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**Lampiran 1 Daftar Populasi Sektor *Consumer Non Cyclicals* 2019-2022**

|  |  |  |
| --- | --- | --- |
| No | Kode | Nama Perusahaan |
| 1 | AISA | FKS Food Sejahtera Tbk. |
| 2 | ALTO | Tri Banyan Tirta Tbk. |
| 3 | AMRT | Sumber Alfaria Trijaya Tbk. |
| 4 | ANJT | Austindo Nusantara Jaya Tbk. |
| 5 | BISI | BISI International Tbk. |
| 6 | AALI | Astra Agro Lestari Tbk. |
| 7 | ADES | Akasha Wira International Tbk. |
| 8 | BWPT | Eagle High Plantations Tbk. |
| 9 | CEKA | Wilmar Cahaya Indonesia Tbk. |
| 10 | CPIN | Charoen Pokphand Indonesia Tbk |
| 11 | CPRO | Central Proteina Prima Tbk. |
| 12 | DLTA | Delta Djakarta Tbk. |
| 13 | DSFI | Dharma Samudera Fishing Indust |
| 14 | DSNG | Dharma Satya Nusantara Tbk. |
| 15 | EPMT | Enseval Putera Megatrading Tbk |
| 16 | FISH | FKS Multi Agro Tbk. |
| 17 | GGRM | Gudang Garam Tbk. |
| 18 | GOLL | Golden Plantation Tbk. |
| 19 | GZCO | Gozco Plantations Tbk. |
| 20 | HERO | Hero Supermarket Tbk. |
| 21 | HMSP | H.M. Sampoerna Tbk. |
| 22 | ICBP | Indofood CBP Sukses Makmur Tbk |
| 23 | JAWA | Jaya Agra Wattie Tbk. |
| 24 | JPFA | Japfa Comfeed Indonesia Tbk. |
| 25 | LSIP | PP London Sumatra Indonesia Tb |
| 26 | MAGP | Multi Agro Gemilang Plantation |
| 27 | MAIN | Malindo Feedmill Tbk. |
| 28 | MBTO | Martina Berto Tbk. |
| 29 | MIDI | Midi Utama Indonesia Tbk. |
| 30 | MLBI | Multi Bintang Indonesia Tbk. |
| 31 | MPPA | Matahari Putra Prima Tbk. |
| 32 | MRAT | Mustika Ratu Tbk. |
| 33 | MYOR | Mayora Indah Tbk. |
| 34 | PALM | Provident Investasi Bersama Tb |
| 35 | PSDN | Prasidha Aneka Niaga Tbk |
| 36 | RANC | Supra Boga Lestari Tbk. |
| 37 | RMBA | Bentoel Internasional Investam |
| 38 | ROTI | Nippon Indosari Corpindo Tbk. |
| 39 | SDPC | Millennium Pharmacon Internati |
| 40 | SGRO | Sampoerna Agro Tbk. |
| 41 | SIMP | Salim Ivomas Pratama Tbk. |
| 42 | SIPD | Sreeya Sewu Indonesia Tbk. |
| 43 | SKBM | Sekar Bumi Tbk. |
| 44 | SKLT | Sekar Laut Tbk. |
| 45 | SMAR | Smart Tbk. |
| 46 | SSMS | Sawit Sumbermas Sarana Tbk. |
| 47 | STTP | Siantar Top Tbk. |
| 48 | TBLA | Tunas Baru Lampung Tbk. |
| 49 | ULTJ | Ultra Jaya Milk Industry & Tra |
| 50 | UNSP | Bakrie Sumatera Plantations Tb |
| 51 | UNVR | Unilever Indonesia Tbk. |
| 52 | WAPO | Wahana Pronatural Tbk. |
| 53 | WICO | Wicaksana Overseas Internation |
| 54 | WIIM | Wismilak Inti Makmur Tbk. |
| 55 | DAYA | Duta Intidaya Tbk. |
| 56 | DPUM | Dua Putra Utama Makmur Tbk. |
| 57 | HOKI | Buyung Poetra Sembada Tbk. |
| 58 | MGRO | Mahkota Group Tbk. |
| 59 | ANDI | Andira Agro Tbk. |
| 60 | PANI | Pratama Abadi Nusa Industri Tb |
| 61 | KPAS | Cottonindo Ariesta Tbk. |
| 62 | GOOD | Garudafood Putra Putri Jaya Tb |
| 63 | FOOD | Sentra Food Indonesia Tbk. |
| 64 | BEEF | Estika Tata Tiara Tbk. |
| 65 | COCO | Wahana Interfood Nusantara Tbk |
| 66 | ITIC | Indonesian Tobacco Tbk. |
| 67 | KEJU | Mulia Boga Raya Tbk. |
| 68 | PSGO | Palma Serasih Tbk. |
| 69 | AGAR | Asia Sejahtera Mina Tbk. |
| 70 | UCID | Uni-Charm Indonesia Tbk. |
| 71 | CSRA | Cisadane Sawit Raya Tbk. |
| 72 | DMND | Diamond Food Indonesia Tbk. |
| 73 | IKAN | Era Mandiri Cemerlang Tbk. |
| 74 | PGUN | Pradiksi Gunatama Tbk. |
| 75 | KMDS | Kurniamitra Duta Sentosa Tbk. |
| 76 | ENZO | Morenzo Abadi Perkasa Tbk. |
| 77 | VICI | Victoria Care Indonesia Tbk. |
| 78 | PMMP | Panca Mitra Multiperdana Tbk. |
| 79 | FAPA | FAP Agri Tbk. |
| 80 | WMUU | Widodo Makmur Unggas Tbk. |
| 81 | TAPG | Triputra Agro Persada Tbk. |
| 82 | FLMC | Falmaco Nonwoven Industri Tbk. |
| 83 | OILS | Indo Oil Perkasa Tbk. |
| 84 | TCID | Mandom Indonesia Tbk. |
| 85 | TGKA | Tigaraksa Satria Tbk. |
| 86 | MKTR | Menthobi Karyatama Raya Tbk. |
| 87 | BTEK | Bumi Teknokultura Unggul Tbk |
| 88 | BUDI | Budi Starch & Sweetener Tbk. |
| 89 | BOBA | Formosa Ingredient Factory Tbk |
| 90 | CMRY | Cisarua Mountain Dairy Tbk. |
| 91 | CLEO | Sariguna Primatirta Tbk. |
| 92 | INDF | Indofood Sukses Makmur Tbk. |
| 93 | TAYS | Jaya Swarasa Agung Tbk. |
| 94 | WMPP | Widodo Makmur Perkasa Tbk. |
| 95 | IPPE | Indo Pureco Pratama Tbk. |
| 96 | NASI | Wahana Inti Makmur Tbk. |
| 97 | CAMP | Campina Ice Cream Industry Tbk |
| 98 | PCAR | Prima Cakrawala Abadi Tbk. |
| 99 | STAA | Sumber Tani Agung Resources Tb |
| 100 | NANO | Nanotech Indonesia Global Tbk. |
| 101 | TLDN | Teladan Prima Agro Tbk. |
| 102 | IBOS | Indo Boga Sukses Tbk. |
| 103 | ASHA | Cilacap Samudera Fishing Indus |
| 104 | TRGU | Cerestar Indonesia Tbk. |
| 105 | KINO | Kino Indonesia Tbk. |
| 106 | DEWI | Dewi Shri Farmindo Tbk. |
| 107 | GULA | Aman Agrindo Tbk. |
| 108 | JARR | Jhonlin Agro Raya Tbk. |
| 109 | AMMS | Agung Menjangan Mas Tbk. |
| 110 | EURO | Estee Gold Feet Tbk. |
| 111 | BUAH | Segar Kumala Indonesia Tbk. |
| 112 | CRAB | Toba Surimi Industries Tbk. |
| 113 | CBUT | Citra Borneo Utama Tbk. |

