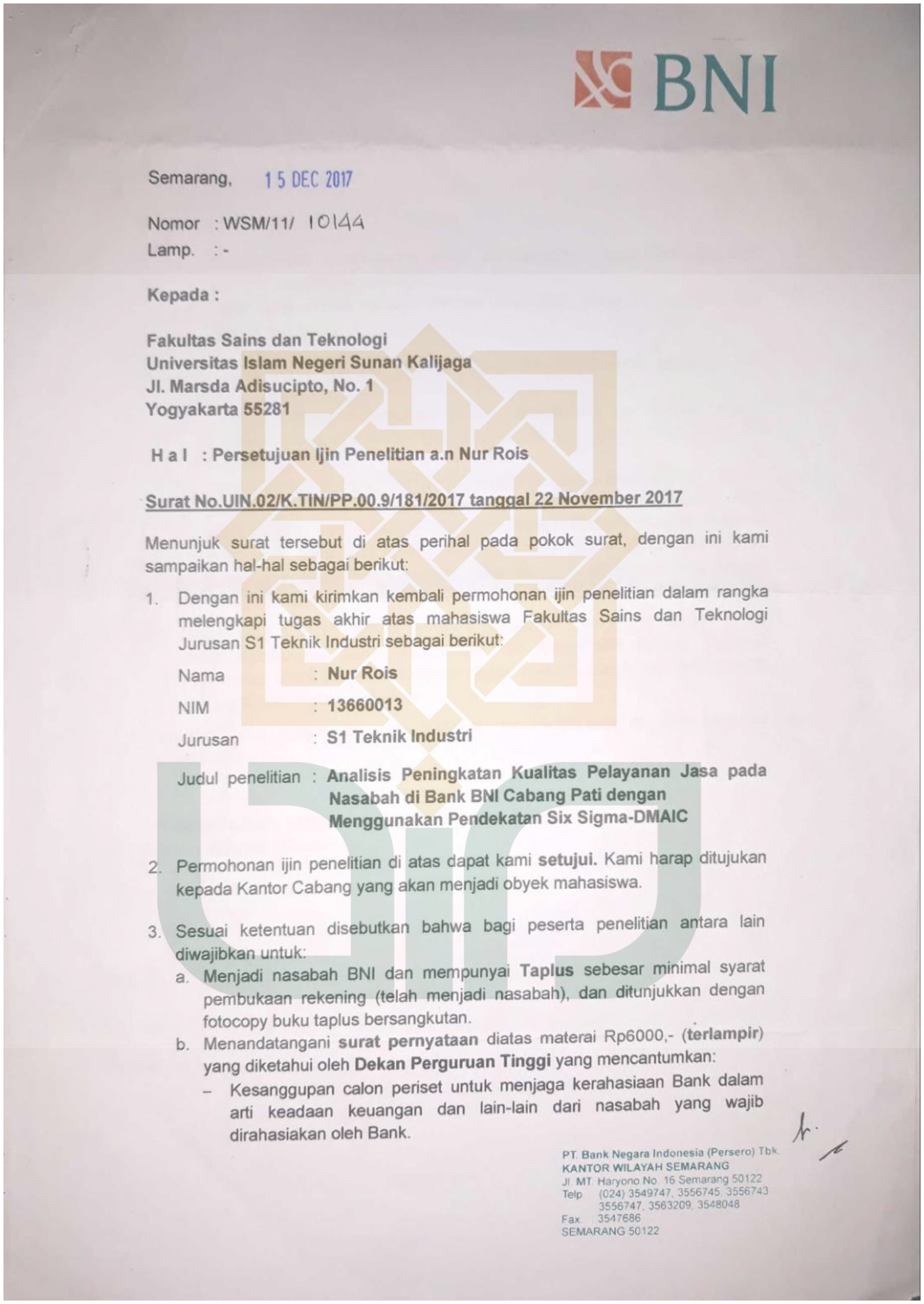

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H a l : Persetujuan Ijin Penelitian a.n Nur Rois

Surat No.UIN.02/K.TIN/PP.00.9/181/2017 tanggal 22 November 2017

Menunjuk surat tersebut di atas perihal pada pokok surat, dengan ini kami sampaikan hal-hal sebagai berikut:

1. Dengan ini kami kirimkan kembali permohonan ijin penelitian dalam rangka melengkapi tugas akhir atas mahasiswa Fakultas Sains dan Teknologi Jurusan S1 Teknik Industri sebagai berikut:

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2. Permohonan ijin penelitian di atas dapat kami **setujui.** Kami harap ditujukan kepada Kantor Cabang yang akan menjadi obyek mahasiswa.

3. Sesuai ketentuan disebutkan bahwa bagi peserta penelitian antara lain diwajibkan untuk:
   a. Menjadi nasabah BNI dan mempunyai **Taplus** sebesar minimal syarat pembukaan rekening (telah menjadi nasabah), dan ditunjukkan dengan fotocopy buku taplus bersangkutan.
   b. Menandatangani **surat pernyataan** diatas materai Rp6000,- (**terlampir**) yang diketahui oleh **Dekan Perguruan Tinggi** yang mencantumkan:
      - Kesanggupan calon periset untuk menjaga kerahasiaan Bank dalam arti keadaan keuangan dan lain-lain dari nasabah yang wajib dirahasiakan oleh Bank.

PT. Bank Negara Indonesia (Persero) Tbk.
KANTOR WILAYAH SEMARANG
Jl. MT. Haryono No. 16 Semarang 50122
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3556747, 3563209, 3548048
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HALAMAN MOTO

إِنَّ مَعَ الْعُسْرِ يُسْرًا

Artinya : "Sesungguhnya, sesudah kesulitan itu ada kemudahan." – (QS.94:6)

مَنْ خَرَ جَ فِى الْعِلْمِ طَلَبِ فَهُوَفِى سَبِيْلِ اللهِ

Artinya : Barang siapa keluar untuk mencari Ilmu maka dia berada di jalan Allah “. (HR. Turmudzi)

العِلْمُ بِلاَ عَمَلٍ كَالشَّجَرِ بِلاَ ثَمَر

Artinya : ilmu tanpa diamalkan bagaikan pohon tak berbuah

يـ ادنـ يا إخدمى من خدمـنى وا سـ تخدمى من خدمك

Artinya: Wahai dunia... mengabdilah kepada manusia yang mengabdi kepada Ku... dan perbudaklah manusia yang mengabdi kepada mu

HALAMAN PERSEMBAHAN

Skripsi ini saya persembahkan untuk

Ibunda Hj. Rami

Bapak H. Sariyun

Mas Bambang Sunariyo, Mbak Nur rofi'ah, Adek Fatimah Khoirul Nisa'

Keluarga Besar Teknik Industri 2013 (SINERGI)

Keluarga Besar Futsal Teknik Industri Uin Suka

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KATA PENGANTAR

بسم الله الرحمن الرحيم

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Yogyakarta, 13 Agustus 2018

Penulis

Nur Rois
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DAFTAR TABEL

Analisis Pelayanan Kualitas Jasa pada Bank BNI Cabang Pati dengan Menggunakan Pendekatan SIX SIGMA-DMAIC

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Program Studi Teknik Industri Fakultas Sains dan Teknologi

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ABSTRAK

Pelayanan merupakan salah satu faktor penting yang paling diupayakan pada perusahaan yang bergerak di bidang jasa, khususnya pada jasa perbankan. Pada Bank BNI cabang Pati memiliki beberapa masalah diantaranya pelayanan nasabah kurang cepat hal ini diakibatkan oleh banyaknya antrian, informasi yang diberikan kurang jelas, dan kurangnya pengetahuan aplikasi mobile Banking terhadap nasabah yang berakibat penumpukan pada antrian customer service. Maka dari itu dilakukan penelitian mengenai strategi Bank BNI cabang Pati dalam membangun kualitas pelayanan perbankan untuk menciptakan kepuasan nasabah pada Bank BNI di kawasan Pati Jawa Tengah. Penelitian ini dilakukan dengan tujuan untuk Menentukan tingkat kepuasan nasabah terhadap kualitas pelayanan jasa Bank BNI cabang Pati dan untuk Menentukan atribut yang menjadi prioritas dalam perbaikan kualitas pelayanan Bank BNI cabang Pati. Analisis pendekatan yang digunakan yaitu analisis Six Sigma-DMAIC dan kuesioner instrument SERVQUAL. Berdasarkan hasil pengolahan data menggunakan Six Sigma diketahui bahwa tingkat kualitas pelayanan pada Bank BNI cabang Pati atribut yang memuaskan nasabah bearada pada atribut T5, R5, RE1, RE3, RE4, A1, A2, A4, A5, E2, E3, E4 *dan yang harus dijadikan prioritas dalam perbaikan pelayanan Bank BNI Cabang Pati adalah R1, R2, R4, A3, dan E1.*

Kata Kunci *: Kualitas pelayanan, Servqual, Six Sigma-DMAIC, Diagram Kartesius.*

.

BAB I

PENDAHULUAN

1.1. Latar belakang

Persaingan era globalisasi tersebut mengakibatkan ketatnya kompetisi antar perusahan. Hal ini mengakibatkan setiap perusahaan menyusun kembali strategi untuk meningkatkan daya saing dalam pasar. Perubahan lingkungan bisnis yang secara langsung pesat telah membawa dampak yang sangat signifikan bagi perusahaan. Salah satunya mengenai persaingan kualitas produk, jasa dan harga akan semakin meningkat seiring berjalannya teknologi dan informasi. Hal ini menyebabkan setiap perusahaan saling bersaing untuk mendapatkan pelanggan dan kepercayaan terhadap pelayanan pada perusahaan tersebut.

Atmawati dan Wahyuddin (2007) menjelaskan persaingan didunia bisnis saat ini semakin meningkat dengan ketat, barang jasa yang ada di pasaran bisa memiliki keseragaman antara produk yang satu dengan produk yang lain. Meningkatnya intesitas persaingan dan jumlah persaingan menunutut perusahaan untuk selalu memperhatikan kebutuhan dan keinginan konsumen serta berusaha memenuhi harapan konsumen dengan cara memberikan pelayanan yang lebih memuaskan dari pada yang dilakukan oleh pesaing. Dengan demikian,hanya perusahaan yang berkualitas yang dapat bersaing dan menguasai pasar.

Evans dan Lindsay (2007) menyatakan agar bisa berkompetisi dimasa kini, setiap perusahaan perlu meningkatkan diri. Peningkatan dapat berbentuk perbaikan desain produk dan jasa, pengurangan cacat dan kesalahan

pelayanan, sistem operasi yang lebih ramping dan efisien, tanggapan pelayanan yang lebih cepat, keterampilan karyawan lebih baik.

Tunggal (1998) menyatakan untuk meningkatkan diri, perusahaan perlu menggunakan manajemen kualitas. Manajemen kualitas merupakan bagian dari semua fungsi usaha yang lain (pemaaran, sumber daya manusia, keuangan , dan lain-lain). Kualitas mempelajari setiap area dari manajemen operasi – dari perencanaan lini produk dan fasilitas, sampai penjadwalan dan monitoring hasil.

Mansur (2015) menyatakan adapun operasi pengendalian kualitas dapat dilakukan dengan berbagai macam metode di antaranya adalah perbaikan kualitas produk dengan pendekatan Six Sigma DMAIC *(define, measure, analyze, improve and control).* Dengan menerapkan metode Six Sigma DMAIC di perusahaan, maka akan dapat memberikan banyak manfaat bagi perusahaan, antara lain peningkatan produktivitas dan pengurangan cacat *(defect)*.

