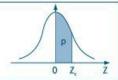
Tabela III — Distribuição Normal Padrão $Z \sim N(0, 1)$ Corpo da tabela dá a probabilidade p, tal que $p = P(0 < Z < Z_g)$



| parte inteira e primeira decimal | 20 | Segunda decimal de Z _c | | | | | | | | | | | | | | |
|---|--------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|--|--|--|--|--|
| de Z | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | de Z | | | | | |
| | p = 0 | | | | | | | | | | | | | | | |
| 0,0 | 000000 | 00399 | 00798 | 01197 | 01595 | 01994 | 02392 | 02790 | 03188 | 03586 | 0,0 | | | | | |
| 0,1 | 03983 | 04380 | 04776 | 05172 | 05567 | 05962 | 06356 | 06749 | 07142 | 07535 | 0,1 | | | | | |
| 0,2 | 07926 | 08317 | 08706 | 09095 | 09483 | 09871 | 10257 | 10642 | 11026 | 11409 | 0,2 | | | | | |
| 0,3 | 11791 | 12172 | 12552 | 12930 | 13307 | 13683 | 14058 | 14431 | 14803 | 15173 | 0,3 | | | | | |
| 0,4 | 15542 | 15910 | 16276 | 16640 | 17003 | 17364 | 17724 | 18082 | 18439 | 18793 | 0,4 | | | | | |
| 0,5 | 19146 | 19497 | 19847 | 20194 | 20540 | 20884 | 21226 | 21566 | 21904 | 22240 | 0,5 | | | | | |
| 0,6 | 22575 | 22907 | 23237 | 23565 | 23891 | 24215 | 24537 | 24857 | 25175 | 25490 | 0,6 | | | | | |
| 0,7 | 25804 | 26115 | 26424 | 26730 | 27035 | 27337 | 27637 | 27935 | 28230 | 28524 | 0,7 | | | | | |
| 0,8 | 28814 | 29103 | 29389 | 29673 | 29955 | 30234 | 30511 | 30785 | 31057 | 31327 | 0,8 | | | | | |
| 0,9 | 31594 | 31859 | 32121 | 32381 | 32639 | 32894 | 33147 | 33398 | 33646 | 33891 | 0,9 | | | | | |
| 1,0 | 34134 | 34375 | 34614 | 34850 | 35083 | 35314 | 35543 | 35769 | 35993 | 36214 | 1,0 | | | | | |
| 1,1 | 36433 | 36650 | 36864 | 37076 | 37286 | 37493 | 37698 | 37900 | 38100 | 38298 | 1,1 | | | | | |
| 1,2 | 38493 | 38686 | 38877 | 39065 | 39251 | 39435 | 39617 | 39796 | 39973 | 40147 | 1,2 | | | | | |
| 1,3 | 40320 | 40490 | 40658 | 40824 | 40988 | 41149 | 41309 | 41466 | 41621 | 41774 | 1,3 | | | | | |
| 1,4 | 41924 | 42073 | 42220 | 42364 | 42507 | 42647 | 42786 | 42922 | 43056 | 43189 | 1,4 | | | | | |
| 1,5 | 43319 | 43448 | 43574 | 43699 | 43822 | 43943 | 44062 | 44179 | 44295 | 44408 | 1,5 | | | | | |
| 1,6 | 44520 | 44630 | 44738 | 44845 | 44950 | 45053 | 45154 | 45254 | 45352 | 45449 | 1,6 | | | | | |
| 1,7 | 45543 | 45637 | 45728 | 45818 | 45907 | 45994 | 46080 | 46164 | 46246 | 46327 | 1,7 | | | | | |
| 1,8 | 46407 | 46485 | 46562 | 46638 | 46712 | 46784 | 46856 | 46926 | 46995 | 47062 | 1,8 | | | | | |
| 1,9 | 47128 | 47193 | 47257 | 47320 | 47381 | 47441 | 47500 | 47558 | 47615 | 47670 | 1,9 | | | | | |
| 2,0 | 47725 | 47778 | 47831 | 47882 | 47932 | 47982 | 48030 | 48077 | 48124 | 48169 | 2,0 | | | | | |
| 2,1 | 48214 | 48257 | 48300 | 48341 | 48382 | 48422 | 48461 | 48500 | 48537 | 48574 | 2,1 | | | | | |
| 2,2 | 48610 | 48645 | 48679 | 48713 | 48745 | 48778 | 48809 | 48840 | 48870 | 48899 | 2,2 | | | | | |
| 2,3 | 48928 | 48956 | 48983 | 49010 | 49036 | 49061 | 49086 | 49111 | 49134 | 49158 | 2,3 | | | | | |