**Lampiran 2 Daftar Sampel Sektor Consumer Non Cyclicals 2019-2022**

|  |  |  |
| --- | --- | --- |
| No | Kode Saham | Perusahaan |
| 1 | ADES | Akasha Wira International Tbk |
| 2 | AMRT | Sumber Alfaria Trijaya Tbk. |
| 3 | BISI | BISI International Tbk. |
| 4 | BUDI | Budi Starch & Sweetener Tbk. |
| 5 | CAMP | Campina Ice Cream Industry Tbk |
| 6 | CPIN | Charoen Pokphand Indonesia Tbk |
| 7 | DLTA  | Delta Djakarta Tbk |
| 8 | DMND | Diamond Food Indonesia Tbk. |
| 9 | DSNG | Dharma Satya Nusantara Tbk. |
| 10 | EPMT | Enseval Putera Megatrading Tbk |
| 11 | GGRM | Gudang Garam Tbk. |
| 12 | GOOD | Garudafood Putra Putri Tbk |
| 13 | ICBP | Indofood CBP Sukses Makmur Tbk |
| 14 | INDF | Indofood Sukses Makmur Tbk. |
| 15 | JPFA | Japfa Comfeed Indonesia Tbk. |
| 16 | KEJU | Mulia Boga Raya Tbk. |
| 17 | SKBM  | Sekar Bumi Tbk. |
| 18 | SKLT | Sekar Laut Tbk. |
| 19 | TBLA | Tunas Baru Lampung Tbk. |
| 20 | UCID | Uni-Charm Indonesia Tbk. |
| 21 | ULTJ  | Ultra Jaya Milk Industry & Tra |

**Lampiran 3 Hasil Perhitungan Profitabilitas Periode 2019-2022**

*Return On Asset* (ROA) = $\frac{Earning After Taxes}{Total Asset}$ x 100 %

|  |  |
| --- | --- |
| **Kode Saham** | **Profitabilitas** |
| 2019 | 2020 | 2021 | 2022 |
| **ADES** | 0,10 | 0,14 | 0,20 | 0,22 |
| **AMRT** | 0,05 | 0,04 | 0,07 | 0,09 |
| **BISI** | 0,10 | 0,09 | 0,12 | 0,15 |
|  **BUDI** | 0,02 | 0,02 | 0,03 | 0,03 |
| **CAMP** | 0,07 | 0,04 | 0,09 | 0,11 |
| **CPIN** | 0,12 | 0,12 | 0,10 | 0,07 |
| **DLTA** | 0,22 | 0,10 | 0,14 | 0,18 |
| **DMND** | 0,07 | 0,04 | 0,06 | 0,06 |
| **DSNG** | 0,02 | 0,03 | 0,05 | 0,08 |
| **EPMT** | 0,07 | 0,07 | 0,09 | 0,08 |
| **GGRM** | 0,14 | 0,10 | 0,06 | 0,03 |
| **GOOD** | 0,09 | 0,04 | 0,07 | 0,07 |
| **ICBP** | 0,14 | 0,07 | 0,07 | 0,05 |
| **INDF** | 0,06 | 0,05 | 0,06 | 0,05 |
| **JPFA** | 0,07 | 0,04 | 0,07 | 0,05 |
| **KEJU** | 0,15 | 0,18 | 0,19 | 0,14 |
| **SKBM** | 0,00 | 0,00 | 0,02 | 0,04 |
| **SKLT** | 0,06 | 0,05 | 0,10 | 0,07 |
| **TBLA** | 0,04 | 0,04 | 0,04 | 0,03 |
| **UCID** | 0,05 | 0,04 | 0,06 | 0,04 |
| **ULTJ** | 0,16 | 0,13 | 0,17 | 0,13 |
| **Rata-Rata** | 7,3095 |
| **Minimum**  | 00,00 |
| **Maksimum**  | 22,00 |

**Lampiran 4 Hasil Perhitungan Perputaran Kas Periode 2019-2022**

Perputaran Kas = $\frac{Penjualan Bersih}{Rata-Rata Kas}$

|  |  |
| --- | --- |
| **Kode Saham**  | **Perputaran Kas** |
| **2019** | **2020** | **2021** | **2022** |
| **ADES** | 7,21 | 2,88 | 2,60 | 3,59 |
| **AMRT** | 24,44 | 19,50 | 23,76 | 27,12 |
| **BISI** | 15,69 | 4,55 | 2,37 | 2,85 |
|  **BUDI** | 77,67 | 61,79 | 54,41 | 54,53 |
| **CAMP** | 3,27 | 2,31 | 1,87 | 2,07 |
| **CPIN** | 24,61 | 18,33 | 23,07 | 25,38 |
| **DLTA** | 0,92 | 0,71 | 0,90 | 0,03 |
| **DMND** | 68,47 | 9,42 | 5,84 | 7,08 |
| **DSNG** | 14,45 | 14,59 | 13,32 | 18,01 |
| **EPMT** | 19,30 | 16,95 | 17,44 | 19,04 |
| **GGRM** | 39,43 | 27,43 | 27,93 | 27,88 |
| **GOOD** | 24,01 | 11,47 | 9,98 | 11,92 |
| **SKBM** | 9,58 | 3,36 | 32,81 | 32,42 |
| **ICBP** | 6,46 | 5,21 | 3,80 | 4,33 |
| **INDF** | 6,79 | 5,26 | 4,24 | 4,73 |
| **JPFA** | 35,91 | 31,59 | 37,07 | 40,46 |
| **KEJU** | 9,22 | 4,45 | 5,56 | 5,57 |
| **SKBM** | 9,58 | 3,36 | 32,81 | 32,42 |
| **TBLA** | 27,31 | 24,68 | 27,31 | 28,35 |
| **UCID** | 5,45 | 4,94 | 6,22 | 7,04 |
| **ULTJ** | 3,58 | 3,23 | 4,07 | 4,71 |
| **Rata-Rata** | 1669,3333 |
| **Minimum**  | 3,00 |
| **Maksimum**  | 7767,00 |

**Lampiran 5 Hasil Perhitungan Perputaran Piutang Periode 2019-2022**

Perputaran Piutang **=** $\frac{Penjualan Kredit}{Rata-Rata Piutang}$

|  |  |
| --- | --- |
| **Kode Saham** | **Perputaran Piutang** |
| **TAHUN** | 2019 | 2020 | 2021 | 2022 |
| **ADES** | 6,16 | 5,21 | 6,50 | 7,23 |
| **AMRT** | 39,26 | 41,76 | 43,31 | 42,95 |
| **BISI** | 2,12 | 3,48 | 6,61 | 5,00 |
|  **BUDI** | 31,71 | 24,40 | 24,00 | 24,31 |
| **CAMP** | 5,41 | 6,19 | 8,66 | 9,50 |
| **CPIN** | 19,44 | 16,33 | 27,52 | 29,42 |
| **DLTA** | 4,67 | 3,66 | 7,15 | 7,60 |
| **DMND** | 6,73 | 6,07 | 7,31 | 8,55 |
| **DSNG** | 11,11 | 14,21 | 21,35 | 35,77 |
| **EPMT** | 7,40 | 7,26 | 8,56 | 9,56 |
| **GGRM** | 61,37 | 51,66 | 46,86 | 44,95 |
| **GOOD** | 15,99 | 13,77 | 16,18 | 18,15 |
| **ICBP** | 37,41 | 26,60 | 20,46 | 19,22 |
| **INDF** | 15,84 | 16,03 | 16,34 | 16,38 |
| **JPFA** | 18,07 | 17,62 | 20,54 | 20,38 |
| **KEJU** | 7,69 | 8,22 | 12,13 | 12,88 |
| **SKBM** | 8,06 | 0,99 | 9,59 | 8,53 |
| **SKLT** | 7,49 | 7,55 | 8,73 | 9,07 |
| **TBLA** | 8,55 | 9,41 | 11,10 | 11,36 |
| **UCID** | 4,63 | 4,29 | 4,85 | 4,97 |
| **ULTJ** | 10,36 | 9,45 | 10,45 | 11,67 |
| **Rata-Rata** | 1436,6429 |
| **Minimum**  | 5,00 |
| **Maksimum**  | 6137,00 |