Bank merupakan suatu perusahaan yang bergerak di bidang jasa, sehingga kinerja perusahaan harus diukur pada aspek non finansial seperti perilaku karyawan, kemampuan karyawan, kepuasan pelanggan. Kinerja perusahaan dapat ditentukan oleh kombinasi faktor internal dan eksternal perusahaan. Faktor-faktor internal yang dimiliki perusahaan harus dikombinasikan dengan factor-faktor eksternal yang dimiliki perusahaan. Pelayanan merupakan salah satu faktor penting yang paling diupayakan pada perusahaan yang bergerak di bidang jasa, khususnya pada jasa perbankan. Wahlers (dalam Pribadi, 2007) mengungkapkan bahwa strategi yang tepat dan akurat dalam kualitas layanan

adalah faktor penting yang dapat mempengaruhi keunggulan bersaing jika strategi tersebut direncanakan dan diimplementasikan dengan tepat karena kualitas layanan adalah kualitas yang diukur pada jasa perbankan.

Pada Bank BNI cabang Pati memiliki beberapa masalah diantaranya pelayanan nasabah kurang cepat hal ini diakibatkan oleh banyaknya antrian dan kurangnya pengetahuan aplikasi mobile Banking terhadap nasabah yang berakibat penumpukan pada antrian *customer service*.

Berdasarkan penjelasan-penjelasan diatas, maka peneliti melakukan penelitian mengenai strategi Bank BNI cabang Pati dalam membangun kualitas pelayanan perbankan untuk menciptakan kepuasan nasabah pada Bank BNI di kawasan Pati Jawa Tengah.

1.2. Rumusan masalah

Berdasarkan urairan dari latar belakang pada sub bab sebelumnya maka dapat dirumuskan masalah sebagai berikut : "Bagaimanakah Kualitas Pelayanan jasa Bank BNI cabang Pati dengan pendekatan Six Sigma - DMAIC?"

1.3. Tujuan Penelitian

Tujuan dari penelitian yang akan dilakukan adalah sebagai berikut:

1. Menentukan tingkat kepuasan nasabah terhadap kualitas pelayanan jasa Bank BNI cabang Pati.
2. Menentukan atribut yang menjadi prioritas dalam perbaikan kualitas pelayanan Bank BNI cabang Pati menggunakan metode Six Sigma DMAIC.
3. Memberikan usulan perbaikan layanan pada Bank BNI cabang Pati.

1.4. Manfaat penelitian

Manfaat yang dapat diperoleh perusahaan melalui penelitian ini yaitu:

1. Sebagai sumber informasi pada pihak manajemen Bank BNI cabang Pati mengenai pelayanan yang dinilai penting maupun kurang penting oleh pelanggan sehingga mempunyai pengaruh signifikan terhadap kepuasan pelanggan.
2. Sebagai sumber informasi dalam pertimbangan peningkatan kualitas layanan Bank BNI cabang Pati.

1.5. Batasan Masalah

Pembahasan dan pengembangan suatu model pemecahan masalah perlu adanya batasan masalah. Adapun batasan masalah pada penelitian ini adalah nasabah yang menjadi responden kuesioner ini merupakan nasabah yang aktif mengunjungi Bank BNI cabang Pati dan solusi hanya dilakukan pada atribut yang masuk dalam kuadran I.

1.6. Sistematika Penulisan

Untuk memudahkan dalam mempelaajari tugas akhir ini maka diperlukan sistematika penuliasn sebagai berikut:

BAB I : PENDAHULUAN

Berisi tentang latar belakang masalah, rumusan masalah, tujuan penelitian, batasan masalah, manfaat penelitian dan sistematika penulisan. Yang diharapkan dapat memberikan gambaran secara umum tentang tugas akhir ini.

BAB II : LANDASAN TEORI

Berisi tentang konsep-konsep dan prinsip dasar digunakan oleh peneliti sebelumnya untuk memecahkan masalah yang dirumuskan dala, penelitian yang nantinya akan dijadikan sebagai bahan acuan bagi penelitian ini.

BAB III : METODOLOGI PENELITIAN

Menjelaskan tentang lokasi penelitian, waktu penelitian, jenis data, metode pengumpulan data, metode analisis data yang digunakan dalam penelitian dan diagram alir penelitian.

BAB IV : HASIL DAN PEMBAHASAN

Pada bab ini mengidentifikasi data dari hasil yang diperoleh selama penelitian, mengolah data hasil penelitian dengan menggunakan metode yang telah ditentukan, serta menganalisis hasil pengolahan data.

BAB V : PENUTUP

Pada bab ini berisi mengenai kesimpulan atas hasil penelitian yang telah dilakukan serta saran yang dapt diberikan oleh peneliti kepada perusahaan yang dapat digunakan oleh perusahaan sebagai evaluasi.

BAB V

PENUTUP

5.1. Kesimpulan

Berdasarkan hasil penelitian dan pengolahan data yang telah dilakukan oleh penulis, maka dapat diambil kesimpulan sebagai berikut:

1. Berdasarkan perhitungan menggunakan *Servqual* diketahui bahwa terjadi gap antara realita dan harapan pada dimensi *Tangible* sebesar –0.93, dimensi *Reliability* sebesar -0.968, dimensi *Responssiveness* sebesar -0..71, dimensi *Assurance* sebesar -0.854, dan dimensi *Emphaty* sebesar -0.8775. Maka secara keseluruhan dapat disimpulkan bahwa pelayanan di Bank BNI cabang Pati kurang memuaskan.
2. Berdasarkan pengolahan data menggunakan Six Sigma pada tahap Analyze menggunakan diagram kartesius terdapat atribut yang menjadi prioritas dalam perbaikan karena masuk dalam kuadran I diantaranya atribut R1 (Karyawan Bank BNI melayani Nasabah dengan cepat, teliti dan akurat), R2 (Informasi yang diberikan oleh *customer service* Bank BNI kepada Nasabah sangat jelas), R4 (Bank BNI menyediakan aplikasi dengan *Mobile Banking* di HP *smartphone*, sehingga mempermudah Nasabah untuk bertransaksi), A3 (Karyawan Bank BNI selalu membina hubungan yang baik dengan Nasabah), dan E1 (Karyawan Bank BNI dapat memberikan perhatian yang baik secara personal atau individu).
3. Usulan yang dapat dilakukan untuk meningkatkan pelayanan kualitas di Bank BNI cabang Pati pada atribut yang menjadi prioritas adalah sebagai berikut :

a. Untuk atribut R1 (Karyawan Bank BNI melayani Nasabah dengan cepat, teliti dan akurat) dengan *sigma* 2.739 perbaikan yang harus dilakukan oleh Bank BNI cabang Pati adalah melakukan pelatihan terhadap karyawan Bank BNI untuk meningkatkan kecepatan, ketelitian dan keakuratan dalam bekerja.

b. Untuk atribut R2 (Informasi yang diberikan oleh *customer service* Bank BNI kepada Nasabah sangat jelas) dengan *sigma* 2.675 perbaikan yang harus dilakukan oleh Bank BNI cabang Pati adalah dengan meningkatkan pemahaman staf *customer service* untu mengatasi keluhan nasabah untuk memperjelas informasi yang diberikan oleh *customer service.*

c. Untuk atribut R4 (Bank BNI menyediakan aplikasi dengan *Mobile Banking* di HP *smartphone*, sehingga mempermudah Nasabah untuk bertransaksi) dengan *sigma* 2.767 kebijakan yang seharusnya dilakukan oleh Bank BNI cabang Pati adalah melakukan sosialisasi penggunaan BNI mobile Banking serta kemudahan bertransaksi menggunakan smart phone terhadap nasabah Bank BNI cabang Pati.

d. Untuk atribut A3 (Karyawan Bank BNI selalu membina hubungan yang baik dengan Nasabah) dengan *sigma* 2.726 perbaikan yang seharusnya dilakukan oleh Bank BNI cabang Pati adalah memberlakukan 5S (senyum, salam, sapa, sopan dan santun) bagi karyawan pada saat melayani nasabah Bank BNI cabang Pati.

e. Untuk atribut E1 dengan *sigma* 2.957 kebijakan yang akan dilakukan oleh Bank BNI cabang Pati adalah memberikan solusi pada permasalahan nasabah sesuai dengan SOP dengan baik dan benar.

5.2. Saran

Saran yang dapat penulis berikan untuk penelitian selanjutnya adalah sebagai berikut:

1. Untuk perbaikan sebaiknya Bank BNI cabang Pati tidak hanya pada atribut yang menjadi prioritas akan tetapi pada semua atribut yang kurang memuaskan.
2. Penelitian selanjutnya bisa menggunakan sampel yang lebih banyak sehingga dapat memberikan gambaran populasi nasabah Bank BNI cabang Pati.

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LAMPIRAN

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KUESIONER PENELITIAN

Kepada Yth. Bapak/Ibu Responden

Bersamaan dengan ini saya sebarkan kuisoner untuk melengkapi data – data yang diperlukan dalam penyusunan skripsi yang sedang saya lakukan dengan judul :

"**ANALISIS PENINGKATAN KUALITAS PELAYANAN JASA PADA NASABAH DI BANK BNI CABANG PATI DENGAN MENGGUNAKAN PENDEKATAN SIX SIGMA –DMAIC"**

Saya mohon kesediaan responden agar kiranya sudi meluangkan waktu mengisi kuesioner yang telah saya susun ini. Responden diharapkan membaca dengan cermat dan teliti setiap pertanyaan sebelum mengisinya. Atas segala perhatian dan bantuannya saya ucapkan terimakasih.

Hormat Saya,

Nur rois
NIM. 13660013
Program Studi Teknik Industri

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A. PROFIL RESPONDEN

Pilihlah salah satu jawaban yang menurut Bapak/Ibu paling tepat dengan memberikan ***tanda silang (X)*** *pada setiap butir pernyataan.*

1. Jenis kelamin :
   a. Laki-Laki
   b. Perempuan
2. Pekerjaan Anda saat ini:
   a. Wirausaha
   b. Pegawai Swasta
   c. Pegawai Negeri /PNS/TNI-POLRI
   d. Pelajar/Mahasiswa
   e. Lainnya……
3. Pendidikan terakhir Anda:
   a. SD
   b. SLTP
   c. SLTA
   d. Sarjana
   e. Pascasarjana
   f. lainnya…….
4. Usia Anda saat ini:
   a. < 25 tahun
   b. 25 – 30 tahun
   c. 31 – 40 tahun
   d. 41 – 50 tahun
   e. 51 – 55 tahun
   f. > 55 tahun
5. Sudah berapa lama Anda menjadi nasabah BNI ?
   a. < 3 bulan
   b. 3 – 6 bulan
   c. 7 – 12 bulan
   d. > 1 tahun
6. Apakah anda adalah nasabah tetap BNI ?
   a. Ya
   b. Tidak

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B. PETUNJUK KUESIONER

Di bawah ini terdapat beberapa pertanyaan terkait kualitas pelayanan jasa pada nasabah di Bank BNI cabang Pati. Baca dan pahamilah setiap pertanyaan dengan seksama, kemudian berikan respon anda dengan memberikan tanda *Cheklist* (√) pada pertanyaan dibawah ini.