| 2,4 | 49180 | 49202 | 49224 | 49245 | 49266 | 49286 | 49305 | 49324 | 49343 | 49361 | 2,4 | | | | | |
| 2,5 | 49379 | 49396 | 49413 | 49430 | 49446 | 49461 | 49477 | 49492 | 49506 | 49520 | 2,5 | | | | | |
| 2,6 | 49534 | 49547 | 49560 | 49573 | 49585 | 49598 | 49609 | 49621 | 49632 | 49643 | 2,6 | | | | | |
| 2,7 | 49653 | 49664 | 49674 | 49683 | 49693 | 49702 | 49711 | 49720 | 49728 | 49736 | 2,7 | | | | | |
| 2,8 | 49744 | 49752 | 49760 | 49767 | 49774 | 49781 | 49788 | 49795 | 49801 | 49807 | 2,8 | | | | | |
| 2,9 | 49813 | 49819 | 49825 | 49831 | 49836 | 49841 | 49846 | 49851 | 49856 | 49861 | 2,9 | | | | | |
| 3,0 | 49865 | 49869 | 49874 | 49878 | 49882 | 49886 | 49889 | 49893 | 49897 | 49900 | 3,0 | | | | | |
| 3,1 | 49903 | 49906 | 49910 | 49913 | 49916 | 49918 | 49921 | 49924 | 49926 | 49929 | 3,1 | | | | | |
| 3,2 | 49931 | 49934 | 49936 | 49938 | 49940 | 49942 | 49944 | 49946 | 49948 | 49950 | 3,2 | | | | | |
| 3,3 | 49952 | 49953 | 49955 | 49957 | 49958 | 49960 | 49961 | 49962 | 49964 | 49965 | 3,3 | | | | | |
| 3,4 | 49966 | 49968 | 49969 | 49970 | 49971 | 49972 | 49973 | 49974 | 49975 | 49976 | 3,4 | | | | | |
| 3,5 | 49977 | 49978 | 49978 | 49979 | 49980 | 49981 | 49981 | 49982 | 49983 | 49983 | 3,5 | | | | | |
| 3,6 | 49984 | 49985 | 49985 | 49986 | 49986 | 49987 | 49987 | 49988 | 49988 | 49989 | 3,6 | | | | | |
| 3,7 | 49989 | 49990 | 49990 | 49990 | 49991 | 49991 | 49992 | 49992 | 49992 | 49992 | 3,7 | | | | | |
| 3,8 | 49993 | 49993 | 49993 | 49994 | 49994 | 49994 | 49994 | 49995 | 49995 | 49995 | 3,8 | | | | | |
| 3,9 | 49995 | 49995 | 49996 | 49996 | 49996 | 49996 | 49996 | 49996 | 49997 | 49997 | 3,9 | | | | | |
| 4,0 | 49997 | 49997 | 49997 | 49997 | 49997 | 49997 | 49998 | 49998 | 49998 | 49998 | 4,0 | | | | | |
| 4,5 | 49999 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 50000 | 4,5 | | | | | |

| Graus de liberdade v | | Tabeta IV — Distribuição Qui-quadrado $Y \sim \chi^2(v)$ Corpo da tabela dá os valores y_c tais que $P(Y > y_c) = p$. Para valores $v > 30$, use a aproximação normal dada no texto. | | | | | | | | | | | | | | | → χ² | Graus de liberdade v | |
|----------------------|---------|--|--------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------|----------------------|-----------|
| | p = 99% | 98% | 97,5% | 95% | 90% | 80% | 70% | 50% | 30% | 20% | 10% | 5% | 4% | 2,5% | 2% | 1% | 0,2% | 0,1% | |
| 1 | 0,0316 | 0,0%3 | 0,001 | 0,004 | 0,016 | 0,064 | 0,148 | 0,455 | 1,074 | 1,642 | 2,706 | 3,841 | 4,218 | 5,024 | 5,412 | 6,635 | 9,550 | 10,827 | 1 |
| 2 | 0,020 | 0,040 | 0,051 | 0,103 | 0,211 | 0,446 | 0,713 | 1,386 | 2,408 | 3,219 | 4,605 | 5,991 | 6,438 | 7,378 | 7,824 | 9,210 | 12,429 | 13,815 | 2 |
| 3 | 0,115 | 0,185 | 0,216 | 0,352 | 0,584 | 1,005 | 1,424 | 2,366 | 3,665 | 4,642 | 6,251 | 7,815 | 8,311 | 9,348 | 9,837 | 11,345 | 14,796 | 16,266 | 3 |
| 4 | 0,297 | 0,429 | 0,484 | 0,711 | 1,064 | 1,649 | 2,195 | 3,357 | 4,878 | 5,989 | 7,779 | 9,488 | 10,026 | 11,143 | 11,668 | 13,277 | 16,924 | 18,467 | 4 |