**Lampiran 6 Hasil Perhitungan Perputaran Persediaan Periode 2019-2022**

Perputaran Persediaan = $\frac{HPP}{Rata-Rata Persediaan}$

|  |  |
| --- | --- |
| **Kode Saham** | **Perputaran Persediaan** |
| **TAHUN** | 2019 | 2020 | 2021 | 2022 |
| **ADES** | 4,44 | 4,16 | 4,88 | 0,50 |
| **AMRT** | 7,89 | 7,94 | 8,20 | 8,60 |
| **BISI** | 1,31 | 1,08 | 1,27 | 1,78 |
|  **BUDI** | 7,23 | 8,46 | 5,73 | 5,25 |
| **CAMP** | 2,52 | 2,84 | 3,58 | 4,06 |
| **CPIN** | 8,75 | 6,01 | 6,53 | 5,85 |
| **DLTA** | 1,17 | 0,91 | 1,14 | 1,28 |
| **DMND** | 4,12 | 3,70 | 4,03 | 3,98 |
| **DSNG** | 5,41 | 7,17 | 7,07 | 6,31 |
| **EPMT** | 8,39 | 8,52 | 8,34 | 7,39 |
| **GGRM** | 2,16 | 2,35 | 2,53 | 2,39 |
| **GOOD** | 7,32 | 6,72 | 6,83 | 6,89 |
| **ICBP** | 7,11 | 6,98 | 6,99 | 6,62 |
| **INDF** | 5,06 | 5,28 | 5,61 | 5,26 |
| **JPFA** | 4,85 | 4,97 | 5,51 | 4,86 |
| **KEJU** | 3,67 | 4,08 | 3,99 | 3,23 |
| **SKBM** | 5,16 | 7,14 | 8,02 | 7,12 |
| **SKLT** | 6,04 | 5,96 | 6,95 | 6,06 |
| **TBLA** | 2,89 | 3,67 | 5,27 | 3,55 |
| **UCID** | 9,35 | 10,90 | 9,33 | 7,40 |
| **ULTJ** | 4,59 | 3,91 | 5,28 | 4,48 |
| **Rata-Rata** | 484,2262 |
| **Minimum**  | 5,00 |
| **Maksimum**  | 935,00 |

**Lampiran 7 Hasil Perhitungan Struktur Modal Periode 2019-2022**

Struktur Modal = $\frac{Total Debt}{Total Equity}$ x 100 %

|  |  |
| --- | --- |
| **Kode Perusahaan** | **Struktur Modal** |
| **TAHUN** | 2019 | 2020 | 2021 | 2022 |
| **ADES** | 0,45 | 0,45 | 0,34 | 0,23 |
| **AMRT** | 2,49 | 2,40 | 2,06 | 1,68 |
| **BISI** | 0,03 | 0,19 | 0,15 | 0,12 |
|  **BUDI** | 1,33 | 1,24 | 1,16 | 1,20 |
| **CAMP** | 0,13 | 0,13 | 0,12 | 0,14 |
| **CPIN** | 0,39 | 0,33 | 0,41 | 0,51 |
| **DLTA** | 0,18 | 0,20 | 0,30 | 0,31 |
| **DMND** | 0,70 | 0,22 | 0,25 | 0,27 |
| **DSNG** | 2,11 | 1,27 | 0,95 | 0,88 |
| **EPMT** | 0,42 | 0,40 | 0,42 | 0,46 |
| **GGRM** | 0,54 | 0,34 | 0,52 | 0,53 |
| **GOOD** | 0,83 | 1,27 | 1,23 | 1,19 |
| **ICBP** | 0,45 | 1,06 | 1,16 | 1,01 |
| **INDF** | 0,77 | 1,06 | 1,07 | 0,93 |
| **JPFA** | 1,24 | 1,27 | 1,18 | 1,39 |
| **KEJU** | 0,53 | 0,53 | 0,31 | 0,22 |
| **SKBM** | 0,76 | 0,84 | 0,99 | 0,90 |
| **SKLT** | 1,08 | 0,90 | 0,64 | 0,75 |
| **TBLA** | 2,24 | 2,30 | 2,25 | 2,46 |
| **UCID** | 0,92 | 0,70 | 0,59 | 0,62 |
| **ULTJ** | 0,17 | 0,83 | 0,44 | 0,27 |
| **Rata-Rata** | 70,5952 |
| **Minimum**  | 2,00 |
| **Maksimum**  | 249,00 |

**Lampiran 8 Uji Statistik Deskriptif**

|  |
| --- |
| **Descriptive Statistics** |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Perputaran Kas | 84 | 3.00 | 7767.00 | 1673.9405 | 1709.64286 |
| Perputaran Piutang | 84 | 5.00 | 4331.00 | 1287.7143 | 1039.12862 |
| Perputaran Persediaan | 84 | 5.00 | 1061.00 | 518.2738 | 255.56983 |
| Struktur Modal | 84 | 2.00 | 249.00 | 69.4762 | 60.85762 |
| Profitabilitas | 84 | .00 | 22.00 | 7.7976 | 5.40811 |
| Valid N (listwise) | 84 |  |  |  |  |

**Lampiran 9 Hasil Uji Normalitas**



|  |
| --- |
| **One-Sample Kolmogorov-Smirnov Test** |
|  | Unstandardized Residual |
| N | 84 |
| Normal Parametersa,b | Mean | .0000000 |
| Std. Deviation | 4.65146422 |
| Most Extreme Differences | Absolute | .065 |
| Positive | .065 |
| Negative | -.064 |
| Test Statistic | .065 |
| Asymp. Sig. (2-tailed) | .200c,d |

**Lampiran 10 Hasil Uji Multikolenieritas**

|  |
| --- |
|  **Coefficientsa** |
| Model | Collinearity Statistics |
| Tolerance | VIF |
| 1 | (Constant) |  |  |
| Perputaran Kas | .830 | 1.205 |
| Perputaran Piutang | .886 | 1.128 |
| Perputaran Persediaan | .921 | 1.086 |
| Struktur Modal | .847 | 1.181 |

**Lampiran 11 Hasil Uji Autokorelasi**

|  |
| --- |
|  **Model Summaryb** |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .439a | .193 | .152 | 4.76777 | 1.812 |

**Lampiran 12 Hasil Uji Heteroskedastisitas**



**Lampiran 13 Hasil Regresi Linear Berganda**

|  |
| --- |
|  **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients |
| B | Std. Error | Beta |
| 1 | (Constant) | 11.413 | 1.326 |  |
| Perputaran Kas | -.001 | .000 | -.246 |
| Perputaran Piutang | .000 | .000 | .055 |
| Perputaran Persediaan | -.004 | .002 | -.189 |
| Struktur Modal | -.017 | .009 | -.199 |

**Lampiran 14 Hasil Uji Signifikansi Parsial (Uji t)**

|  |
| --- |
| **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients | T | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 11.413 | 1.326 |  | 8.608 | .000 |
| Perputaran Kas | -.001 | .000 | -.246 | -2.216 | .030 |
| Perputaran Piutang | .000 | .000 | .055 | .516 | .607 |
| Perputaran Persediaan | -.004 | .002 | -.189 | -1.793 | .077 |
| Struktur Modal | -.017 | .009 | -.199 | -1.814 | .074 |

**Lampiran 15 Hasil Uji Signifikansi Simultan (Uji F)**

|  |
| --- |
|  **ANOVAa** |
| Model | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 428.154 | 4 | 107.039 | 4.709 | .002b |
| Residual | 1795.798 | 79 | 22.732 |  |  |
| Total | 2223.952 | 83 |  |  |  |
|  |
| **Lampiran 16 Hasil Koefisien Determinasi (**$R^{2}$**)**

|  |
| --- |
|  **Model Summaryb** |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .439a | .193 | .152 | 4.76777 | 1.812 |