a) Bukti Fisik *(Tangible)*

No.	Item pertanyaan	Realita					Harapan				
		Sangat tidak setuju				Sangat setuju	Sangat tidak setuju				Sangat setuju
		1	2	3	4	5	1	2	3	4	5
1.	Bank BNI memiliki sarana parkir yang luas .										
2.	Karyawan Bank BNI berpenampilan rapi dan sopan.										
3.	Ruangan Bank BNI bersih dan rapi.										
4.	Bank BNI mempunyai perlengkapan dan teknologi seperti komputer, telpon, AC yang memadai.										
5.	Bank BNI memiliki ATM yang mudah ditemui di wilayah Pati.										

b) Keandalan *(Reliability)*

No.	Item pertanyaan	Realita					Harapan				
		Sangat tidak setuju				Sangat setuju	Sangat tidak setuju				Sangat setuju
		1	2	3	4	5	1	2	3	4	5
1.	Karyawan Bank BNI melayani nasabah dengan cepat, teliti dan akurat.										
2.	Informasi yang diberikan oleh Customer service bank BNI kepada nasabah sangat jelas.										
3.	Jaringan Bank BNI sangat luas sehingga memudahkan nasabah untuk bertransaksi di ATM Bank lain.										
4.	Bank BNI menyediakan aplikasi BNI Mobile Banking di hp smart phone, sehingga										

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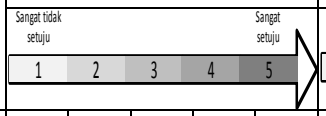
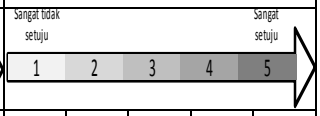
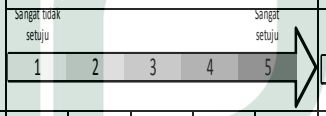
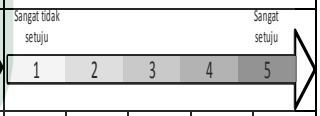
	mempermudah nasabah untuk bertransaksi.										
5.	Bank BNI menjamin kerahasiaan data nasabah dengan baik.										

c) Daya Tanggap *(Responssiveness)*

No.	Item pertanyaan	Realita 					Harapan 				
1.	Karyawan Bank BNI selalu bersedia membantu memberikan pelayanan dengan baik dan cepat kepada nasabah.										
2.	Nasabah mudah menghubungi Call Center Bank BNI untuk mengetahui informasi.										
3.	Satpam Bank BNI selalu memberikan pengarahan kepada nasabah saat akan bertransaksi.										
4.	Customer service Bank BNI selalu memberikan pelayanan dengan baik, sopan, ramah dan senyum dalam melayani nasabah.										

d) Jaminan *(Assurance)*

No.	Item pertanyaan	Realita 					Harapan 				
1.	Customer service mampu menyakinkan nasabah bahwa produk tabungan BNI merupakan produk yang kompetitif.										
2.	Bank BNI menjamin kerahasiaan transaksi para nasabah.										
3.	Karyawan BNI selalu membina hubungan yang baik dengan nasabah.										
4.	Nasabah bisa mengambil dana setiap saat yang dibutuhkan di ATM Bank BNI.										
5.	Karyawan mampu memberikan penjelasan mengenai produk										

	Bank BNI dengan jelas.										

e) Empati *(Empathy)*

No.	Item pertanyaan	Realita					Harapan				
		Sangat tidak setuju 1	2	3	4	Sangat setuju 5	Sangat tidak setuju 1	2	3	4	Sangat setuju 5
1.	Karyawan Bank BNI dapat memberilan solusi yang baik kepada nasabah.										
2.	Karyawan Bank BNI mampu meberikan perhatian yang baik secara personal / individu.										
3.	Karyawan BNI selalu memberikan salam ketika selesai melayani transaksi.										
4.	Customer service Bank BNI selalu memperhatikan kepentingan nasabah dengan sungguh - sungguh.										

1. Data Kuesioner Realita

Data Kuisioner analisis kualitas jasa																							
	Tangibles					Reliability					Responsiveness				Assurance					Empathy			
Responden	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23
1	4	3	5	5	5	4	4	5	5	5	5	5	5	4	5	5	5	4	5	4	5	5	4
2	5	4	4	5	5	5	5	5	5	5	4	4	5	5	4	5	5	5	5	4	5	5	4
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4	5	5	5	4	5	5	5	5	5	5	5	5	5	4	5	4	5	5	5	5	5	5	5
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6	4	4	4	5	5	4	5	5	5	5	5	5	5	5	4	4	5	5	4	5	4	4	5
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92	4	3	5	4	5	4	4	4	4	5	4	3	5	4	5	4	4	5	5	4	5	4	4
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99	4	4	4	4	5	4	4	5	4	4	4	3	4	3	2	4	3	5	5	4	3	2	4
100	4	4	4	4	5	4	4	4	4	4	4	3	4	4	4	4	4	4	5	4	4	4	4
Rata-rata	4.3	3.86	4.4	4.25	4.64	4.23	4.15	4.32	4.3	4.11	4.29	3.81	4.29	4.31	4.33	4.38	3.94	4.54	4.52	4.26	4.32	4.45	4.53

2. Data Kuesioner Harapan

Data Kuisioner analisis kualitas jasa																							
	Tangibles					Reliability					Responsiveness				Assurance					Empathy			
Responden	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23
1	5	5	5	5	4	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5
2	5	5	5	5	5	5	5	4	5	4	5	5	4	4	5	5	5	5	5	4	4	5	5
3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4	5	5	5	5	4	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
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12	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
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90	4	4	5	4	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5
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96	5	3	4	4	5	4	4	4	5	4	5	4	5	4	4	4	4	5	5	5	5	5	5
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98	4	4	5	5	5	5	5	4	5	4	5	5	5	4	5	5	5	4	5	5	5	5	5
99	5	4	5	5	3	5	5	4	5	4	5	4	5	4	4	4	4	5	5	5	5	5	5
100	4	4	4	5	4	5	5	5	5	4	4	4	5	4	5	5	5	5	5	5	5	5	5
Rata – rata	4.48	4.57	4.6	4.6	4.59	4.64	4.63	4.55	4.63	4.48	4.62	4.3	4.74	4.35	4.5	4.64	4.69	4.72	4.68	4.69	4.73	4.72	4.72

1. Uji Validitas dan Reabilitas Realita
   a. Tangible

		Q1	Q2	Q3	Q4	Q5	TOTAL
Q1	Pearson Correlation	1	.389*	.194	.075	.245	.566**
	Sig. (2-tailed)		.034	.303	.694	.192	.001
	N	30	30	30	30	30	30
Q2	Pearson Correlation	.389*	1	.565**	.279	.365*	.792**
	Sig. (2-tailed)	.034		.001	.135	.047	.000
	N	30	30	30	30	30	30
Q3	Pearson Correlation	.194	.565**	1	.391*	.243	.734**
	Sig. (2-tailed)	.303	.001		.033	.195	.000
	N	30	30	30	30	30	30
Q4	Pearson Correlation	.075	.279	.391*	1	.636**	.652**
	Sig. (2-tailed)	.694	.135	.033		.000	.000
	N	30	30	30	30	30	30
Q5	Pearson Correlation	.245	.365*	.243	.636**	1	.674**
	Sig. (2-tailed)	.192	.047	.195	.000		.000
	N	30	30	30	30	30	30
TOTAL	Pearson Correlation	.566**	.792**	.734**	.652**	.674**	1
	Sig. (2-tailed)	.001	.000	.000	.000	.000	
	N	30	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.714	.719	5

b. Reability

		Q6	Q7	Q8	Q9	Q10	TOTAL
Q6	Pearson Correlation	1	.536**	.467**	.218	.378*	.677**
	Sig. (2-tailed)		.002	.009	.247	.039	.000
	N	30	30	30	30	30	30
Q7	Pearson Correlation	.536**	1	.579**	.464**	.268	.766**
	Sig. (2-tailed)	.002		.001	.010	.152	.000
	N	30	30	30	30	30	30
Q8	Pearson Correlation	.467**	.579**	1	.802**	.617**	.882**
	Sig. (2-tailed)	.009	.001		.000	.000	.000
	N	30	30	30	30	30	30
Q9	Pearson Correlation	.218	.464**	.802**	1	.722**	.812**
	Sig. (2-tailed)	.247	.010	.000		.000	.000
	N	30	30	30	30	30	30
Q10	Pearson Correlation	.378*	.268	.617**	.722**	1	.745**
	Sig. (2-tailed)	.039	.152	.000	.000		.000
	N	30	30	30	30	30	30
TOTAL	Pearson Correlation	.677**	.766**	.882**	.812**	.745**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	30	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.828	.836	5

c. Responsiveness

		Q11	Q12	Q13	Q14	TOTAL
Q11	Pearson Correlation	1	.885**	.584**	.639**	.879**
	Sig. (2-tailed)		.000	.001	.000	.000
	N	30	30	30	30	30
Q12	Pearson Correlation	.885**	1	.733**	.674**	.937**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	30	30	30	30	30
Q13	Pearson Correlation	.584**	.733**	1	.625**	.846**
	Sig. (2-tailed)	.001	.000		.000	.000
	N	30	30	30	30	30
Q14	Pearson Correlation	.639**	.674**	.625**	1	.842**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	30	30	30	30	30
TOTAL	Pearson Correlation	.879**	.937**	.846**	.842**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.897	.899	4

d. Assurance

		Q15	Q16	Q17	Q18	Q19	TOTAL
Q15	Pearson Correlation	1	.713**	.485**	.636**	.476**	.828**
	Sig. (2-tailed)		.000	.007	.000	.008	.000
	N	30	30	30	30	30	30
Q16	Pearson Correlation	.713**	1	.485**	.636**	.476**	.828**
	Sig. (2-tailed)	.000		.007	.000	.008	.000
	N	30	30	30	30	30	30
Q17	Pearson Correlation	.485**	.485**	1	.522**	.351	.727**
	Sig. (2-tailed)	.007	.007		.003	.057	.000
	N	30	30	30	30	30	30
Q18	Pearson Correlation	.636**	.636**	.522**	1	.545**	.837**
	Sig. (2-tailed)	.000	.000	.003		.002	.000
	N	30	30	30	30	30	30
Q19	Pearson Correlation	.476**	.476**	.351	.545**	1	.734**
	Sig. (2-tailed)	.008	.008	.057	.002		.000
	N	30	30	30	30	30	30
TOTAL	Pearson Correlation	.828**	.828**	.727**	.837**	.734**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	30	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.845	.851	5

e. Empathy

		Q20	Q21	Q22	Q23	TOTAL
Q20	Pearson Correlation	1	.055	.330	.614**	.740**
	Sig. (2-tailed)		.775	.075	.000	.000
	N	30	30	30	30	30
Q21	Pearson Correlation	.055	1	.327	.144	.565**
	Sig. (2-tailed)	.775		.077	.447	.001
	N	30	30	30	30	30
Q22	Pearson Correlation	.330	.327	1	.189	.689**
	Sig. (2-tailed)	.075	.077		.317	.000
	N	30	30	30	30	30
Q23	Pearson Correlation	.614**	.144	.189	1	.712**
	Sig. (2-tailed)	.000	.447	.317		.000
	N	30	30	30	30	30
TOTAL	Pearson Correlation	.740**	.565**	.689**	.712**	1
	Sig. (2-tailed)	.000	.001	.000	.000	
	N	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.604	.605	4