| 5 | 0,554 | 0,752 | 0,831 | 1,145 | 1,610 | 2,343 | 3,000 | 4,351 | 6,064 | 7,289 | 9,236 | 11,070 | 11,644 | 12,832 | 13,388 | 15,086 | 18,907 | 20,515 | 5 |
| 6 | 0,872 | 1,134 | 1,237 | 1,635 | 2,204 | 3,070 | 3,828 | 5,348 | 7,231 | 8,558 | 10,645 | 12,592 | 13,198 | 14,449 | 15,033 | 16,812 | 20,791 | 22,457 | 6 |
| 7 | 1,239 | 1,564 | 1,690 | 2,167 | 2,833 | 3,822 | 4,671 | 6,346 | 8,383 | 9,803 | 12,017 | 14,067 | 14,703 | 16,013 | 16,622 | 18,475 | 22,601 | 24,322 | 7 |
| 8 | 1,646 | 2,032 | 2,180 | 2,733 | 3,490 | 4,594 | 5,527 | 7,344 | 9,524 | 11,030 | 13,362 | 15,507 | 16,171 | 17,534 | 18,168 | 20,090 | 24,352 | 26,125 | 8 |
| 9 | 2,088 | 2,532 | 2,700 | 3,325 | 4,168 | 5,380 | 6,393 | 8,343 | 10,656 | 12,242 | 14,684 | 16,919 | 17,608 | 19,023 | 19,679 | 21,666 | 26,056 | 27,877 | 9 |
| 10 | 2,558 | 3,059 | 3,247 | 3,940 | 4,865 | 6,179 | 7,267 | 9,342 | 11,781 | 13,442 | 15,987 | 18,307 | 19,021 | 20,483 | 21,161 | 23,209 | 27,722 | 29,588 | 10 |
| 11 | 3,053 | 3,609 | 3,816 | 4,575 | 5,578 | 6,989 | 8,148 | 10,341 | 12,899 | 14,631 | 17,275 | 19,675 | 20,412 | 21,920 | 22,618 | 24,725 | 29,354 | 31,264 | 111 |
| 12 | 3,571 | 4,178 | 4,404 | 5,226 | 6,304 | 7,807 | 9,034 | 11,340 | 14,011 | 15,812 | 18,549 | 21,026 | 21,785 | 23,337 | 24,054 | 26,217 | 30,957 | 32,909 | 12 |
| 13 | 4,107 | 4,765 | 5,009 | 5,892 | 7,042 | 8,634 | 9,926 | 12,340 | 15,119 | 16,985 | 19,812 | 22,362 | 23,142 | 24,736 | 25,472 | 27,688 | 32,535 | 34,528 | 13 |
| 14 | 4,660 | 5,368 | 5,629 | 6,571 | 7,790 | 9,467 | 10,821 | 13,339 | 16,222 | 18,151 | 21,064 | 23,685 | 24,485 | 26,119 | 26,873 | 29,141 | 34,091 | 36,123 | 14 |
| 15 | 5,229 | 5,985 | 6,262 | 7,261 | 8,547 | 10,307 | 11,721 | 14,339 | 17,322 | 19,311 | 22,307 | 24,996 | 25,816 | 27,488 | 28,259 | 30,578 | 35,628 | 37,697 | 15 |
| 16 | 6,408 | 7,255 | 7,564 | 7,962 8,672 | 9,312 | 11,152 | 12,624 | 16,338 | 19,418 | 20,465 | 24,769 | 27,587 | 27,136 | 28,845 | 29,633 | 32,000 | 37,146 38,648 | 39,252 40,790 | 16 |
| 18 | 7,015 | 7,906 | 8,231 | 9,390 | 10,865 | 12,857 | 14,440 | 17,338 | 20,601 | 22,760 | 25,989 | 28,869 | 29.745 | 31,526 | 32,346 | 34,805 | 40,136 | 42,312 | 18 |
| 19 | 7,633 | 8,567 | 8,906 | 10,117 | 11,651 | 13,716 | 15,352 | 18,338 | 21.689 | 23,900 | 27,204 | 30.144 | 31.037 | 32,852 | 33,687 | 36,191 | 41,610 | 43,820 | 19 |
| 20 | 8,260 | 9,237 | 9,591 | 10,851 | 12,443 | 14,578 | 16,266 | 19,337 | 22,775 | 25,038 | 28,412 | 31,410 | 32,321 | 34,170 | 35,020 | 37,566 | 43,072 | 45,315 | decree of |
| 21 | 8,897 | 9,915 | 10,283 | 11,591 | 13,240 | 15,445 | 17,182 | 20,337 | 23,858 | 26,171 | 29,615 | 32,671 | 33,597 | 35,479 | 36,343 | 38,932 | 44,522 | 46,797 | |
| 22 | 9,542 | 10,600 | 10,982 | 12,338 | 14,041 | 16,314 | 18,101 | 21,337 | 24,939 | 27,301 | 30,813 | 33,924 | 34,867 | 36,781 | 37,659 | 40,289 | 45,962 | 48,268 | 22 |