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|  |
|  |

 **Lampiran 17 Tabel Uji t**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Pr** | **0.25** | **0.10** | **0.05** | **0.025** | **0.01** | **0.005** | **0.001** |
| **df** | **0.50** | **0.20** | **0.10** | **0.050** | **0.02** | **0.010** | **0.002** |
| **1** | 1.00000 | 3.07768 | 6.31375 | 12.70620 | 31.82052 | 63.65674 | 318.30884 |
| **2** | 0.81650 | 1.88562 | 2.91999 | 4.30265 | 6.96456 | 9.92484 | 22.32712 |
| **3** | 0.76489 | 1.63774 | 2.35336 | 3.18245 | 4.54070 | 5.84091 | 10.21453 |
| **4** | 0.74070 | 1.53321 | 2.13185 | 2.77645 | 3.74695 | 4.60409 | 7.17318 |
| **5** | 0.72669 | 1.47588 | 2.01505 | 2.57058 | 3.36493 | 4.03214 | 5.89343 |
| **6** | 0.71756 | 1.43976 | 1.94318 | 2.44691 | 3.14267 | 3.70743 | 5.20763 |
| **7** | 0.71114 | 1.41492 | 1.89458 | 2.36462 | 2.99795 | 3.49948 | 4.78529 |
| **8** | 0.70639 | 1.39682 | 1.85955 | 2.30600 | 2.89646 | 3.35539 | 4.50079 |
| **9** | 0.70272 | 1.38303 | 1.83311 | 2.26216 | 2.82144 | 3.24984 | 4.29681 |
| **10** | 0.69981 | 1.37218 | 1.81246 | 2.22814 | 2.76377 | 3.16927 | 4.14370 |
| **11** | 0.69745 | 1.36343 | 1.79588 | 2.20099 | 2.71808 | 3.10581 | 4.02470 |
| **12** | 0.69548 | 1.35622 | 1.78229 | 2.17881 | 2.68100 | 3.05454 | 3.92963 |
| **13** | 0.69383 | 1.35017 | 1.77093 | 2.16037 | 2.65031 | 3.01228 | 3.85198 |
| **14** | 0.69242 | 1.34503 | 1.76131 | 2.14479 | 2.62449 | 2.97684 | 3.78739 |
| **15** | 0.69120 | 1.34061 | 1.75305 | 2.13145 | 2.60248 | 2.94671 | 3.73283 |
| **16** | 0.69013 | 1.33676 | 1.74588 | 2.11991 | 2.58349 | 2.92078 | 3.68615 |
| **17** | 0.68920 | 1.33338 | 1.73961 | 2.10982 | 2.56693 | 2.89823 | 3.64577 |
| **18** | 0.68836 | 1.33039 | 1.73406 | 2.10092 | 2.55238 | 2.87844 | 3.61048 |
| **19** | 0.68762 | 1.32773 | 1.72913 | 2.09302 | 2.53948 | 2.86093 | 3.57940 |
| **20** | 0.68695 | 1.32534 | 1.72472 | 2.08596 | 2.52798 | 2.84534 | 3.55181 |
| **21** | 0.68635 | 1.32319 | 1.72074 | 2.07961 | 2.51765 | 2.83136 | 3.52715 |
| **22** | 0.68581 | 1.32124 | 1.71714 | 2.07387 | 2.50832 | 2.81876 | 3.50499 |
| **23** | 0.68531 | 1.31946 | 1.71387 | 2.06866 | 2.49987 | 2.80734 | 3.48496 |
| **24** | 0.68485 | 1.31784 | 1.71088 | 2.06390 | 2.49216 | 2.79694 | 3.46678 |
| **25** | 0.68443 | 1.31635 | 1.70814 | 2.05954 | 2.48511 | 2.78744 | 3.45019 |
| **26** | 0.68404 | 1.31497 | 1.70562 | 2.05553 | 2.47863 | 2.77871 | 3.43500 |
| **27** | 0.68368 | 1.31370 | 1.70329 | 2.05183 | 2.47266 | 2.77068 | 3.42103 |
| **28** | 0.68335 | 1.31253 | 1.70113 | 2.04841 | 2.46714 | 2.76326 | 3.40816 |
| **29** | 0.68304 | 1.31143 | 1.69913 | 2.04523 | 2.46202 | 2.75639 | 3.39624 |
| **30** | 0.68276 | 1.31042 | 1.69726 | 2.04227 | 2.45726 | 2.75000 | 3.38518 |
| **31** | 0.68249 | 1.30946 | 1.69552 | 2.03951 | 2.45282 | 2.74404 | 3.37490 |
| **32** | 0.68223 | 1.30857 | 1.69389 | 2.03693 | 2.44868 | 2.73848 | 3.36531 |
| **33** | 0.68200 | 1.30774 | 1.69236 | 2.03452 | 2.44479 | 2.73328 | 3.35634 |
| **34** | 0.68177 | 1.30695 | 1.69092 | 2.03224 | 2.44115 | 2.72839 | 3.34793 |
| **35** | 0.68156 | 1.30621 | 1.68957 | 2.03011 | 2.43772 | 2.72381 | 3.34005 |
| **36** | 0.68137 | 1.30551 | 1.68830 | 2.02809 | 2.43449 | 2.71948 | 3.33262 |
| **37** | 0.68118 | 1.30485 | 1.68709 | 2.02619 | 2.43145 | 2.71541 | 3.32563 |
| **38** | 0.68100 | 1.30423 | 1.68595 | 2.02439 | 2.42857 | 2.71156 | 3.31903 |
| **39** | 0.68083 | 1.30364 | 1.68488 | 2.02269 | 2.42584 | 2.70791 | 3.31279 |
| **40** | 0.68067 | 1.30308 | 1.68385 | 2.02108 | 2.42326 | 2.70446 | 3.30688 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Pr** | **0.25** | **0.10** | **0.05** | **0.025** | **0.01** | **0.005** | **0.001** |
| **df** | **0.50** | **0.20** | **0.10** | **0.050** | **0.02** | **0.010** | **0.002** |
| **41** | 0.68052 | 1.30254 | 1.68288 | 2.01954 | 2.42080 | 2.70118 | 3.30127 |
| **42** | 0.68038 | 1.30204 | 1.68195 | 2.01808 | 2.41847 | 2.69807 | 3.29595 |
| **43** | 0.68024 | 1.30155 | 1.68107 | 2.01669 | 2.41625 | 2.69510 | 3.29089 |
| **44** | 0.68011 | 1.30109 | 1.68023 | 2.01537 | 2.41413 | 2.69228 | 3.28607 |
| **45** | 0.67998 | 1.30065 | 1.67943 | 2.01410 | 2.41212 | 2.68959 | 3.28148 |
| **46** | 0.67986 | 1.30023 | 1.67866 | 2.01290 | 2.41019 | 2.68701 | 3.27710 |
| **47** | 0.67975 | 1.29982 | 1.67793 | 2.01174 | 2.40835 | 2.68456 | 3.27291 |
| **48** | 0.67964 | 1.29944 | 1.67722 | 2.01063 | 2.40658 | 2.68220 | 3.26891 |
| **49** | 0.67953 | 1.29907 | 1.67655 | 2.00958 | 2.40489 | 2.67995 | 3.26508 |
| **50** | 0.67943 | 1.29871 | 1.67591 | 2.00856 | 2.40327 | 2.67779 | 3.26141 |
| **51** | 0.67933 | 1.29837 | 1.67528 | 2.00758 | 2.40172 | 2.67572 | 3.25789 |
| **52** | 0.67924 | 1.29805 | 1.67469 | 2.00665 | 2.40022 | 2.67373 | 3.25451 |
| **53** | 0.67915 | 1.29773 | 1.67412 | 2.00575 | 2.39879 | 2.67182 | 3.25127 |
| **54** | 0.67906 | 1.29743 | 1.67356 | 2.00488 | 2.39741 | 2.66998 | 3.24815 |
| **55** | 0.67898 | 1.29713 | 1.67303 | 2.00404 | 2.39608 | 2.66822 | 3.24515 |
| **56** | 0.67890 | 1.29685 | 1.67252 | 2.00324 | 2.39480 | 2.66651 | 3.24226 |
| **57** | 0.67882 | 1.29658 | 1.67203 | 2.00247 | 2.39357 | 2.66487 | 3.23948 |
| **58** | 0.67874 | 1.29632 | 1.67155 | 2.00172 | 2.39238 | 2.66329 | 3.23680 |
| **59** | 0.67867 | 1.29607 | 1.67109 | 2.00100 | 2.39123 | 2.66176 | 3.23421 |
| **60** | 0.67860 | 1.29582 | 1.67065 | 2.00030 | 2.39012 | 2.66028 | 3.23171 |
| **61** | 0.67853 | 1.29558 | 1.67022 | 1.99962 | 2.38905 | 2.65886 | 3.22930 |
| **62** | 0.67847 | 1.29536 | 1.66980 | 1.99897 | 2.38801 | 2.65748 | 3.22696 |
| **63** | 0.67840 | 1.29513 | 1.66940 | 1.99834 | 2.38701 | 2.65615 | 3.22471 |
| **64** | 0.67834 | 1.29492 | 1.66901 | 1.99773 | 2.38604 | 2.65485 | 3.22253 |
| **65** | 0.67828 | 1.29471 | 1.66864 | 1.99714 | 2.38510 | 2.65360 | 3.22041 |