2. Uji Validitas dan Reabilitas Harapan
   a. Tangible

		Q1	Q2	Q3	Q4	Q5	JUMLAH
Q1	Pearson Correlation	1	.873**	.935**	.736**	.530**	.934**
	Sig. (2-tailed)		.000	.000	.000	.003	.000
	N	30	30	30	30	30	30
Q2	Pearson Correlation	.873**	1	.796**	.583**	.522**	.865**
	Sig. (2-tailed)	.000		.000	.001	.003	.000
	N	30	30	30	30	30	30
Q3	Pearson Correlation	.935**	.796**	1	.796**	.593**	.944**
	Sig. (2-tailed)	.000	.000		.000	.001	.000
	N	30	30	30	30	30	30
Q4	Pearson Correlation	.736**	.583**	.796**	1	.659**	.865**
	Sig. (2-tailed)	.000	.001	.000		.000	.000
	N	30	30	30	30	30	30
Q5	Pearson Correlation	.530**	.522**	.593**	.659**	1	.757**
	Sig. (2-tailed)	.003	.003	.001	.000		.000
	N	30	30	30	30	30	30
JUMLAH	Pearson Correlation	.934**	.865**	.944**	.865**	.757**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	30	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.922	.922	5

b. Reliability

		Q6	Q7	Q8	Q9	Q10	JUMLAH
Q6	Pearson Correlation	1	.649**	.433*	.653**	.649**	.805**
	Sig. (2-tailed)		.000	.017	.000	.000	.000
	N	30	30	30	30	30	30
Q7	Pearson Correlation	.649**	1	.489**	.709**	.713**	.845**
	Sig. (2-tailed)	.000		.006	.000	.000	.000
	N	30	30	30	30	30	30
Q8	Pearson Correlation	.433*	.489**	1	.772**	.636**	.785**
	Sig. (2-tailed)	.017	.006		.000	.000	.000
	N	30	30	30	30	30	30
Q9	Pearson Correlation	.653**	.709**	.772**	1	.709**	.908**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	30	30	30	30	30	30
Q10	Pearson Correlation	.649**	.713**	.636**	.709**	1	.879**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	30	30	30	30	30	30
JUMLAH	Pearson Correlation	.805**	.845**	.785**	.908**	.879**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	30	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.899	.899	5

c. Responsiveness

		Q11	Q12	Q13	Q14	JUMLAH
Q11	Pearson Correlation	1	.921**	.592**	.709**	.918**
	Sig. (2-tailed)		.000	.001	.000	.000
	N	30	30	30	30	30
Q12	Pearson Correlation	.921**	1	.659**	.636**	.914**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	30	30	30	30	30
Q13	Pearson Correlation	.592**	.659**	1	.636**	.820**
	Sig. (2-tailed)	.001	.000		.000	.000
	N	30	30	30	30	30
Q14	Pearson Correlation	.709**	.636**	.636**	1	.856**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	30	30	30	30	30
JUMLAH	Pearson Correlation	.918**	.914**	.820**	.856**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.899	.900	4

d. Assurance

		Q15	Q16	Q17	Q18	Q19	JUMLAH
Q15	Pearson Correlation	1	.646**	.659**	.243	.529**	.803**
	Sig. (1-tailed)		.000	.000	.097	.001	.000
	N	30	30	30	30	30	30
Q16	Pearson Correlation	.646**	1	.653**	.592**	.524**	.850**

	Sig. (1-tailed)	.000		.000	.000	.001	.000
	N	30	30	30	30	30	30
Q17	Pearson Correlation	.659**	.653**	1	.585**	.505**	.853**
	Sig. (1-tailed)	.000	.000		.000	.002	.000
	N	30	30	30	30	30	30
Q18	Pearson Correlation	.243	.592**	.585**	1	.592**	.719**
	Sig. (1-tailed)	.097	.000	.000		.000	.000
	N	30	30	30	30	30	30
Q19	Pearson Correlation	.529**	.524**	.505**	.592**	1	.776**
	Sig. (1-tailed)	.001	.001	.002	.000		.000
	N	30	30	30	30	30	30
JUMLAH	Pearson Correlation	.803**	.850**	.853**	.719**	.776**	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	
	N	30	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.854	.861	5

e. Empathy

		Q20	Q21	Q22	Q23	JUMLAH
Q20	Pearson Correlation	1	.929**	.617**	.463**	.911**
	Sig. (2-tailed)		.000	.000	.010	.000
	N	30	30	30	30	30
Q21	Pearson Correlation	.929**	1	.709**	.408*	.922**
	Sig. (2-tailed)	.000		.000	.025	.000
	N	30	30	30	30	30
Q22	Pearson Correlation	.617**	.709**	1	.365*	.811**
	Sig. (2-tailed)	.000	.000		.047	.000
	N	30	30	30	30	30
Q23	Pearson Correlation	.463**	.408*	.365*	1	.670**
	Sig. (2-tailed)	.010	.025	.047		.000
	N	30	30	30	30	30
JUMLAH	Pearson Correlation	.911**	.922**	.811**	.670**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	30	30	30	30	30

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.850	.848	4

TABEL DISTRIBUSI

Dilengkapi Metode Untuk Membaca Tabel Distribusi

Deny Kurniawan
2008

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

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

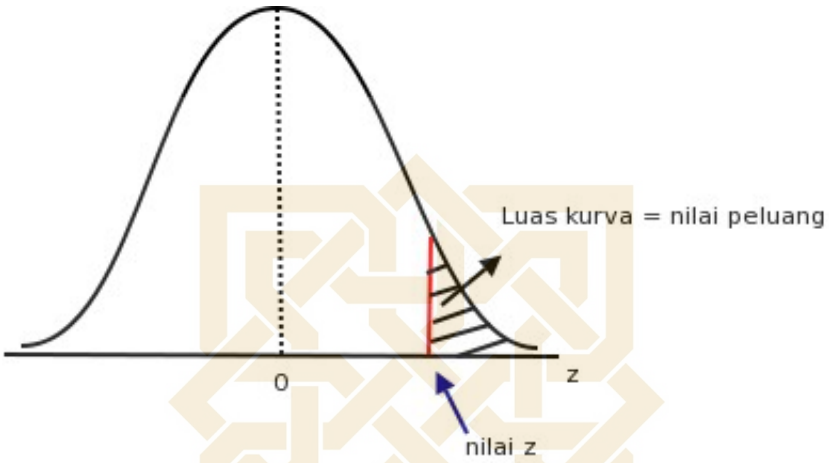
A program for drawing structured diagrams.
(C) 1998-2006 The Free Software Foundation and the authors
http://www.gnome.org/projects/dia/

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

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 = + ∞ s.d. nilai z yang dimaksud.

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

	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

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

	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

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	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

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Cara mambaca 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

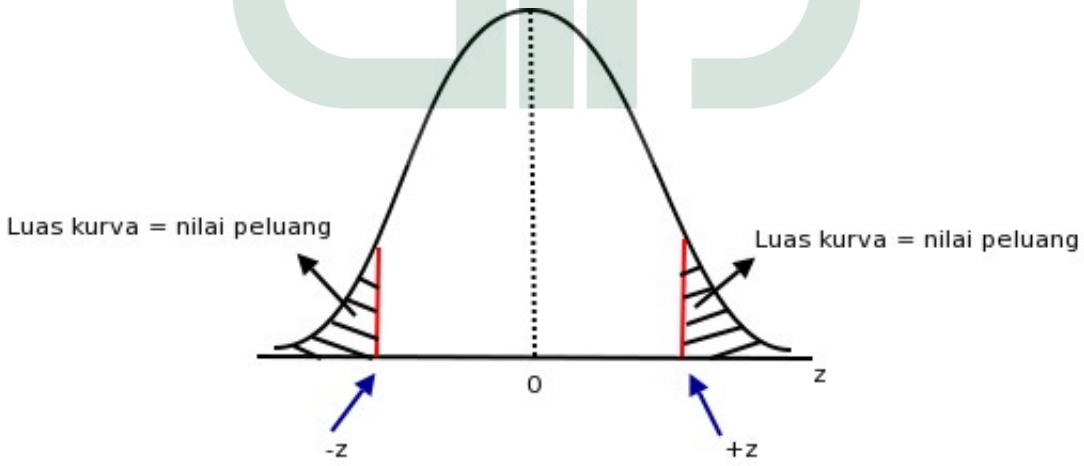
Misal ingin dicari nilai peluang dari nilai z sebesar 1.645, maka langkah-langkah yang perlu dilakukan:

- 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:



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Tabel Titik Kritis Distribusi t

df	α 0.1	0.05	0.025	0.01	0.005	0.0025	0.001
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

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df	α 0.1	0.05	0.025	0.01	0.005	0.0025	0.001
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	1.656659	1.978380	2.355375	2.614177	2.855736	3.154107
131	1.288047	1.656569	1.978239	2.355150	2.613880	2.855358	3.153611
132	1.287998	1.656479	1.978099	2.354930	2.613588	2.854986	3.153122
133	1.287949	1.656391	1.977961	2.354712	2.613300	2.854620	3.152640
134	1.287901	1.656305	1.977826	2.354498	2.613017	2.854260	3.152166
135	1.287854	1.656219	1.977692	2.354287	2.612738	2.853904	3.151699
136	1.287807	1.656135	1.977561	2.354079	2.612463	2.853554	3.151239
137	1.287762	1.656052	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

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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	3.135114
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

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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`.

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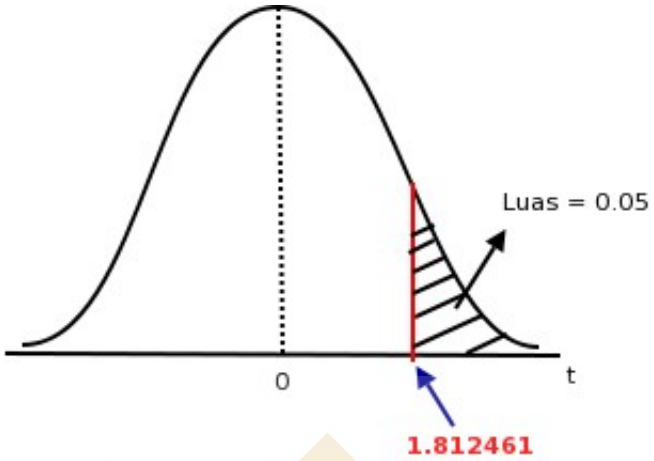
Kurva distribusi t beserta titik kritis yang dimaksud digambarkan seperti di bawah ini:



**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).

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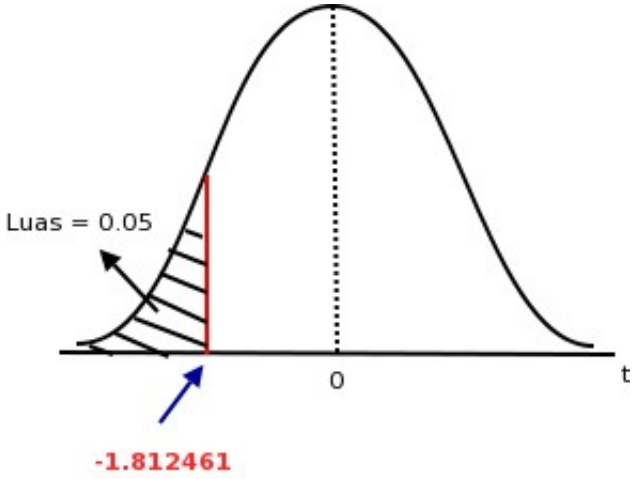
Kurva distribusi t beserta titik kritis yang dimaksud digambarkan seperti di bawah ini:



**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:
$H_0 : \beta_i = 0$
$H_1 : \beta_i \neq 0$
$i = 0, 1, 2, ..., k$
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` .