| 23 | 10.196 | 11,293 | 11,688 | 13,091 | 14,848 | 17.187 | 19,021 | 22.337 | 26.018 | 28,429 | 32.007 | 35,172 | 36.131 | 38,076 | 38,968 | 41,638 | 47,391 | 49,728 | 100 |
| 24 | 10,856 | 11,992 | 12,401 | 13,848 | 15,659 | 18,062 | 19,943 | 23,337 | 27,096 | 29,553 | 33,196 | 36,415 | 37,389 | 39,364 | 40,270 | 42,980 | 48,812 | 51,179 | 24 |
| 25 | 11,524 | 12,697 | 13,120 | 14,611 | 16,473 | 18,940 | 20.867 | 24,337 | 28,172 | 30,675 | 34,382 | 37,652 | 38,642 | 40.646 | 41,566 | 44,314 | 50,223 | 52,620 | 11.75 |
| 26 | 12,198 | 13,409 | 13,844 | 15,379 | 17,292 | 19,820 | 21,792 | 25,336 | 29,246 | 31,795 | 35,563 | 38,885 | 39,889 | 41,923 | 42,856 | 45,642 | 51,627 | 54,052 | |
| 27 | 12.879 | 14,125 | 14,573 | 16,151 | 18,114 | 20,703 | 22,719 | 26,336 | 30,319 | 32,912 | 36,741 | 40,113 | 41,132 | 43,194 | 44,140 | 46,963 | 53,022 | 55,476 | |
| 28 | 13,565 | 14,847 | 15,308 | 16,928 | 18,939 | 21,588 | 23,647 | 27,336 | 31,319 | 34,027 | 37,916 | 41,337 | 42,370 | 44,461 | 45,419 | 48.278 | 54,411 | 56,893 | document. |
| 29 | 14,258 | 15,574 | 16,047 | 17,708 | 19,768 | 22,475 | 24,577 | 28,336 | 32,461 | 35,139 | 39,087 | 42,557 | 43,604 | 45,722 | 46,693 | 49,588 | 55,792 | 58,302 | |
| 30 | 14,953 | 16,306 | 16,791 | 18,493 | 20,599 | 23,364 | 25,508 | 29,336 | 33,530 | 36,250 | 40,256 | 43,773 | 44,834 | 46,979 | 47,962 | 50,892 | 57,167 | 59,703 | |
| | p = 99% | 98% | 97,5% | 95% | 90% | 80% | 70% | 50% | 30% | 20% | 10% | 5% | 4% | 2,5% | 2% | 1% | 0,2% | 0,1% | |

| Graus de liberdade | | Tabela V — Distribuição t de Student Corpo da tabela dá os valores t_e tais que $P(-t_e < t < t_e) = 1 - p$. Para $v > 120$, usar a aproximação normal. | | | | | | | | | | | | | | |
|--------------------|---------|---|-------|-------|-------|-------|-------|-------|-------|--------|--------|----------------|--------|----------------|----------------|------|
| Ğ | p = 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% | 5% | 4% | 2% | 1% | 0,2% | 0,1% | Gaus |
| 1. | 0,158 | 0,325 | 0,510 | 0,727 | 1,000 | 1,376 | 1,963 | 3,078 | 6,314 | 12,706 | 15,894 | 31,821 | 63,657 | 318,309 | 636,619 | 1 |
| 2 | 0,142 | 0,289 | 0,445 | 0,617 | 0,816 | 1,061 | 1,386 | 1,886 | 2,920 | 4,303 | 4,849 | 6,965 | 9,925 | 22,327 | 31,598 | 2 |
| 3 | 0,137 | 0,277 | 0,424 | 0,584 | 0,765 | 0,978 | 1,250 | 1,638 | 2,353 | 3,182 | 3,482 | 4,541 | 5,841 | 10,214 | 12,924 | 3 |
| 4 | 0,134 | 0,271 | 0,414 | 0,569 | 0,741 | 0,941 | 1,190 | 1,533 | 2,132 | 2,776 | 2,998 | 3,747 | 4,604 | 7,173 | 8,610 | 4 |
| 5 | 0,132 | 0,267 | 0,408 | 0,559 | 0,727 | 0,920 | 1,156 | 1,476 | 2,015 | 2,571 | 2,756 | 3,365 | 4,032 | 5,893 | 6,869 | 5 |
| 6 | 0,131 | 0,265 | 0,404 | 0,553 | 0,718 | 0,906 | 1,134 | 1,440 | 1,943 | 2,447 | 2,612 | 3,143 2,998 | 3,707 | 5,208 4,785 | 5,959 5,408 | 7 |
| 8 | 0,130 | 0,262 | 0,402 | 0,549 | 0,706 | 0,899 | 1,119 | 1,415 | 1,860 | 2,305 | 2,449 | 2,896 | 3,355 | 4,501 | 5,041 | 8 |