| **66** | 0.67823 | 1.29451 | 1.66827 | 1.99656 | 2.38419 | 2.65239 | 3.21837 |
| **67** | 0.67817 | 1.29432 | 1.66792 | 1.99601 | 2.38330 | 2.65122 | 3.21639 |
| **68** | 0.67811 | 1.29413 | 1.66757 | 1.99547 | 2.38245 | 2.65008 | 3.21446 |
| **69** | 0.67806 | 1.29394 | 1.66724 | 1.99495 | 2.38161 | 2.64898 | 3.21260 |
| **70** | 0.67801 | 1.29376 | 1.66691 | 1.99444 | 2.38081 | 2.64790 | 3.21079 |
| **71** | 0.67796 | 1.29359 | 1.66660 | 1.99394 | 2.38002 | 2.64686 | 3.20903 |
| **72** | 0.67791 | 1.29342 | 1.66629 | 1.99346 | 2.37926 | 2.64585 | 3.20733 |
| **73** | 0.67787 | 1.29326 | 1.66600 | 1.99300 | 2.37852 | 2.64487 | 3.20567 |
| **74** | 0.67782 | 1.29310 | 1.66571 | 1.99254 | 2.37780 | 2.64391 | 3.20406 |
| **75** | 0.67778 | 1.29294 | 1.66543 | 1.99210 | 2.37710 | 2.64298 | 3.20249 |
| **76** | 0.67773 | 1.29279 | 1.66515 | 1.99167 | 2.37642 | 2.64208 | 3.20096 |
| **77** | 0.67769 | 1.29264 | 1.66488 | 1.99125 | 2.37576 | 2.64120 | 3.19948 |
| **78** | 0.67765 | 1.29250 | 1.66462 | 1.99085 | 2.37511 | 2.64034 | 3.19804 |
| **79** | 0.67761 | 1.29236 | 1.66437 | 1.99045 | 2.37448 | 2.63950 | 3.19663 |
| **80** | 0.67757 | 1.29222 | 1.66412 | 1.99006 | 2.37387 | 2.63869 | 3.19526 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Pr** | **0.25** | **0.10** | **0.05** | **0.025** | **0.01** | **0.005** | **0.001** |
| **df** | **0.50** | **0.20** | **0.10** | **0.050** | **0.02** | **0.010** | **0.002** |
| **81** | 0.67753 | 1.29209 | 1.66388 | 1.98969 | 2.37327 | 2.63790 | 3.19392 |
| **82** | 0.67749 | 1.29196 | 1.66365 | 1.98932 | 2.37269 | 2.63712 | 3.19262 |
| **83** | 0.67746 | 1.29183 | 1.66342 | 1.98896 | 2.37212 | 2.63637 | 3.19135 |
| **84** | 0.67742 | 1.29171 | 1.66320 | 1.98861 | 2.37156 | 2.63563 | 3.19011 |
| **85** | 0.67739 | 1.29159 | 1.66298 | 1.98827 | 2.37102 | 2.63491 | 3.18890 |
| **86** | 0.67735 | 1.29147 | 1.66277 | 1.98793 | 2.37049 | 2.63421 | 3.18772 |
| **87** | 0.67732 | 1.29136 | 1.66256 | 1.98761 | 2.36998 | 2.63353 | 3.18657 |
| **88** | 0.67729 | 1.29125 | 1.66235 | 1.98729 | 2.36947 | 2.63286 | 3.18544 |
| **89** | 0.67726 | 1.29114 | 1.66216 | 1.98698 | 2.36898 | 2.63220 | 3.18434 |
| **90** | 0.67723 | 1.29103 | 1.66196 | 1.98667 | 2.36850 | 2.63157 | 3.18327 |
| **91** | 0.67720 | 1.29092 | 1.66177 | 1.98638 | 2.36803 | 2.63094 | 3.18222 |
| **92** | 0.67717 | 1.29082 | 1.66159 | 1.98609 | 2.36757 | 2.63033 | 3.18119 |
| **93** | 0.67714 | 1.29072 | 1.66140 | 1.98580 | 2.36712 | 2.62973 | 3.18019 |
| **94** | 0.67711 | 1.29062 | 1.66123 | 1.98552 | 2.36667 | 2.62915 | 3.17921 |
| **95** | 0.67708 | 1.29053 | 1.66105 | 1.98525 | 2.36624 | 2.62858 | 3.17825 |
| **96** | 0.67705 | 1.29043 | 1.66088 | 1.98498 | 2.36582 | 2.62802 | 3.17731 |
| **97** | 0.67703 | 1.29034 | 1.66071 | 1.98472 | 2.36541 | 2.62747 | 3.17639 |
| **98** | 0.67700 | 1.29025 | 1.66055 | 1.98447 | 2.36500 | 2.62693 | 3.17549 |
| **99** | 0.67698 | 1.29016 | 1.66039 | 1.98422 | 2.36461 | 2.62641 | 3.17460 |
| **100** | 0.67695 | 1.29007 | 1.66023 | 1.98397 | 2.36422 | 2.62589 | 3.17374 |
| **101** | 0.67693 | 1.28999 | 1.66008 | 1.98373 | 2.36384 | 2.62539 | 3.17289 |
| **102** | 0.67690 | 1.28991 | 1.65993 | 1.98350 | 2.36346 | 2.62489 | 3.17206 |
| **103** | 0.67688 | 1.28982 | 1.65978 | 1.98326 | 2.36310 | 2.62441 | 3.17125 |
| **104** | 0.67686 | 1.28974 | 1.65964 | 1.98304 | 2.36274 | 2.62393 | 3.17045 |
| **105** | 0.67683 | 1.28967 | 1.65950 | 1.98282 | 2.36239 | 2.62347 | 3.16967 |
| **106** | 0.67681 | 1.28959 | 1.65936 | 1.98260 | 2.36204 | 2.62301 | 3.16890 |
| **107** | 0.67679 | 1.28951 | 1.65922 | 1.98238 | 2.36170 | 2.62256 | 3.16815 |
| **108** | 0.67677 | 1.28944 | 1.65909 | 1.98217 | 2.36137 | 2.62212 | 3.16741 |
| **109** | 0.67675 | 1.28937 | 1.65895 | 1.98197 | 2.36105 | 2.62169 | 3.16669 |
| **110** | 0.67673 | 1.28930 | 1.65882 | 1.98177 | 2.36073 | 2.62126 | 3.16598 |
| **111** | 0.67671 | 1.28922 | 1.65870 | 1.98157 | 2.36041 | 2.62085 | 3.16528 |
| **112** | 0.67669 | 1.28916 | 1.65857 | 1.98137 | 2.36010 | 2.62044 | 3.16460 |
| **113** | 0.67667 | 1.28909 | 1.65845 | 1.98118 | 2.35980 | 2.62004 | 3.16392 |
| **114** | 0.67665 | 1.28902 | 1.65833 | 1.98099 | 2.35950 | 2.61964 | 3.16326 |
| **115** | 0.67663 | 1.28896 | 1.65821 | 1.98081 | 2.35921 | 2.61926 | 3.16262 |
| **116** | 0.67661 | 1.28889 | 1.65810 | 1.98063 | 2.35892 | 2.61888 | 3.16198 |
| **117** | 0.67659 | 1.28883 | 1.65798 | 1.98045 | 2.35864 | 2.61850 | 3.16135 |
| **118** | 0.67657 | 1.28877 | 1.65787 | 1.98027 | 2.35837 | 2.61814 | 3.16074 |
| **119** | 0.67656 | 1.28871 | 1.65776 | 1.98010 | 2.35809 | 2.61778 | 3.16013 |
| **120** | 0.67654 | 1.28865 | 1.65765 | 1.97993 | 2.35782 | 2.61742 | 3.15954 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Pr** | **0.25** | **0.10** | **0.05** | **0.025** | **0.01** | **0.005** | **0.001** |
| **df** | **0.50** | **0.20** | **0.10** | **0.050** | **0.02** | **0.010** | **0.002** |
| **121** | 0.67652 | 1.28859 | 1.65754 | 1.97976 | 2.35756 | 2.61707 | 3.15895 |
| **122** | 0.67651 | 1.28853 | 1.65744 | 1.97960 | 2.35730 | 2.61673 | 3.15838 |
| **123** | 0.67649 | 1.28847 | 1.65734 | 1.97944 | 2.35705 | 2.61639 | 3.15781 |
| **124** | 0.67647 | 1.28842 | 1.65723 | 1.97928 | 2.35680 | 2.61606 | 3.15726 |
| **125** | 0.67646 | 1.28836 | 1.65714 | 1.97912 | 2.35655 | 2.61573 | 3.15671 |
| **126** | 0.67644 | 1.28831 | 1.65704 | 1.97897 | 2.35631 | 2.61541 | 3.15617 |
| **127** | 0.67643 | 1.28825 | 1.65694 | 1.97882 | 2.35607 | 2.61510 | 3.15565 |
| **128** | 0.67641 | 1.28820 | 1.65685 | 1.97867 | 2.35583 | 2.61478 | 3.15512 |
| **129** | 0.67640 | 1.28815 | 1.65675 | 1.97852 | 2.35560 | 2.61448 | 3.15461 |
| **130** | 0.67638 | 1.28810 | 1.65666 | 1.97838 | 2.35537 | 2.61418 | 3.15411 |
| **131** | 0.67637 | 1.28805 | 1.65657 | 1.97824 | 2.35515 | 2.61388 | 3.15361 |
| **132** | 0.67635 | 1.28800 | 1.65648 | 1.97810 | 2.35493 | 2.61359 | 3.15312 |