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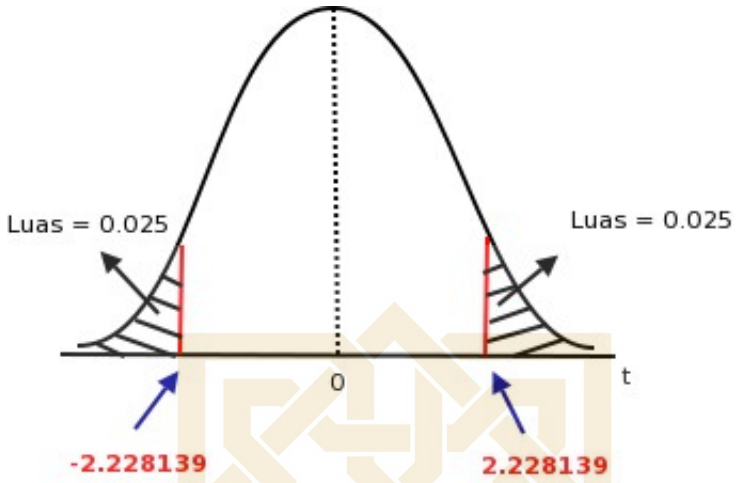
- Nilai titik kritis `-2.228139` diperoleh secara mudah dengan cara memberikan tanda negatif pada titik kritis yang positif. Kemudahan ini didasarkan atas sifat kurva distribusi t yang setangkup (simetris).

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*).

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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

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F $\alpha = 0.1$

df2 \ 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

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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

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F $\alpha = 0.1$

df2 \ df1	1	2	3	4	5	6	7
228	2.727664	2.325996	2.107959	1.969677	1.872701	1.800120	1.743292
229	2.727567	2.325893	2.107853	1.969568	1.872589	1.800006	1.743175
230	2.727471	2.325791	2.107748	1.969460	1.872478	1.799892	1.743059
231	2.727375	2.325690	2.107643	1.969353	1.872369	1.799780	1.742945
232	2.727281	2.325590	2.107540	1.969247	1.872260	1.799669	1.742831
233	2.727187	2.325491	2.107437	1.969141	1.872152	1.799558	1.742718
234	2.727094	2.325392	2.107335	1.969037	1.872045	1.799449	1.742607
235	2.727002	2.325294	2.107235	1.968933	1.871939	1.799340	1.742496
236	2.726910	2.325198	2.107135	1.968830	1.871834	1.799233	1.742386
237	2.726819	2.325102	2.107035	1.968729	1.871729	1.799126	1.742277
238	2.726729	2.325006	2.106937	1.968628	1.871626	1.799020	1.742169
239	2.726640	2.324912	2.106840	1.968528	1.871523	1.798916	1.742062
240	2.726552	2.324818	2.106743	1.968428	1.871422	1.798812	1.741956
241	2.726464	2.324725	2.106647	1.968330	1.871321	1.798708	1.741850
242	2.726377	2.324633	2.106552	1.968232	1.871221	1.798606	1.741746
243	2.726291	2.324542	2.106458	1.968136	1.871122	1.798505	1.741642
244	2.726206	2.324452	2.106364	1.968040	1.871023	1.798404	1.741540
245	2.726121	2.324362	2.106272	1.967944	1.870926	1.798304	1.741438
246	2.726037	2.324273	2.106180	1.967850	1.870829	1.798205	1.741337
247	2.725953	2.324184	2.106089	1.967756	1.870733	1.798107	1.741237
248	2.725870	2.324097	2.105998	1.967663	1.870638	1.798010	1.741137
249	2.725788	2.324010	2.105908	1.967571	1.870543	1.797913	1.741039
250	2.725707	2.323924	2.105819	1.967480	1.870450	1.797818	1.740941

df2 \ df1	8	9	10	11	12	13	14
1	59.438981	59.857585	60.194980	60.472676	60.705212	60.902764	61.072668
2	9.366770	9.380544	9.391573	9.400603	9.408132	9.414506	9.419972
3	5.251671	5.239996	5.230411	5.222405	5.215618	5.209792	5.204739
4	3.954940	3.935671	3.919876	3.906694	3.895527	3.885946	3.877636
5	3.339276	3.316281	3.297402	3.281623	3.268239	3.256743	3.246760
6	2.983036	2.957741	2.936935	2.919517	2.904721	2.891994	2.880930
7	2.751580	2.724678	2.702510	2.683924	2.668111	2.654493	2.642641
8	2.589349	2.561238	2.538037	2.518554	2.501958	2.487647	2.475178
9	2.469406	2.440340	2.416316	2.396114	2.378885	2.364012	2.351040
10	2.377150	2.347306	2.322604	2.301808	2.284051	2.268708	2.255313
11	2.303997	2.273502	2.248230	2.226930	2.208725	2.192979	2.179221
12	2.244575	2.213525	2.187764	2.166031	2.147437	2.131341	2.117267
13	2.195350	2.163820	2.137635	2.115522	2.096588	2.080185	2.065831
14	2.153904	2.121955	2.095396	2.072950	2.053714	2.037038	2.022434
15	2.118530	2.086209	2.059319	2.036575	2.017070	2.000148	1.985321
16	2.087982	2.055331	2.028145	2.005134	1.985386	1.968243	1.953212
17	2.061336	2.028388	2.000936	1.977683	1.957716	1.940372	1.925157
18	2.037889	2.004674	1.976980	1.953508	1.933340	1.915813	1.900428
19	2.017098	1.983639	1.955725	1.932053	1.911702	1.894006	1.878467
20	1.998534	1.964853	1.936738	1.912882	1.892363	1.874512	1.858829
21	1.981858	1.947974	1.919674	1.895649	1.874975	1.856980	1.841165
22	1.966796	1.932725	1.904255	1.880073	1.859255	1.841127	1.825189
23	1.953124	1.918880	1.890252	1.865926	1.844974	1.826723	1.810670
24	1.940658	1.906255	1.877480	1.853018	1.831942	1.813576	1.797415
25	1.929246	1.894693	1.865782	1.841195	1.820003	1.801528	1.785267
26	1.918758	1.884067	1.855028	1.830324	1.809023	1.790447	1.774092
27	1.909087	1.874267	1.845109	1.820295	1.798891	1.780221	1.763777
28	1.900141	1.865199	1.835930	1.811012	1.789513	1.770753	1.754226
29	1.891842	1.856786	1.827412	1.802397	1.780807	1.761963	1.745356
30	1.884121	1.848958	1.819485	1.794379	1.772704	1.753780	1.737098
31	1.876920	1.841657	1.812091	1.786898	1.765142	1.746142	1.729390
32	1.870189	1.834831	1.805176	1.779901	1.758069	1.738998	1.722179
33	1.863882	1.828434	1.798697	1.773344	1.751439	1.732300	1.715417
34	1.857961	1.822428	1.792612	1.767185	1.745212	1.726008	1.709065
35	1.852392	1.816778	1.786887	1.761390	1.739351	1.720087	1.703085
36	1.847144	1.811453	1.781491	1.755928	1.733826	1.714503	1.697447
37	1.842190	1.806426	1.776396	1.750769	1.728609	1.709230	1.692121
38	1.837505	1.801673	1.771578	1.745891	1.723673	1.704241	1.687082
39	1.833070	1.797171	1.767014	1.741270	1.718998	1.699515	1.682307
40	1.828863	1.792902	1.762686	1.736886	1.714563	1.695030	1.677777
41	1.824869	1.788847	1.758575	1.732722	1.710349	1.690770	1.673472
42	1.821071	1.784991	1.754665	1.728762	1.706341	1.686717	1.669377
43	1.817455	1.781320	1.750942	1.724990	1.702524	1.682857	1.665476
44	1.814008	1.777820	1.747393	1.721395	1.698885	1.679176	1.661756
45	1.810719	1.774480	1.744006	1.717963	1.695411	1.675663	1.658205
46	1.807577	1.771290	1.740769	1.714684	1.692091	1.672305	1.654811
47	1.804573	1.768239	1.737674	1.711548	1.688916	1.669093	1.651564
48	1.801697	1.765318	1.734712	1.708545	1.685876	1.666017	1.648455
49	1.798942	1.762520	1.731872	1.705667	1.682962	1.663069	1.645474
50	1.796300	1.759836	1.729150	1.702908	1.680167	1.660241	1.642615
51	1.793764	1.757260	1.726536	1.700258	1.677485	1.657527	1.639870
52	1.791328	1.754786	1.724025	1.697713	1.674907	1.654918	1.637232
53	1.788987	1.752407	1.721611	1.695266	1.672428	1.652410	1.634696
54	1.786734	1.750118	1.719288	1.692911	1.670043	1.649996	1.632254

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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

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F $\alpha = 0.1$

df2 \ 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

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F $\alpha = 0.1$

df2 \ 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

df2 \ 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

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F $\alpha = 0.1$

df2 \ df1	15	16	17	18	19	20
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

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F $\alpha = 0.1$

df2 \ df1	15	16	17	18	19	20
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

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F $\alpha = 0.1$

df2 \ 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	1.454780
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

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F $\alpha = 0.05$

df1 / df2	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

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F $\alpha = 0.05$

df2 \ 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

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F $\alpha = 0.05$

df2 \ df1	1	2	3	4	5	6
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

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F $\alpha = 0.05$

df2 \ df1	1	2	3	4	5	6
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

df2 \ df1	7	8	9	10	11	12
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

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F $\alpha = 0.05$

df1 / df2	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

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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

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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

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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

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F $\alpha = 0.05$

df2 \ df1	13	14	15	16	17	18
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

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F $\alpha = 0.05$

df2 \ df1	13	14	15	16	17	18
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

df2 \ df1	19	20
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

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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

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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

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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

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

F $\alpha = 0.025$

df1	1	2	3	4	5	6
df2						
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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

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

F $\alpha = 0.025$

df1	1	2	3	4	5	6
df2						
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

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F $\alpha = 0.025$

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df2						
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