| 0 | 0,130 | 0,261 | 0,399 | 0,543 | 0,703 | 0,883 | 1,100 | 1,397 | 1,833 | 2,300 | 2,398 | 2,821 | 3,250 | 4,297 | 4,781 | 0 |
| 10 | 0,129 | 0,260 | 0,397 | 0,542 | 0,700 | 0,879 | 1,093 | 1,372 | 1,812 | 2,228 | 2,359 | 2,764 | 3,169 | 4,144 | 4,587 | 10 |
| 11 | 0,129 | 0,260 | 0,396 | 0,540 | 0,697 | 0,876 | 1,088 | 1,363 | 1,796 | 2,201 | 2,328 | 2,718 | 3,106 | 3,025 | 4,437 | 111 |
| 12 | 0,128 | 0,259 | 0,395 | 0,539 | 0,695 | 0,873 | 1,083 | 1,356 | 1,782 | 2,179 | 2,303 | 2,681 | 3,055 | 3,930 | 4,318 | 12 |
| 13 | 0,128 | 0,259 | 0.394 | 0,538 | 0,694 | 0,870 | 1,079 | 1,350 | 1,771 | 2,160 | 2,282 | 2,650 | 3,012 | 3,852 | 4,221 | 13 |
| 14 | 0,128 | 0,258 | 0,393 | 0,537 | 0,692 | 0,868 | 1,076 | 1,345 | 1,761 | 2,145 | 2,264 | 2,624 | 2,977 | 3,787 | 4,140 | 14 |
| 15 | 0,128 | 0,258 | 0,393 | 0,536 | 0,691 | 0,866 | 1,074 | 1,341 | 1,753 | 2,131 | 2,248 | 2,602 | 2,947 | 3,733 | 4,073 | 15 |
| 16 | 0,128 | 0,258 | 0,392 | 0,535 | 0,690 | 0,865 | 1,071 | 1,337 | 1,746 | 2,120 | 2,235 | 2,583 | 2,921 | 3,686 | 4,015 | 16 |
| 17 | 0,128 | 0,257 | 0,392 | 0,534 | 0,689 | 0,863 | 1,069 | 1,333 | 1,740 | 2,110 | 2,224 | 2,567 | 2,898 | 3,646 | 3,965 | 17 |
| 18 | 0,127 | 0,257 | 0,392 | 0,534 | 0,688 | 0,862 | 1,067 | 1,330 | 1,734 | 2,101 | 2,214 | 2,552 | 2,878 | 3,610 | 3,922 | 18 |
| 19 | 0,127 | 0,257 | 0,391 | 0,533 | 0,688 | 0,861 | 1,066 | 1,328 | 1,729 | 2,093 | 2,205 | 2,539 | 2,861 | 3,579 | 3,883 | 19 |
| 20 | 0,127 | 0,257 | 0,391 | 0,533 | 0,687 | 0,860 | 1,064 | 1,325 | 1,725 | 2,086 | 2,197 | 2,528 | 2,845 | 3,552 | 3,850 | 20 |
| 21 | 0,127 | 0,257 | 0,391 | 0,532 | 0,686 | 0,859 | 1,063 | 1,323 | 1,721 | 2,080 | 2,189 | 2,518 | 2,831 | 3,527 | 3,819 | 21 |
| 22 | 0,127 | 0,256 | 0,390 | 0,532 | 0,686 | 0,858 | 1,061 | 1,321 | 1,717 | 2,074 | 2,183 | 2,508 | 2,819 | 3,505 | 3,792 3,768 | 22 |
| 24 | 0,127 | 0,256 | 0,390 | 0,532 | 0,685 | 0,857 | 1,059 | 1,319 | 1,711 | 2,064 | 2,172 | 2,492 | 2,797 | 3,467 | 3,745 | 24 |
| 25 | 0,127 | 0,256 | 0,390 | 0,531 | 0,684 | 0,856 | 1,058 | 1,316 | 1,708 | 2,060 | 2,166 | 2,485 | 2,787 | 3,450 | 3,725 | 25 |
| 26 | 0,127 | 0,256 | 0,390 | 0,531 | 0,684 | 0,856 | 1,058 | 1,315 | 1,706 | 2,056 | 2,162 | 2,479 | 2,779 | 3,435 | 3,707 | 26 |
| 27 | 0.127 | 0,256 | 0.389 | 0,531 | 0,684 | 0,855 | 1.057 | 1,314 | 1.703 | 2,052 | 2,158 | 2,473 | 2,771 | 3,421 | 3,690 | 27 |
| 28 | 0,127 | 0,256 | 0,389 | 0,530 | 0,684 | 0,855 | 1,056 | 1,313 | 1,701 | 2,048 | 2,154 | 2,467 | 2,763 | 3,408 | 3,674 | 28 |
| 29 | 0,127 | 0,256 | 0,389 | 0,530 | 0,683 | 0,854 | 1,055 | 1,311 | 1,699 | 2,045 | 2,150 | 2,462 | 2,756 | 3,396 | 3,659 | 29 |
| 30 | 0,127 | 0,256 | 0,389 | 0,530 | 0,683 | 0,854 | 1,055 | 1,310 | 1,697 | 2,042 | 2,147 | 2,457 | 2,750 | 3,385 | 3,646 | 30 |
| 35 | 0,126 | 0,255 | 0,388 | 0,529 | 0,682 | 0,852 | 1,052 | 1,306 | 1,690 | 2,030 | 2,133 | 2,438 | 2,724 | 3,340 | 3,591 | 35 |
| 40 | 0,126 | 0,255 | 0,388 | 0,529 | 0,681 | 0,851 | 1,050 | 1,303 | 1,684 | 2,021 | 2,123 | 2,423 | 2,704 | 3,307 | 3,551 | 40 |