| **133** | 0.67634 | 1.28795 | 1.65639 | 1.97796 | 2.35471 | 2.61330 | 3.15264 |
| **134** | 0.67633 | 1.28790 | 1.65630 | 1.97783 | 2.35450 | 2.61302 | 3.15217 |
| **135** | 0.67631 | 1.28785 | 1.65622 | 1.97769 | 2.35429 | 2.61274 | 3.15170 |
| **136** | 0.67630 | 1.28781 | 1.65613 | 1.97756 | 2.35408 | 2.61246 | 3.15124 |
| **137** | 0.67628 | 1.28776 | 1.65605 | 1.97743 | 2.35387 | 2.61219 | 3.15079 |
| **138** | 0.67627 | 1.28772 | 1.65597 | 1.97730 | 2.35367 | 2.61193 | 3.15034 |
| **139** | 0.67626 | 1.28767 | 1.65589 | 1.97718 | 2.35347 | 2.61166 | 3.14990 |
| **140** | 0.67625 | 1.28763 | 1.65581 | 1.97705 | 2.35328 | 2.61140 | 3.14947 |
| **141** | 0.67623 | 1.28758 | 1.65573 | 1.97693 | 2.35309 | 2.61115 | 3.14904 |
| **142** | 0.67622 | 1.28754 | 1.65566 | 1.97681 | 2.35289 | 2.61090 | 3.14862 |
| **143** | 0.67621 | 1.28750 | 1.65558 | 1.97669 | 2.35271 | 2.61065 | 3.14820 |
| **144** | 0.67620 | 1.28746 | 1.65550 | 1.97658 | 2.35252 | 2.61040 | 3.14779 |
| **145** | 0.67619 | 1.28742 | 1.65543 | 1.97646 | 2.35234 | 2.61016 | 3.14739 |
| **146** | 0.67617 | 1.28738 | 1.65536 | 1.97635 | 2.35216 | 2.60992 | 3.14699 |
| **147** | 0.67616 | 1.28734 | 1.65529 | 1.97623 | 2.35198 | 2.60969 | 3.14660 |
| **148** | 0.67615 | 1.28730 | 1.65521 | 1.97612 | 2.35181 | 2.60946 | 3.14621 |
| **149** | 0.67614 | 1.28726 | 1.65514 | 1.97601 | 2.35163 | 2.60923 | 3.14583 |
| **150** | 0.67613 | 1.28722 | 1.65508 | 1.97591 | 2.35146 | 2.60900 | 3.14545 |
| **151** | 0.67612 | 1.28718 | 1.65501 | 1.97580 | 2.35130 | 2.60878 | 3.14508 |
| **152** | 0.67611 | 1.28715 | 1.65494 | 1.97569 | 2.35113 | 2.60856 | 3.14471 |
| **153** | 0.67610 | 1.28711 | 1.65487 | 1.97559 | 2.35097 | 2.60834 | 3.14435 |
| **154** | 0.67609 | 1.28707 | 1.65481 | 1.97549 | 2.35081 | 2.60813 | 3.14400 |
| **155** | 0.67608 | 1.28704 | 1.65474 | 1.97539 | 2.35065 | 2.60792 | 3.14364 |
| **156** | 0.67607 | 1.28700 | 1.65468 | 1.97529 | 2.35049 | 2.60771 | 3.14330 |
| **157** | 0.67606 | 1.28697 | 1.65462 | 1.97519 | 2.35033 | 2.60751 | 3.14295 |
| **158** | 0.67605 | 1.28693 | 1.65455 | 1.97509 | 2.35018 | 2.60730 | 3.14261 |
| **159** | 0.67604 | 1.28690 | 1.65449 | 1.97500 | 2.35003 | 2.60710 | 3.14228 |
| **160** | 0.67603 | 1.28687 | 1.65443 | 1.97490 | 2.34988 | 2.60691 | 3.14195 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Pr** | **0.25** | **0.10** | **0.05** | **0.025** | **0.01** | **0.005** | **0.001** |
| **df** | **0.50** | **0.20** | **0.10** | **0.050** | **0.02** | **0.010** | **0.002** |
| **161** | 0.67602 | 1.28683 | 1.65437 | 1.97481 | 2.34973 | 2.60671 | 3.14162 |
| **162** | 0.67601 | 1.28680 | 1.65431 | 1.97472 | 2.34959 | 2.60652 | 3.14130 |
| **163** | 0.67600 | 1.28677 | 1.65426 | 1.97462 | 2.34944 | 2.60633 | 3.14098 |
| **164** | 0.67599 | 1.28673 | 1.65420 | 1.97453 | 2.34930 | 2.60614 | 3.14067 |
| **165** | 0.67598 | 1.28670 | 1.65414 | 1.97445 | 2.34916 | 2.60595 | 3.14036 |
| **166** | 0.67597 | 1.28667 | 1.65408 | 1.97436 | 2.34902 | 2.60577 | 3.14005 |
| **167** | 0.67596 | 1.28664 | 1.65403 | 1.97427 | 2.34888 | 2.60559 | 3.13975 |
| **168** | 0.67595 | 1.28661 | 1.65397 | 1.97419 | 2.34875 | 2.60541 | 3.13945 |
| **169** | 0.67594 | 1.28658 | 1.65392 | 1.97410 | 2.34862 | 2.60523 | 3.13915 |
| **170** | 0.67594 | 1.28655 | 1.65387 | 1.97402 | 2.34848 | 2.60506 | 3.13886 |
| **171** | 0.67593 | 1.28652 | 1.65381 | 1.97393 | 2.34835 | 2.60489 | 3.13857 |
| **172** | 0.67592 | 1.28649 | 1.65376 | 1.97385 | 2.34822 | 2.60471 | 3.13829 |
| **173** | 0.67591 | 1.28646 | 1.65371 | 1.97377 | 2.34810 | 2.60455 | 3.13801 |
| **174** | 0.67590 | 1.28644 | 1.65366 | 1.97369 | 2.34797 | 2.60438 | 3.13773 |
| **175** | 0.67589 | 1.28641 | 1.65361 | 1.97361 | 2.34784 | 2.60421 | 3.13745 |
| **176** | 0.67589 | 1.28638 | 1.65356 | 1.97353 | 2.34772 | 2.60405 | 3.13718 |
| **177** | 0.67588 | 1.28635 | 1.65351 | 1.97346 | 2.34760 | 2.60389 | 3.13691 |
| **178** | 0.67587 | 1.28633 | 1.65346 | 1.97338 | 2.34748 | 2.60373 | 3.13665 |
| **179** | 0.67586 | 1.28630 | 1.65341 | 1.97331 | 2.34736 | 2.60357 | 3.13638 |
| **180** | 0.67586 | 1.28627 | 1.65336 | 1.97323 | 2.34724 | 2.60342 | 3.13612 |
| **181** | 0.67585 | 1.28625 | 1.65332 | 1.97316 | 2.34713 | 2.60326 | 3.13587 |
| **182** | 0.67584 | 1.28622 | 1.65327 | 1.97308 | 2.34701 | 2.60311 | 3.13561 |
| **183** | 0.67583 | 1.28619 | 1.65322 | 1.97301 | 2.34690 | 2.60296 | 3.13536 |
| **184** | 0.67583 | 1.28617 | 1.65318 | 1.97294 | 2.34678 | 2.60281 | 3.13511 |
| **185** | 0.67582 | 1.28614 | 1.65313 | 1.97287 | 2.34667 | 2.60267 | 3.13487 |
| **186** | 0.67581 | 1.28612 | 1.65309 | 1.97280 | 2.34656 | 2.60252 | 3.13463 |
| **187** | 0.67580 | 1.28610 | 1.65304 | 1.97273 | 2.34645 | 2.60238 | 3.13438 |
| **188** | 0.67580 | 1.28607 | 1.65300 | 1.97266 | 2.34635 | 2.60223 | 3.13415 |
| **189** | 0.67579 | 1.28605 | 1.65296 | 1.97260 | 2.34624 | 2.60209 | 3.13391 |
| **190** | 0.67578 | 1.28602 | 1.65291 | 1.97253 | 2.34613 | 2.60195 | 3.13368 |
| **191** | 0.67578 | 1.28600 | 1.65287 | 1.97246 | 2.34603 | 2.60181 | 3.13345 |
| **192** | 0.67577 | 1.28598 | 1.65283 | 1.97240 | 2.34593 | 2.60168 | 3.13322 |
| **193** | 0.67576 | 1.28595 | 1.65279 | 1.97233 | 2.34582 | 2.60154 | 3.13299 |
| **194** | 0.67576 | 1.28593 | 1.65275 | 1.97227 | 2.34572 | 2.60141 | 3.13277 |
| **195** | 0.67575 | 1.28591 | 1.65271 | 1.97220 | 2.34562 | 2.60128 | 3.13255 |
| **196** | 0.67574 | 1.28589 | 1.65267 | 1.97214 | 2.34552 | 2.60115 | 3.13233 |
| **197** | 0.67574 | 1.28586 | 1.65263 | 1.97208 | 2.34543 | 2.60102 | 3.13212 |
| **198** | 0.67573 | 1.28584 | 1.65259 | 1.97202 | 2.34533 | 2.60089 | 3.13190 |
| **199** | 0.67572 | 1.28582 | 1.65255 | 1.97196 | 2.34523 | 2.60076 | 3.13169 |
| **200** | 0.67572 | 1.28580 | 1.65251 | 1.97190 | 2.34514 | 2.60063 | 3.13148 |