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F $\alpha = 0.025$

df2	df1 1	2	3	4	5	6
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

df2	df1 7	8	9	10	11	12
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

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

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
68	2.480000	2.384824	2.307467	2.243147	2.188685	2.141880
69	2.477104	2.381922	2.304555	2.240222	2.185747	2.138926
70	2.474294	2.379106	2.301729	2.237384	2.182895	2.136060
71	2.471566	2.376372	2.298986	2.234629	2.180126	2.133277
72	2.468917	2.373716	2.296321	2.231953	2.177437	2.130573
73	2.466343	2.371137	2.293732	2.229352	2.174824	2.127947
74	2.463841	2.368629	2.291215	2.226825	2.172283	2.125393
75	2.461408	2.366190	2.288768	2.224366	2.169813	2.122910
76	2.459041	2.363818	2.286387	2.221975	2.167410	2.120494
77	2.456738	2.361509	2.284070	2.219648	2.165071	2.118143
78	2.454496	2.359262	2.281814	2.217382	2.162794	2.115854
79	2.452312	2.357073	2.279618	2.215175	2.160576	2.113624
80	2.450185	2.354941	2.277478	2.213026	2.158416	2.111452
81	2.448112	2.352863	2.275392	2.210931	2.156310	2.109335
82	2.446091	2.350838	2.273359	2.208888	2.154257	2.107271
83	2.444120	2.348862	2.271376	2.206897	2.152255	2.105258
84	2.442198	2.346935	2.269442	2.204954	2.150302	2.103295
85	2.440323	2.345055	2.267555	2.203058	2.148397	2.101379
86	2.438492	2.343220	2.265713	2.201207	2.146537	2.099508
87	2.436705	2.341428	2.263915	2.199400	2.144721	2.097682
88	2.434959	2.339679	2.262158	2.197636	2.142947	2.095899
89	2.433254	2.337969	2.260442	2.195912	2.141214	2.094156
90	2.431588	2.336299	2.258766	2.194227	2.139521	2.092453
91	2.429959	2.334667	2.257127	2.192581	2.137865	2.090789
92	2.428367	2.333070	2.255525	2.190971	2.136247	2.089162
93	2.426810	2.331510	2.253958	2.189397	2.134665	2.087570
94	2.425288	2.329983	2.252425	2.187857	2.133117	2.086014
95	2.423798	2.328489	2.250926	2.186350	2.131602	2.084490
96	2.422340	2.327028	2.249458	2.184876	2.130120	2.083000
97	2.420912	2.325597	2.248022	2.183433	2.128669	2.081541
98	2.419515	2.324196	2.246616	2.182020	2.127248	2.080112
99	2.418147	2.322824	2.245238	2.180636	2.125857	2.078713
100	2.416807	2.321481	2.243889	2.179280	2.124494	2.077342
101	2.415494	2.320164	2.242568	2.177952	2.123159	2.075999
102	2.414207	2.318874	2.241273	2.176651	2.121851	2.074684
103	2.412946	2.317610	2.240004	2.175376	2.120569	2.073394
104	2.411710	2.316371	2.238759	2.174125	2.119311	2.072129
105	2.410498	2.315155	2.237539	2.172899	2.118079	2.070890
106	2.409309	2.313964	2.236343	2.171697	2.116870	2.069674
107	2.408144	2.312795	2.235169	2.170518	2.115684	2.068481
108	2.407000	2.311648	2.234018	2.169361	2.114521	2.067311
109	2.405878	2.310523	2.232888	2.168225	2.113379	2.066163
110	2.404776	2.309419	2.231779	2.167111	2.112259	2.065036
111	2.403695	2.308335	2.230691	2.166018	2.111159	2.063930
112	2.402634	2.307271	2.229623	2.164944	2.110080	2.062844
113	2.401592	2.306226	2.228574	2.163890	2.109019	2.061777
114	2.400569	2.305200	2.227543	2.162854	2.107978	2.060730
115	2.399563	2.304192	2.226531	2.161837	2.106956	2.059701
116	2.398576	2.303202	2.225537	2.160838	2.105951	2.058691
117	2.397606	2.302229	2.224560	2.159856	2.104964	2.057698
118	2.396652	2.301273	2.223600	2.158892	2.103994	2.056722
119	2.395715	2.300333	2.222657	2.157943	2.103040	2.055763
120	2.394794	2.299410	2.221730	2.157011	2.102103	2.054820
121	2.393889	2.298502	2.220818	2.156095	2.101182	2.053893
122	2.392998	2.297609	2.219921	2.155194	2.100275	2.052981
123	2.392123	2.296731	2.219040	2.154308	2.099384	2.052085
124	2.391262	2.295868	2.218173	2.153437	2.098508	2.051203
125	2.390415	2.295018	2.217320	2.152579	2.097646	2.050336
126	2.389581	2.294183	2.216481	2.151736	2.096798	2.049483
127	2.388761	2.293360	2.215655	2.150906	2.095963	2.048643
128	2.387954	2.292551	2.214842	2.150089	2.095142	2.047817
129	2.387160	2.291755	2.214043	2.149286	2.094333	2.047004
130	2.386379	2.290971	2.213256	2.148494	2.093538	2.046203
131	2.385609	2.290199	2.212481	2.147716	2.092754	2.045415
132	2.384852	2.289440	2.211718	2.146949	2.091983	2.044639
133	2.384106	2.288692	2.210967	2.146194	2.091224	2.043875
134	2.383371	2.287955	2.210227	2.145450	2.090476	2.043123
135	2.382647	2.287229	2.209498	2.144718	2.089739	2.042382
136	2.381935	2.286515	2.208780	2.143996	2.089014	2.041651
137	2.381233	2.285810	2.208073	2.143285	2.088299	2.040932
138	2.380541	2.285117	2.207377	2.142585	2.087595	2.040224
139	2.379859	2.284433	2.206690	2.141895	2.086901	2.039525
140	2.379187	2.283760	2.206014	2.141215	2.086217	2.038837
141	2.378525	2.283096	2.205347	2.140545	2.085543	2.038159
142	2.377873	2.282441	2.204690	2.139884	2.084878	2.037491
143	2.377230	2.281796	2.204042	2.139233	2.084223	2.036832
144	2.376596	2.281160	2.203403	2.138591	2.083578	2.036182
145	2.375970	2.280533	2.202774	2.137958	2.082941	2.035541
146	2.375354	2.279915	2.202153	2.137334	2.082313	2.034910

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F $\alpha = 0.025$

df2 \ 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

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F $\alpha = 0.025$

df2	df1 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	df1 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

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F $\alpha = 0.025$

df1 / df2	13	14	15	16	17	18
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

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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

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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

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$F \quad \alpha = \ 0.025$

df2 \ 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

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df2 \ 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

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df1	19	20
df2		
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 $\alpha = 0.01$

df1	1	2	3	4	5	6
df2						
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

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

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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

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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

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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

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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

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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

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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	2.624096	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

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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

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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

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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

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F $\alpha = 0.01$

df1	19	20
df2		
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

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F $\alpha = 0.01$

df1	19	20
df2		
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

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F $\alpha = 0.01$

df1	19	20
df2		
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

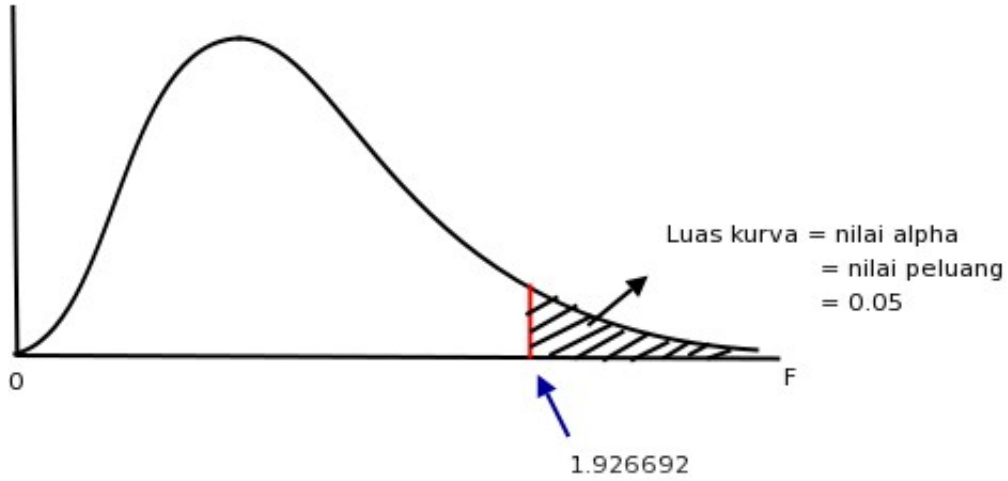
Misal ingin dicari titik kritis distribusi (sebaran) F dengan $\alpha = 0.05$, df1 = 10 dan df2 = 100, maka ikuti langkah-langkah di bawah ini:

- 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 = *degrees of freedom*
= derajat bebas

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

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 ".

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

Tabel r (Koefisien Korelasi Sederhana)

df = 1 - 200

Tabel r untuk df = 1 - 50

df = (N-2)	Tingkat signifikansi untuk uji satu arah				
	0.05	0.025	0.01	0.005	0.0005
	Tingkat signifikansi untuk uji dua arah				
	0.1	0.05	0.02	0.01	0.001
1	0.9877	0.9969	0.9995	0.9999	1.0000
2	0.9000	0.9500	0.9800	0.9900	0.9990
3	0.8054	0.8783	0.9343	0.9587	0.9911
4	0.7293	0.8114	0.8822	0.9172	0.9741
5	0.6694	0.7545	0.8329	0.8745	0.9509
6	0.6215	0.7067	0.7887	0.8343	0.9249
7	0.5822	0.6664	0.7498	0.7977	0.8983
8	0.5494	0.6319	0.7155	0.7646	0.8721
9	0.5214	0.6021	0.6851	0.7348	0.8470
10	0.4973	0.5760	0.6581	0.7079	0.8233
11	0.4762	0.5529	0.6339	0.6835	0.8010
12	0.4575	0.5324	0.6120	0.6614	0.7800
13	0.4409	0.5140	0.5923	0.6411	0.7604
14	0.4259	0.4973	0.5742	0.6226	0.7419
15	0.4124	0.4821	0.5577	0.6055	0.7247
16	0.4000	0.4683	0.5425	0.5897	0.7084
17	0.3887	0.4555	0.5285	0.5751	0.6932
18	0.3783	0.4438	0.5155	0.5614	0.6788
19	0.3687	0.4329	0.5034	0.5487	0.6652
20	0.3598	0.4227	0.4921	0.5368	0.6524
21	0.3515	0.4132	0.4815	0.5256	0.6402
22	0.3438	0.4044	0.4716	0.5151	0.6287
23	0.3365	0.3961	0.4622	0.5052	0.6178
24	0.3297	0.3882	0.4534	0.4958	0.6074
25	0.3233	0.3809	0.4451	0.4869	0.5974
26	0.3172	0.3739	0.4372	0.4785	0.5880
27	0.3115	0.3673	0.4297	0.4705	0.5790
28	0.3061	0.3610	0.4226	0.4629	0.5703
29	0.3009	0.3550	0.4158	0.4556	0.5620
30	0.2960	0.3494	0.4093	0.4487	0.5541
31	0.2913	0.3440	0.4032	0.4421	0.5465
32	0.2869	0.3388	0.3972	0.4357	0.5392
33	0.2826	0.3338	0.3916	0.4296	0.5322
34	0.2785	0.3291	0.3862	0.4238	0.5254
35	0.2746	0.3246	0.3810	0.4182	0.5189
36	0.2709	0.3202	0.3760	0.4128	0.5126
37	0.2673	0.3160	0.3712	0.4076	0.5066
38	0.2638	0.3120	0.3665	0.4026	0.5007
39	0.2605	0.3081	0.3621	0.3978	0.4950
40	0.2573	0.3044	0.3578	0.3932	0.4896
41	0.2542	0.3008	0.3536	0.3887	0.4843
42	0.2512	0.2973	0.3496	0.3843	0.4791
43	0.2483	0.2940	0.3457	0.3801	0.4742
44	0.2455	0.2907	0.3420	0.3761	0.4694
45	0.2429	0.2876	0.3384	0.3721	0.4647
46	0.2403	0.2845	0.3348	0.3683	0.4601
47	0.2377	0.2816	0.3314	0.3646	0.4557
48	0.2353	0.2787	0.3281	0.3610	0.4514
49	0.2329	0.2759	0.3249	0.3575	0.4473
50	0.2306	0.2732	0.3218	0.3542	0.4432