| 50 | 0,126 | 0,254 | 0,387 | 0,528 | 0,679 | 0,849 | 1,047 | 1,299 | 1,676 | 2,009 | 2,109 | 2,403 | 2,678 | 3,261 | 3,496 | 50 |
| 60 | 0,126 | 0,254 | 0,387 | 0,527 | 0,679 | 0,848 | 1,045 | 1,296 | 1,671 | 2,000 | 2,099 | 2,390 | 2,660 | 3,232 | 3,460 | 60 |
| 120 | 0,126 | 0,254 | 0,386 | 0,526 | 0,677 | 0,845 | 1,041 | 1,289 | 1,658 | 1,980 | 2,076 | 2,358 | 2,617 | 3,160 | 3,373 | 120 |
| - 100 | p = 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% | 5% | 4% | 2% | 1% | 0,2% | 0,1% | - 30 |

| Graus de libendade do denominador de P: v ₂ | | Tabela VI — Distribuição F Corpo da tabela dá os valores f_c tais que $P(F > f_c) = 0.05$. | | | | | | | | | | | | | | | + f | Graus de liberdade do denominador de F1 V2 | | | | | |
|---|-------|---|-------|-------|-------|---------|-------|---|-------|-----------|-------|---------------------|-------------------|-------|-------|-------------------|------------|---|---------|---------|-----------|-------|----------|
| Prom | :00 | 222 | e5. | SIV | 560 | 1 = 300 | 1934 | 5500 | Gra | u de libe | | o numen | ador de | F: v, | 000 | Yieldig. | 0/480 | .0.255 | V1 4102 | opati | Vertices: | | rous |
| 00 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 15 | 16 | 18 | 20 | 24 | 30 | 40 | 60 | 120 | 00 | 0-0 |
| - 1 | 161,4 | 199,5 | 215,7 | 224,6 | 230,2 | 234,0 | 236,8 | 238,9 | 240,5 | 241,9 | 243,9 | 245,4 | 245,9 | | 247,3 | The second second | 249,1 | 250,1 | 251,1 | 252,2 | | 254,3 | 1. |
| 2 | 18,51 | 19,00 | 19,16 | 19,25 | 19,30 | 19,33 | 19,35 | 19,37 | 19,38 | 19,40 | 19,41 | 19,42 | 19,43 | 19,43 | 19,44 | 19,45 | 19,45 | 19,46 | 19,47 | | 19,49 | 19,50 | 2 |
| 3 | 10,13 | 9,55 | 9,28 | 9,12 | 9,01 | 8,94 | 8,89 | 8,85 | 8,81 | 8,79 | 8,74 | 8,72 | 8,70 | 8,69 | 8,67 | 8,66 | 8,64 | 8,62 | 8,59 | 8,57 | 8,55 | 8,53 | 3 |
| 4 | 7,71 | 6,94 | 6,59 | 6,39 | 6,26 | 6,16 | 6,09 | 6,04 | 6,00 | 5,96 | 5,91 | 5,87 | 5,86 | 5,84 | 5,82 | 5,80 | 5,77 | 5,75 | 5,72 | 5,69 | 5,66 | 5,63 | 4 |
| 5 | 6,61 | 5,79 | 5,41 | 5,19 | 5,05 | 4,95 | 4,88 | 4,82 | 4,77 | 4,74 | 4,68 | 4,64 | 4,62 | 4,60 | 4,58 | 4,56 | 4,53 | 4,50 | 4,46 | 4,43 | 4,40 | 4,36 | 5 |
| 6 | 5,99 | 5,14 | 4,76 | 4,53 | 4,39 | 4,28 | 4,21 | 4,15 | 4,10 | 4,06 | 4,00 | 3,96 | 3,94 | 3,92 | 3,90 | 3,87 | 3,84 | 3,81 | 3,77 | 3,74 | 3,70 | 3,67 | 6 |
| 7 | 5,59 | 474 | 4,35 | 4,12 | 3,97 | 3,87 | 3,79 | 3,73 | 3,68 | 3,64 | 3,57 | 3,53 | 3,51 | 3,49 | 3,47 | 3,44 | 3,41 | 3,38 | 3,34 | 3,30 | 3,27 | 3,23 | 7 |
| 8 | 5,32 | 4,46 | 4,07 | 3,84 | 3,69 | 3,58 | 3,50 | 3,44 | 3,39 | 3,35 | 3,28 | 3,24 | 3,22 | 3,20 | 3,17 | 3,15 | 3,12 | 3,08 | 3,04 | 3,01 | 2,97 | 2,93 | 8 |
| 9 | 5,12 | 4,26 | 3,86 | 3,63 | 3,48 | 3,37 | 3,29 | 3,23 | 3,18 | 3,14 | 3,07 | 3,03 | 3,01 | 2,99 | 2,96 | 2,94 | 2,90 | 2,86 | 2,83 | 2,79 | 2,75 | 2,71 | 9 |
| 10 | 4,96 | 4,10 | 3,71 | 3,48 | 3,33 | 3,22 | 3,14 | 3,07 | 3,02 | 2,98 | 2,91 | 2,87 | 2,85 | 2,83 | 2,80 | 2,77 | 2,74 | 2,70 | 2,66 | 2,62 | 2,58 | 2,54 | 10 |