**Lampiran 18 Tabel Uji f**

|  |
| --- |
|  |
| ***α =* 0,05** | **df1=(k-1)** |
| **df2=(n****-k- 1)** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| 1 | 161.448 | 199,500 | 215.707 | 224,583 | 230,162 | 233.986 | 236,768 | 238,883 |
| 2 | 18,513 | 19,000 | 19,164 | 19,247 | 19,296 | 19,330 | 19,353 | 19,371 |
| 3 | 10,128 | 9,552 | 9,277 | 9,117 | 9,013 | 8,941 | 8,887 | 8,845 |
| 4 | 7,709 | 6,944 | 6,591 | 6,388 | 6,256 | 6,163 | 6,094 | 6,041 |
| 5 | 6,608 | 5,786 | 5,409 | 5,192 | 5,050 | 4,950 | 4,876 | 4,818 |
| 6 | 5,987 | 5,143 | 4,757 | 4,534 | 4,387 | 4,284 | 4,207 | 4,147 |
| 7 | 5,591 | 4,737 | 4,347 | 4,120 | 3,972 | 3,866 | 3,787 | 3,726 |
| 8 | 5,318 | 4,459 | 4,066 | 3,838 | 3,687 | 3,581 | 3,500 | 3,438 |
| 9 | 5,117 | 4,256 | 3,863 | 3,633 | 3,482 | 3,374 | 3,293 | 3,230 |
| 10 | 4,965 | 4,103 | 3,708 | 3,478 | 3,326 | 3,217 | 3,135 | 3,072 |
| 11 | 4,844 | 3,982 | 3,587 | 3,357 | 3,204 | 3,095 | 3,012 | 2,948 |
| 12 | 4,747 | 3,885 | 3,490 | 3,259 | 3,106 | 2,996 | 2,913 | 2,849 |
| 13 | 4,667 | 3,806 | 3,411 | 3,179 | 3,025 | 2,915 | 2,832 | 2,767 |
| 14 | 4,600 | 3,739 | 3,344 | 3,112 | 2,958 | 2,848 | 2,764 | 2,699 |
| 15 | 4,543 | 3,682 | 3,287 | 3,056 | 2,901 | 2,790 | 2,707 | 2,641 |
| 16 | 4,494 | 3,634 | 3,239 | 3,007 | 2,852 | 2,741 | 2,657 | 2,591 |
| 17 | 4,451 | 3,592 | 3,197 | 2,965 | 2,810 | 2,699 | 2,614 | 2,548 |
| 18 | 4,414 | 3,555 | 3,160 | 2,928 | 2,773 | 2,661 | 2,577 | 2,510 |
| 19 | 4,381 | 3,522 | 3,127 | 2,895 | 2,740 | 2,628 | 2,544 | 2,477 |
| 20 | 4,351 | 3,493 | 3,098 | 2,866 | 2,711 | 2,599 | 2,514 | 2,447 |
| 21 | 4,325 | 3,467 | 3,072 | 2,840 | 2,685 | 2,573 | 2,488 | 2,420 |
| 22 | 4,301 | 3,443 | 3,049 | 2,817 | 2,661 | 2,549 | 2,464 | 2,397 |
| 23 | 4,279 | 3,422 | 3,028 | 2,796 | 2,640 | 2,528 | 2,442 | 2,375 |
| 24 | 4,260 | 3,403 | 3,009 | 2,776 | 2,621 | 2,508 | 2,423 | 2,355 |
| 25 | 4,242 | 3,385 | 2,991 | 2,759 | 2,603 | 2,490 | 2,405 | 2,337 |
| 26 | 4,225 | 3,369 | 2,975 | 2,743 | 2,587 | 2,474 | 2,388 | 2,321 |
| 27 | 4,210 | 3,354 | 2,960 | 2,728 | 2,572 | 2,459 | 2,373 | 2,305 |
| 28 | 4,196 | 3,340 | 2,947 | 2,714 | 2,558 | 2,445 | 2,359 | 2,291 |
| 29 | 4,183 | 3,328 | 2,934 | 2,701 | 2,545 | 2,432 | 2,346 | 2,278 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | 4,171 | 3,316 | 2,922 | 2,690 | 2,534 | 2,421 | 2,334 | 2,266 |
| 31 | 4,160 | 3,305 | 2,911 | 2,679 | 2,523 | 2,409 | 2,323 | 2,255 |
| 32 | 4,149 | 3,295 | 2,901 | 2,668 | 2,512 | 2,399 | 2,313 | 2,244 |
| 33 | 4,139 | 3,285 | 2,892 | 2,659 | 2,503 | 2,389 | 2,303 | 2,235 |
| 34 | 4,130 | 3,276 | 2,883 | 2,650 | 2,494 | 2,380 | 2,294 | 2,225 |
| 35 | 4,121 | 3,267 | 2,874 | 2,641 | 2,485 | 2,372 | 2,285 | 2,217 |
| 36 | 4,113 | 3,259 | 2,866 | 2,634 | 2,477 | 2,364 | 2,277 | 2,209 |
| 37 | 4,105 | 3,252 | 2,859 | 2,626 | 2,470 | 2,356 | 2,270 | 2,201 |
| 38 | 4,098 | 3,245 | 2,852 | 2,619 | 2,463 | 2,349 | 2,262 | 2,194 |
| 39 | 4,091 | 3,238 | 2,845 | 2,612 | 2,456 | 2,342 | 2,255 | 2,187 |
| 40 | 4,085 | 3,232 | 2,839 | 2,606 | 2,449 | 2,336 | 2,249 | 2,180 |
| 41 | 4,079 | 3,226 | 2,833 | 2,600 | 2,443 | 2,330 | 2,243 | 2,174 |
| 42 | 4,073 | 3,220 | 2,827 | 2,594 | 2,438 | 2,324 | 2,237 | 2,168 |
| 43 | 4,067 | 3,214 | 2,822 | 2,589 | 2,432 | 2,318 | 2,232 | 2,163 |
| 44 | 4,062 | 3,209 | 2,816 | 2,584 | 2,427 | 2,313 | 2,226 | 2,157 |
| 45 | 4,057 | 3,204 | 2,812 | 2,579 | 2,422 | 2,308 | 2,221 | 2,152 |
| 46 | 4,052 | 3,200 | 2,807 | 2,574 | 2,417 | 2,304 | 2,216 | 2,147 |
| 47 | 4,047 | 3,195 | 2,802 | 2,570 | 2,413 | 2,299 | 2,212 | 2,143 |
| 48 | 4,043 | 3,191 | 2,798 | 2,565 | 2,409 | 2,295 | 2,207 | 2,138 |