Tabel r untuk df = 51 - 100

df = (N-2)	Tingkat signifikansi untuk uji satu arah				
	0.05	0.025	0.01	0.005	0.0005
	Tingkat signifikansi untuk uji dua arah				
	0.1	0.05	0.02	0.01	0.001
51	0.2284	0.2706	0.3188	0.3509	0.4393
52	0.2262	0.2681	0.3158	0.3477	0.4354
53	0.2241	0.2656	0.3129	0.3445	0.4317
54	0.2221	0.2632	0.3102	0.3415	0.4280
55	0.2201	0.2609	0.3074	0.3385	0.4244
56	0.2181	0.2586	0.3048	0.3357	0.4210
57	0.2162	0.2564	0.3022	0.3328	0.4176
58	0.2144	0.2542	0.2997	0.3301	0.4143
59	0.2126	0.2521	0.2972	0.3274	0.4110
60	0.2108	0.2500	0.2948	0.3248	0.4079
61	0.2091	0.2480	0.2925	0.3223	0.4048
62	0.2075	0.2461	0.2902	0.3198	0.4018
63	0.2058	0.2441	0.2880	0.3173	0.3988
64	0.2042	0.2423	0.2858	0.3150	0.3959
65	0.2027	0.2404	0.2837	0.3126	0.3931
66	0.2012	0.2387	0.2816	0.3104	0.3903
67	0.1997	0.2369	0.2796	0.3081	0.3876
68	0.1982	0.2352	0.2776	0.3060	0.3850
69	0.1968	0.2335	0.2756	0.3038	0.3823
70	0.1954	0.2319	0.2737	0.3017	0.3798
71	0.1940	0.2303	0.2718	0.2997	0.3773
72	0.1927	0.2287	0.2700	0.2977	0.3748
73	0.1914	0.2272	0.2682	0.2957	0.3724
74	0.1901	0.2257	0.2664	0.2938	0.3701
75	0.1888	0.2242	0.2647	0.2919	0.3678
76	0.1876	0.2227	0.2630	0.2900	0.3655
77	0.1864	0.2213	0.2613	0.2882	0.3633
78	0.1852	0.2199	0.2597	0.2864	0.3611
79	0.1841	0.2185	0.2581	0.2847	0.3589
80	0.1829	0.2172	0.2565	0.2830	0.3568
81	0.1818	0.2159	0.2550	0.2813	0.3547
82	0.1807	0.2146	0.2535	0.2796	0.3527
83	0.1796	0.2133	0.2520	0.2780	0.3507
84	0.1786	0.2120	0.2505	0.2764	0.3487
85	0.1775	0.2108	0.2491	0.2748	0.3468
86	0.1765	0.2096	0.2477	0.2732	0.3449
87	0.1755	0.2084	0.2463	0.2717	0.3430
88	0.1745	0.2072	0.2449	0.2702	0.3412
89	0.1735	0.2061	0.2435	0.2687	0.3393
90	0.1726	0.2050	0.2422	0.2673	0.3375
91	0.1716	0.2039	0.2409	0.2659	0.3358
92	0.1707	0.2028	0.2396	0.2645	0.3341
93	0.1698	0.2017	0.2384	0.2631	0.3323
94	0.1689	0.2006	0.2371	0.2617	0.3307
95	0.1680	0.1996	0.2359	0.2604	0.3290
96	0.1671	0.1986	0.2347	0.2591	0.3274
97	0.1663	0.1975	0.2335	0.2578	0.3258
98	0.1654	0.1966	0.2324	0.2565	0.3242
99	0.1646	0.1956	0.2312	0.2552	0.3226
100	0.1638	0.1946	0.2301	0.2540	0.3211

Tabel r untuk df = 101 - 150

df = (N-2)	Tingkat signifikansi untuk uji satu arah				
	0.05	0.025	0.01	0.005	0.0005
	Tingkat signifikansi untuk uji dua arah				
	0.1	0.05	0.02	0.01	0.001
101	0.1630	0.1937	0.2290	0.2528	0.3196
102	0.1622	0.1927	0.2279	0.2515	0.3181
103	0.1614	0.1918	0.2268	0.2504	0.3166
104	0.1606	0.1909	0.2257	0.2492	0.3152
105	0.1599	0.1900	0.2247	0.2480	0.3137
106	0.1591	0.1891	0.2236	0.2469	0.3123
107	0.1584	0.1882	0.2226	0.2458	0.3109
108	0.1576	0.1874	0.2216	0.2446	0.3095
109	0.1569	0.1865	0.2206	0.2436	0.3082
110	0.1562	0.1857	0.2196	0.2425	0.3068
111	0.1555	0.1848	0.2186	0.2414	0.3055
112	0.1548	0.1840	0.2177	0.2403	0.3042
113	0.1541	0.1832	0.2167	0.2393	0.3029
114	0.1535	0.1824	0.2158	0.2383	0.3016
115	0.1528	0.1816	0.2149	0.2373	0.3004
116	0.1522	0.1809	0.2139	0.2363	0.2991
117	0.1515	0.1801	0.2131	0.2353	0.2979
118	0.1509	0.1793	0.2122	0.2343	0.2967
119	0.1502	0.1786	0.2113	0.2333	0.2955
120	0.1496	0.1779	0.2104	0.2324	0.2943
121	0.1490	0.1771	0.2096	0.2315	0.2931
122	0.1484	0.1764	0.2087	0.2305	0.2920
123	0.1478	0.1757	0.2079	0.2296	0.2908
124	0.1472	0.1750	0.2071	0.2287	0.2897
125	0.1466	0.1743	0.2062	0.2278	0.2886
126	0.1460	0.1736	0.2054	0.2269	0.2875
127	0.1455	0.1729	0.2046	0.2260	0.2864
128	0.1449	0.1723	0.2039	0.2252	0.2853
129	0.1443	0.1716	0.2031	0.2243	0.2843
130	0.1438	0.1710	0.2023	0.2235	0.2832
131	0.1432	0.1703	0.2015	0.2226	0.2822
132	0.1427	0.1697	0.2008	0.2218	0.2811
133	0.1422	0.1690	0.2001	0.2210	0.2801
134	0.1416	0.1684	0.1993	0.2202	0.2791
135	0.1411	0.1678	0.1986	0.2194	0.2781
136	0.1406	0.1672	0.1979	0.2186	0.2771
137	0.1401	0.1666	0.1972	0.2178	0.2761
138	0.1396	0.1660	0.1965	0.2170	0.2752
139	0.1391	0.1654	0.1958	0.2163	0.2742
140	0.1386	0.1648	0.1951	0.2155	0.2733
141	0.1381	0.1642	0.1944	0.2148	0.2723
142	0.1376	0.1637	0.1937	0.2140	0.2714
143	0.1371	0.1631	0.1930	0.2133	0.2705
144	0.1367	0.1625	0.1924	0.2126	0.2696
145	0.1362	0.1620	0.1917	0.2118	0.2687
146	0.1357	0.1614	0.1911	0.2111	0.2678
147	0.1353	0.1609	0.1904	0.2104	0.2669
148	0.1348	0.1603	0.1898	0.2097	0.2660
149	0.1344	0.1598	0.1892	0.2090	0.2652
150	0.1339	0.1593	0.1886	0.2083	0.2643

Tabel r untuk df = 151 - 200

df = (N-2)	Tingkat signifikansi untuk uji satu arah				
	0.05	0.025	0.01	0.005	0.0005
	Tingkat signifikansi untuk uji dua arah				
	0.1	0.05	0.02	0.01	0.001
151	0.1335	0.1587	0.1879	0.2077	0.2635
152	0.1330	0.1582	0.1873	0.2070	0.2626
153	0.1326	0.1577	0.1867	0.2063	0.2618
154	0.1322	0.1572	0.1861	0.2057	0.2610
155	0.1318	0.1567	0.1855	0.2050	0.2602
156	0.1313	0.1562	0.1849	0.2044	0.2593
157	0.1309	0.1557	0.1844	0.2037	0.2585
158	0.1305	0.1552	0.1838	0.2031	0.2578
159	0.1301	0.1547	0.1832	0.2025	0.2570
160	0.1297	0.1543	0.1826	0.2019	0.2562
161	0.1293	0.1538	0.1821	0.2012	0.2554
162	0.1289	0.1533	0.1815	0.2006	0.2546
163	0.1285	0.1528	0.1810	0.2000	0.2539
164	0.1281	0.1524	0.1804	0.1994	0.2531
165	0.1277	0.1519	0.1799	0.1988	0.2524
166	0.1273	0.1515	0.1794	0.1982	0.2517
167	0.1270	0.1510	0.1788	0.1976	0.2509
168	0.1266	0.1506	0.1783	0.1971	0.2502
169	0.1262	0.1501	0.1778	0.1965	0.2495
170	0.1258	0.1497	0.1773	0.1959	0.2488
171	0.1255	0.1493	0.1768	0.1954	0.2481
172	0.1251	0.1488	0.1762	0.1948	0.2473
173	0.1247	0.1484	0.1757	0.1942	0.2467
174	0.1244	0.1480	0.1752	0.1937	0.2460
175	0.1240	0.1476	0.1747	0.1932	0.2453
176	0.1237	0.1471	0.1743	0.1926	0.2446
177	0.1233	0.1467	0.1738	0.1921	0.2439
178	0.1230	0.1463	0.1733	0.1915	0.2433
179	0.1226	0.1459	0.1728	0.1910	0.2426
180	0.1223	0.1455	0.1723	0.1905	0.2419
181	0.1220	0.1451	0.1719	0.1900	0.2413
182	0.1216	0.1447	0.1714	0.1895	0.2406
183	0.1213	0.1443	0.1709	0.1890	0.2400
184	0.1210	0.1439	0.1705	0.1884	0.2394
185	0.1207	0.1435	0.1700	0.1879	0.2387
186	0.1203	0.1432	0.1696	0.1874	0.2381
187	0.1200	0.1428	0.1691	0.1869	0.2375
188	0.1197	0.1424	0.1687	0.1865	0.2369
189	0.1194	0.1420	0.1682	0.1860	0.2363
190	0.1191	0.1417	0.1678	0.1855	0.2357
191	0.1188	0.1413	0.1674	0.1850	0.2351
192	0.1184	0.1409	0.1669	0.1845	0.2345
193	0.1181	0.1406	0.1665	0.1841	0.2339
194	0.1178	0.1402	0.1661	0.1836	0.2333
195	0.1175	0.1398	0.1657	0.1831	0.2327
196	0.1172	0.1395	0.1652	0.1827	0.2321
197	0.1169	0.1391	0.1648	0.1822	0.2315
198	0.1166	0.1388	0.1644	0.1818	0.2310
199	0.1164	0.1384	0.1640	0.1813	0.2304
200	0.1161	0.1381	0.1636	0.1809	0.2298