| 11 | 4,84 | 3,98 | 3,59 | 3,36 | 3,20 | 3,09 | 3,01 | 2,95 | 2,90 | 2,85 | 2,79 | 274 | 2,72 | 2,70 | 2,67 | 2,65 | 2,61 | 2,57 | 2,53 | 2,49 | 2,45 | 2,40 | 11 |
| 12 | 4,75 | 3,89 | 3,49 | 3,26 | 3,11 | 3,00 | 2,91 | 2,85 | 2,80 | 2,75 | 2,69 | 2,64 | 2,62 | 2,60 | 2,57 | 2,54 | 2,51 | 2,47 | 2,43 | 2,38 | 2,34 | 2,30 | 12 |
| 13 | 4,67 | 3,81 | 3,41 | 3,18 | 3,03 | 2,92 | 2,83 | 2,77 | 2,71 | 2,67 | 2,60 | 2,55 | 2,53 | 2,52 | 2,48 | 2,46 | 2,42 | 2,38 | 2,34 | 2,30 | 2,25 | 2,21 | 13 |
| 14 | 4,60 | 3,74 | 3,34 | 3,11 | 2,96 | | 2,76 | 2,70 | 2,65 | 2,60 | 2,53 | 2,48 | 2,46 | 2,44 | 2,41 | 2,39 | 2,35 | 2,31 | 2,27 | 2,22 | 2,18 | 2,13 | 14 |
| 15 | 4,54 | 3,68 | 3,29 | 3,06 | 2,90 | 2,79 | 2,71 | 2,64 | 2,59 | 2,54 | 2,48 | 2,42 | 2,40 | 2,39 | 2,35 | 2,33 | 2,29 | 2,25 | 2,20 | 2,16 | 2,11 | 2,07 | 15 |
| 16 | 4,49 | 3,63 | 3,24 | 3,01 | 2,85 | 2,74 | 2,66 | 2,59 | 2,54 | 2,49 | 2,42 | 2,37 | 2,35 | 2,33 | 2,30 | 2,28 | 2,24 | 2,19 | 2,15 | 2,11 | 2,06 | 2,01 | 16 |
| 17 | 4,45 | 3,59 | 3,20 | 2,96 | 2,81 | 2,70 | 2,61 | 2,55 | 2,49 | 2,45 | 2,38 | 2,34 | 2,31 | 2,29 | 2,26 | 2,23 | 2,19 | 2,15 | 2,10 | | 2,01 | 1,96 | 17 |
| 18 | 4,41 | 3,55 | 3,16 | 2,93 | 2,77 | 2,66 | 2,58 | 2,51 | 2,46 | 2,41 | 2,34 | 2,29 | 2,27 | 2,25 | 2,22 | 2,19 | 2,15 | 2,11 | 2,06 | 2,02 | 1,97 | 1,92 | 18 |
| 19 | 4,38 | 3,52 | 3,13 | 2,90 | 2,74 | 2,63 | 2,54 | 2,48 | 2,42 | 2,38 | 2,31 | 2,26 | 2,23 | 2,22 | 2,18 | 2,16 | 2,11 | 2,07 | 2,03 | 1,98 | 1,93 | 1,88 | 19 |
| 20 | 4,35 | 3,49 | 3,10 | 2,87 | 2,71 | 2,60 | 2,51 | 2,45 | 2,39 | 2,35 | 2,28 | 2,22 | 2,20 | 2,18 | 2,15 | 2,12 | 2,08 | 2,04 | 1,99 | 1,95 | 1,90 | 1,84 | 20 |
| 21 | 4,32 | 3,47 | 3,07 | 2,84 | 2,68 | 2,57 | 2,49 | 2,42 | 2,37 | 2,32 | 2,25 | 2,20 | 2,18 | 2,16 | 2,12 | 2,10 | 2,05 | 2,01 | 1,96 | 1,92 | 1,87 | 1,81 | 21 |
| 22 | 4,30 | 3,44 | 3,05 | 2,82 | 2,66 | 2,55 | 2,46 | 2,40 | 2,34 | 2,30 | 2,23 | 2,17 | 2,15 | 2,13 | 2,10 | 2,07 | 2,03 | 1,98 | 1,94 | 1,89 | 1,84 | 1,78 | 22 |
| 23 | 4,28 | 3,42 | 3,03 | 2,80 | 2,64 | 2,53 | 2,44 | 2,37 | 2,32 | 2,27 | 2,20 | 2,15 | 2,13 | 2,11 | 2,08 | 2,05 | 2,01 | 1,96 | 1,91 | 1,86 | 1,81 | 1,76 | 23 |
| 24 | 4,26 | 3,40 | 3,01 | 2,78 | 2,62 | 2,51 | 2,42 | 2,36 | 2,30 | 2,25 | 2,18 | 2,13 | 2,11 | 2,09 | 2,05 | 2,03 | 1,98 | 1,94 | 1,89 | 1,84 | 1,79 | 1,73 | 24 |
| 25 26 | | | 2,99 | 2,76 | 2,60 | 2,49 | 2,40 | 2,34 | 2,28 | 2,24 | 2,16 | 2,11 | | 2,07 | | 2,01 | 1,96 | 1,92 | 1,87 | 1,82 | 1,77 | 1,71 | 25 |
| 27 | 4,23 | 3,37 | 2,96 | 273 | 2,57 | 2,46 | 2,37 | 2,32 | 2.25 | 2,22 | 2,15 | 2.08 | 2,07 | 2,05 | 2,02 | 1,97 | 1,95 | 1.88 | 1.84 | 1,80 | 173 | 1.67 | 27 |
| | | | | | | 1000 | | 100000000000000000000000000000000000000 | 1000 | | | THE PERSON NAMED IN | The second second | 200 | - | | | | 1.6 | 7.85170 | - | - 4 | 0.77 |
| 28 | 4,20 | 3,34 | 2,95 | 2,71 | 2,56 | 2,45 | 2,36 | 2,29 | 2,24 | 2,19 | 2,12 | 2,06 | 2,04 | 2,02 | 1,99 | 1,96 | 1,91 | 1,87 | 1,82 | 1,77 | 1,71 | 1,65 | 28 |