| 49 | 4,038 | 3,187 | 2,794 | 2,561 | 2,404 | 2,290 | 2,203 | 2,134 |
| 50 | 4,034 | 3,183 | 2,790 | 2,557 | 2,400 | 2,286 | 2,199 | 2,130 |
| 51 | 4,030 | 3,179 | 2,786 | 2,553 | 2,397 | 2,283 | 2,195 | 2,126 |
| 52 | 4,027 | 3,175 | 2,783 | 2,550 | 2,393 | 2,279 | 2,192 | 2,122 |
| 53 | 4,023 | 3,172 | 2,779 | 2,546 | 2,389 | 2,275 | 2,188 | 2,119 |
| 54 | 4,020 | 3,168 | 2,776 | 2,543 | 2,386 | 2,272 | 2,185 | 2,115 |
| 55 | 4,016 | 3,165 | 2,773 | 2,540 | 2,383 | 2,269 | 2,181 | 2,112 |
| 56 | 4,013 | 3,162 | 2,769 | 2,537 | 2,380 | 2,266 | 2,178 | 2,109 |
| 57 | 4,010 | 3,159 | 2,766 | 2,534 | 2,377 | 2,263 | 2,175 | 2,106 |
| 58 | 4,007 | 3,156 | 2,764 | 2,531 | 2,374 | 2,260 | 2,172 | 2,103 |
| 59 | 4,004 | 3,153 | 2,761 | 2,528 | 2,371 | 2,257 | 2,169 | 2,100 |
| 60 | 4,001 | 3,150 | 2,758 | 2,525 | 2,368 | 2,254 | 2,167 | 2,097 |
| 61 | 3,998 | 3,148 | 2,755 | 2,523 | 2,366 | 2,251 | 2,164 | 2,094 |
| 62 | 3,996 | 3,145 | 2,753 | 2,520 | 2,363 | 2,249 | 2,161 | 2,092 |
| 63 | 3,993 | 3,143 | 2,751 | 2,518 | 2,361 | 2,246 | 2,159 | 2,089 |
| 64 | 3,991 | 3,140 | 2,748 | 2,515 | 2,358 | 2,244 | 2,156 | 2,087 |
| 65 | 3,989 | 3,138 | 2,746 | 2,513 | 2,356 | 2,242 | 2,154 | 2,084 |
| 66 | 3,986 | 3,136 | 2,744 | 2,511 | 2,354 | 2,239 | 2,152 | 2,082 |
| 67 | 3,984 | 3,134 | 2,742 | 2,509 | 2,352 | 2,237 | 2,150 | 2,080 |
| 68 | 3,982 | 3,132 | 2,740 | 2,507 | 2,350 | 2,235 | 2,148 | 2,078 |
| 69 | 3,980 | 3,130 | 2,737 | 2,505 | 2,348 | 2,233 | 2,145 | 2,076 |
| 70 | 3,978 | 3,128 | 2,736 | 2,503 | 2,346 | 2,231 | 2,143 | 2,074 |
| 71 | 3,976 | 3,126 | 2,734 | 2,501 | 2,344 | 2,229 | 2,142 | 2,072 |
| 72 | 3,974 | 3,124 | 2,732 | 2,499 | 2,342 | 2,227 | 2,140 | 2,070 |
| 73 | 3,972 | 3,122 | 2,730 | 2,497 | 2,340 | 2,226 | 2,138 | 2,068 |
| 74 | 3,970 | 3,120 | 2,728 | 2,495 | 2,338 | 2,224 | 2,136 | 2,066 |
| 75 | 3,968 | 3,119 | 2,727 | 2,494 | 2,337 | 2,222 | 2,134 | 2,064 |
| 76 | 3,967 | 3,117 | 2,725 | 2,492 | 2,335 | 2,220 | 2,133 | 2,063 |
| 77 | 3,965 | 3,115 | 2,723 | 2,490 | 2,333 | 2,219 | 2,131 | 2,061 |
| 78 | 3,963 | 3,114 | 2,722 | 2,489 | 2,332 | 2,217 | 2,129 | 2,059 |
| 79 | 3,962 | 3,112 | 2,720 | 2,487 | 2,330 | 2,216 | 2,128 | 2,058 |
| 80 | 3,960 | 3,111 | 2,719 | 2,486 | 2,329 | 2,214 | 2,126 | 2,056 |
| 81 | 3,959 | 3,109 | 2,717 | 2,484 | 2,327 | 2,213 | 2,125 | 2,055 |
| 82 | 3,957 | 3,108 | 2,716 | 2,483 | 2,326 | 2,211 | 2,123 | 2,053 |
| 83 | 3,956 | 3,107 | 2,715 | 2,482 | 2,324 | 2,210 | 2,122 | 2,052 |
| 84 | 3,955 | 3,105 | 2,713 | 2,480 | 2,323 | 2,209 | 2,121 | 2,051 |
| 85 | 3,953 | 3,104 | 2,712 | 2,479 | 2,322 | 2,207 | 2,119 | 2,049 |
| 86 | 3,952 | 3,103 | 2,711 | 2,478 | 2,321 | 2,206 | 2,118 | 2,048 |
| 87 | 3,951 | 3,101 | 2,709 | 2,476 | 2,319 | 2,205 | 2,117 | 2,047 |
| 88 | 3,949 | 3,100 | 2,708 | 2,475 | 2,318 | 2,203 | 2,115 | 2,045 |
| 89 | 3,948 | 3,099 | 2,707 | 2,474 | 2,317 | 2,202 | 2,114 | 2,044 |
| 90 | 3,947 | 3,098 | 2,706 | 2,473 | 2,316 | 2,201 | 2,113 | 2,043 |
| 91 | 3,946 | 3,097 | 2,705 | 2,472 | 2,315 | 2,200 | 2,112 | 2,042 |
| 92 | 3,945 | 3,095 | 2,704 | 2,471 | 2,313 | 2,199 | 2,111 | 2,041 |
| 93 | 3,943 | 3,094 | 2,703 | 2,470 | 2,312 | 2,198 | 2,110 | 2,040 |
| 94 | 3,942 | 3,093 | 2,701 | 2,469 | 2,311 | 2,197 | 2,109 | 2,038 |
| 95 | 3,941 | 3,092 | 2,700 | 2,467 | 2,310 | 2,196 | 2,108 | 2,037 |
| 96 | 3,940 | 3,091 | 2,699 | 2,466 | 2,309 | 2,195 | 2,106 | 2,036 |
| 97 | 3,939 | 3,090 | 2,698 | 2,465 | 2,308 | 2,194 | 2,105 | 2,035 |
| 98 | 3,938 | 3,089 | 2,697 | 2,465 | 2,307 | 2,193 | 2,104 | 2,034 |
| 99 | 3,937 | 3,088 | 2,696 | 2,464 | 2,306 | 2,192 | 2,103 | 2,033 |
| 100 | 3,936 | 3,087 | 2,696 | 2,463 | 2,305 | 2,191 | 2,103 | 2,032 |