LAMPIRAN
Konversi DPMO ke Nilai Sigma Berdasarkan Konsep Motorola

Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO
0,00	933.193	0,51	838.913	1,02	684.386	1,53	488.033
0,01	931.888	0,52	836.457	1,03	680.822	1,54	484.047
0,02	930.563	0,53	833.977	1,04	677.242	1,55	480.061
0,03	929.219	0,54	831.472	1,05	673.645	1,56	476.078
0,04	927.855	0,55	828.944	1,06	670.031	1,57	472.097
0,05	926.471	0,56	826.391	1,07	666.402	1,58	468.119
0,06	925.066	0,57	823.814	1,08	662.757	1,59	464.144
0,07	923.641	0,58	821.214	1,09	659.097	1,60	460.172
0,08	922.196	0,59	818.589	1,10	655.422	1,61	456.205
0,09	920.730	0,60	815.940	1,11	651.732	1,62	452.242
0,10	919.243	0,61	813.267	1,12	648.027	1,63	448.283
0,11	917.736	0,62	810.570	1,13	644.309	1,64	444.330
0,12	916.207	0,63	807.850	1,14	640.576	1,65	440.382
0,13	914.656	0,64	805.106	1,15	636.831	1,66	436.441
0,14	913.085	0,65	802.338	1,16	633.072	1,67	432.505
0,15	911.492	0,66	799.546	1,17	629.300	1,68	428.576
0,16	909.877	0,67	796.731	1,18	625.516	1,69	424.655
0,17	908.241	0,68	793.892	1,19	621.719	1,70	420.740
0,18	906.582	0,69	791.030	1,20	617.911	1,71	416.834
0,19	904.902	0,70	788.145	1,21	614.092	1,72	412.936
0,20	903.199	0,71	785.236	1,22	610.261	1,73	409.046
0,21	901.475	0,72	782.305	1,23	606.420	1,74	405.165
0,22	899.727	0,73	779.350	1,24	602.568	1,75	401.294
0,23	897.958	0,74	776.373	1,25	598.706	1,76	397.432
0,24	896.165	0,75	773.373	1,26	594.835	1,77	393.580
0,25	894.350	0,76	770.350	1,27	590.954	1,78	389.739
0,26	892.512	0,77	767.305	1,28	587.064	1,79	385.908
0,27	890.651	0,78	764.238	1,29	583.166	1,80	382.089
0,28	888.767	0,79	761.148	1,30	579.260	1,81	378.281
0,29	886.860	0,80	758.036	1,31	575.345	1,82	374.484
0,30	884.930	0,81	754.903	1,32	571.424	1,83	370.700
0,31	882.977	0,82	751.748	1,33	567.495	1,84	366.928
0,32	881.000	0,83	748.571	1,34	563.559	1,85	363.169
0,33	878.999	0,84	745.373	1,35	559.618	1,86	359.424
0,34	876.976	0,85	742.154	1,36	555.670	1,87	355.691
0,35	874.928	0,86	738.914	1,37	551.717	1,88	351.973
0,36	872.857	0,87	735.653	1,38	547.758	1,89	348.268
0,37	870.762	0,88	732.371	1,39	543.795	1,90	344.578
0,38	868.643	0,89	729.069	1,40	539.828	1,91	340.903
0,39	866.500	0,90	725.747	1,41	535.856	1,92	337.243
0,40	864.334	0,91	722.405	1,42	531.881	1,93	333.598
0,41	862.143	0,92	719.043	1,43	527.903	1,94	329.969
0,42	859.929	0,93	715.661	1,44	523.922	1,95	326.355
0,43	857.690	0,94	712.260	1,45	519.939	1,96	322.758
0,44	855.428	0,95	708.840	1,46	515.953	1,97	319.178
0,45	853.141	0,96	705.402	1,47	511.967	1,98	315.614
0,46	850.830	0,97	701.944	1,48	507.978	1,99	312.067
0,47	848.495	0,98	698.468	1,49	503.989	2,00	308.538
0,48	846.136	0,99	694.974	1,50	500.000	2,01	305.026
0,49	843.752	1,00	691.462	1,51	496.011	2,02	301.532
0,50	841.345	1,01	687.933	1,52	492.022	2,03	298.056

Sumber: nilai-nilai dibangkitkan menggunakan program oleh: Vincent Gaspersz (2002)

Konversi DPMO ke Nilai Sigma Berdasarkan Konsep Motorola (Lanjutan)

Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO
2,04	294.598	2,55	146.859	3,06	59.380	3,57	19.226
2,05	291.160	2,56	144.572	3,07	58.208	3,58	18.763
2,06	287.740	2,57	142.310	3,08	57.053	3,59	18.309
2,07	284.339	2,58	140.071	3,09	55.917	3,60	17.864
2,08	280.957	2,59	137.857	3,10	54.799	3,61	17.429
2,09	277.595	2,60	135.666	3,11	53.699	3,62	17.003
2,10	274.253	2,61	133.500	3,12	52.616	3,63	16.586
2,11	270.931	2,62	131.357	3,13	51.551	3,64	16.177
2,12	267.629	2,63	129.238	3,14	50.503	3,65	15.778
2,13	264.347	2,64	127.143	3,15	49.471	3,66	15.386
2,14	261.086	2,65	125.072	3,16	48.457	3,67	15.003
2,15	257.846	2,66	123.024	3,17	47.460	3,68	14.629
2,16	254.627	2,67	121.001	3,18	46.479	3,69	16.262
2,17	251.429	2,68	119.000	3,19	45.514	3,70	13.903
2,18	248.252	2,69	117.023	3,20	44.565	3,71	13.553
2,19	245.097	2,70	115.070	3,21	43.633	3,72	13.209
2,20	241.964	2,71	113.140	3,22	42.716	3,73	12.874
2,21	238.852	2,72	111.233	3,23	41.815	3,74	12.545
2,22	235.762	2,73	109.349	3,24	40.929	3,75	12.224
2,23	232.695	2,74	107.488	3,25	40.059	3,76	11.911
2,24	229.650	2,75	105.650	3,26	39.204	3,77	11.604
2,25	226.627	2,76	103.835	3,27	38.364	3,78	11.304
2,26	223.627	2,77	102.042	3,28	37.538	3,79	11.011
2,27	220.650	2,78	100.273	3,29	36.727	3,80	10.724
2,28	217.695	2,79	98.525	3,30	35.930	3,81	10.444
2,29	214.764	2,80	96.801	3,31	35.148	3,82	10.170
2,30	211.855	2,81	95.098	3,32	34.379	3,83	9.903
2,31	208.970	2,82	93.418	3,33	33.625	3,84	9.642
2,32	206.108	2,83	91.759	3,34	32.884	3,85	9.387
2,33	203.269	2,84	90.123	3,35	32.157	3,86	9.137
2,34	200.454	2,85	88.508	3,36	31.443	3,87	8.894
2,35	197.662	2,86	86.915	3,37	30.742	3,88	8.656
2,36	194.894	2,87	85.344	3,38	30.054	3,89	8.424
2,37	192.150	2,88	83.793	3,39	29.379	3,90	8.198
2,38	189.430	2,89	82.264	3,40	28.716	3,91	7.976
2,39	186.733	2,90	80.757	3,41	28.067	3,92	7.760
2,40	184.060	2,91	79.270	3,42	27.429	3,93	7.549
2,41	181.411	2,92	77.804	3,43	26.803	3,94	7.344
2,42	178.786	2,93	76.359	3,44	26.190	3,95	7.143
2,43	176.186	2,94	74.934	3,45	25.588	3,96	6.947
2,44	173.609	2,95	73.529	3,46	24.998	3,97	6.756
2,45	171.056	2,96	72.145	3,47	24.419	3,98	6.569
2,46	168.528	2,97	70.781	3,48	23.852	3,99	6.387
2,47	166.023	2,98	69.437	3,49	23.295	4,00	6.210
2,48	163.543	2,99	68.112	3,50	22.750	4,01	6.037
2,49	161.087	3,00	66.807	3,51	22.215	4,02	5.868
2,50	158.655	3,01	65.522	3,52	21.692	4,03	5.703
2,51	156.248	3,02	64.256	3,53	21.178	4,04	5.543
2,52	153.864	3,03	63.008	3,54	20.675	4,05	5.386
2,53	151.505	3,04	61.780	3,55	20.182	4,06	5.234
2,54	149.170	3,05	60.571	3,56	19.699	4,07	5.085

Sumber: nilai-nilai dibangkitkan menggunakan program oleh: Vincent Gaspersz (2002)

Konversi DPMO ke Nilai Sigma Berdasarkan Konsep Motorola (Lanjutan)

Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO
4,08	4.940	4,59	1.001	5,10	159	5,61	20
4,09	4.799	4,60	968	5,11	153	5,62	19
4,10	4.661	4,61	936	5,12	147	5,63	18
4,11	4.527	4,62	904	5,13	142	5,64	17
4,12	4.397	4,63	874	5,14	136	5,65	17
4,13	4.269	4,64	845	5,15	131	5,66	16
4,14	4.145	4,65	816	5,16	126	5,67	15
4,15	4.025	4,66	789	5,17	121	5,68	15
4,16	3.907	4,67	762	5,18	117	5,69	14
4,17	3.793	4,68	736	5,19	112	5,70	13
4,18	3.681	4,69	711	5,20	108	5,71	13
4,19	3.573	4,70	687	5,21	104	5,72	12
4,20	3.467	4,71	664	5,22	100	5,73	12
4,21	3.364	4,72	641	5,23	96	5,74	11
4,22	3.264	4,73	619	5,24	92	5,75	11
4,23	3.167	4,74	598	5,25	88	5,76	10
4,24	3.072	4,75	577	5,26	85	5,77	10
4,25	2.980	4,76	557	5,27	82	5,78	9
4,26	2.890	4,77	538	5,28	78	5,79	9
4,27	2.803	4,78	519	5,29	75	5,80	9
4,28	2.718	4,79	501	5,30	72	5,81	8
4,29	2.635	4,80	483	5,31	70	5,82	8
4,30	2.555	4,81	467	5,32	67	5,83	7
4,31	2.477	4,82	450	5,33	64	5,84	7
4,32	2.401	4,83	434	5,34	62	5,85	7
4,33	2.327	4,84	419	5,35	59	5,86	7
4,34	2.256	4,85	404	5,36	57	5,87	6
4,35	2.186	4,86	390	5,37	54	5,88	6
4,36	2.118	4,87	376	5,38	52	5,89	6
4,37	2.052	4,88	362	5,39	50	5,90	5
4,38	1.988	4,89	350	5,40	48	5,91	5
4,39	1.926	4,90	337	5,41	46	5,92	5
4,40	1.866	4,91	325	5,42	44	5,93	5
4,41	1.807	4,92	313	5,43	42	5,94	5
4,42	1.750	4,93	302	5,44	41	5,95	4
4,43	1.695	4,94	291	5,45	39	5,96	4
4,44	1.641	4,95	280	5,46	37	5,97	4
4,45	1.589	4,96	270	5,47	36	5,98	4
4,46	1.538	4,97	260	5,48	34	5,99	4
4,47	1.489	4,98	251	5,49	33	6,00	3
4,48	1.441	4,99	242	5,50	32		
4,49	1.395	5,00	233	5,51	30		
4,50	1.350	5,01	224	5,52	29		
4,51	1.306	5,02	216	5,53	28		
4,52	1.264	5,03	208	5,54	27		
4,53	1.223	5,04	200	5,55	26		
4,54	1.183	5,05	193	5,56	25		
4,55	1.144	5,06	185	5,57	24		
4,56	1.107	5,07	179	5,58	23		
4,57	1.070	5,08	172	5,59	22		
4,58	1.035	5,09	165	5,60	21		

Catatan: Tabel konversi ini Mencakup pengeseran 1,5-sigma untuk semua nilai Z

Sumber: nilai-nilai dibangkitkan menggunakan program oleh: Vincent Gaspersz (2002)

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