| 29 | 4,18 | | 2,93 | 2,69 | 2,53 | 2,43 | 2,33 | 2,28 | 2,22 | 2,18 | 2,10 | 2,05 | 2,03 | 2,01 | 1,97 | 1.93 | 1,90 | | 1,81 | 1,74 | 1,70 | 1,64 | |
| 30 40 | 4,17 | 3,32 | 2,92 | 2,61 | 2,45 | 2,42 | 2,33 | 2,18 | 2,12 | 2,08 | 2,00 | 1,95 | 1,92 | 1,90 | 1,90 | 1.84 | 1,79 | 1,84 | 1.69 | 1,64 | 1,68 | 1,62 | 30 40 |
| 60 | 4,08 | 3,15 | 2,76 | 2,53 | 2,45 | 2,34 | 2,23 | 2,10 | 2.04 | 1.99 | 1.92 | 1.86 | 1,84 | 1.81 | 1,78 | 1.75 | 1,70 | 1,65 | 1,59 | 1,53 | 1,47 | 1,39 | 60 |
| 120 | 3.92 | 3,07 | 2.68 | 2,45 | 2,29 | 2.17 | 2,09 | 2.02 | 1.96 | 1.91 | 1.83 | 1.77 | 1.75 | 1.72 | 1,69 | 1.66 | 1.61 | 1.55 | 1.50 | 1,43 | 1,35 | 1,25 | 120 |
| 720 | 3.84 | 3,00 | 2,60 | 2,37 | 2,21 | 2,10 | 2,01 | 1,94 | 1.88 | 1.83 | 1,03 | 1,69 | 1,67 | 1,63 | 1,60 | 1,57 | 1,52 | 1,46 | 1,39 | 1,32 | 1,22 | 1,00 | 00 |
| | 1 | | 3 | 1 | | 4 | 7 | 8 | 0 | | | | | | | - | - | | - | | | - | |
| | -1 | 2 | 3 | 4 | 5 | 0 | 1 | 8 | 9 | 10 | 12 | 14 | 15 | 16 | 18 | 20 | 24 | 30 | 40 | 60 | 120 | (00) | |

| Graus de liberdade do denominador de Fi v ₂ | | Tabela VI — Distribuição F (continuação) Corpo da tabela dá os valores f_c tais que $P(F > f_c) = 0,025$. | | | | | | | | | | | | | | | Graus de liberdade do denominador de F: v ₁ | | | |
|---|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|-------|-------|-----|
| Graus | 40 | Grau de liberdade do numerador de F: v₁ 1 2 3 4 5 6 7 8 9 10 12 15 20 24 30 40 60 120 ∞ | | | | | | | | | | | | | | | | | | |
| 1 | 647.8 | 799.5 | 864.2 | 899.6 | 921.8 | 937.1 | 948.2 | 9567 | 963.3 | 963.3 | 976.7 | 984.9 | 993.1 | 777 | 1001 | 1006 | 1010 | | 1018 | 1 |
| 2 | 38,51 | 39.00 | 39,17 | 39,25 | 39,30 | 39,33 | 39,36 | 39,37 | 39,39 | 39,40 | 39,41 | 39,43 | 39,45 | 39,46 | 39.46 | 39,47 | 39,48 | 39,49 | 39,50 | 2 |
| 3 | 17,44 | 16,04 | 15,44 | 15,10 | 14,88 | 14,73 | 14,62 | 14,54 | 14,47 | 14,42 | 14,34 | 14,25 | 14,17 | 14,12 | 14,08 | 14,04 | 13,99 | 13,95 | 13,90 | 3 |
| 4 | 12,22 | 10,65 | 9,98 | 9,60 | 9,36 | 9,20 | 9,07 | 8,98 | 8,90 | 3,84 | 8,75 | 8,66 | 8,56 | 8,51 | 8.46 | 8,41 | 8,36 | 8,31 | 8,26 | 4 |
| 5 | 10,01 | 8,43 | 7,76 | 7,39 | 7,15 | 6.98 | 6,85 | 6,76 | 6,68 | 6,62 | 6,52 | 6,43 | 6,33 | 6.28 | 6,23 | 6.18 | 6.12 | 6,07 | 6.02 | 5 |
| 6 | 8,81 | 7,26 | 6,60 | 6,23 | 5,99 | 5,82 | 5,70 | 5,60 | 5,52 | 5,46 | 5,37 | 5,27 | 5,17 | 5,12 | 5,07 | 5,01 | 4,96 | 4,90 | 4,85 | 6 |
| 7 | 8,07 | 6,54 | 5,89 | 5,52 | 5,29 | 5,12 | 4,99 | 4,90 | 4,82 | 4,76 | 4,67 | 4,57 | 4,47 | 4,42 | 4,36 | 4,31 | 4,25 | 4,20 | 4,14 | 7 |
| 8 | 7,57 | 6,06 | 5,42 | 5,05 | 4,82 | 4,65 | 4,53 | 4,43 | 4,36 | 4,30 | 4,20 | 4,10 | 4,00 | 3,95 | 3,89 | 3,84 | 3,78 | 3,73 | 3,67 | 8 |
| 9 | 7,21 | 5,71 | 5,08 | 4,72 | 4,48 | 4,32 | 4,20 | 4,10 | 4,03 | 3,96 | 3,87 | 3,77 | 3,67 | 3,61 | 3,56 | 3,51 | 3,45 | 3,39 | 3,33 | 9 |
| 10 | 6,94 | 5,46 | 4,83 | 4,47 | 4,24 | 4,07 | 3,95 | 3,85 | 3,78 | 3,72 | 3,62 | 3,52 | 3,42 | 3,37 | 3,31 | 3,26 | 3,20 | 3,14 | 3,08 | 10 |
| 11 | 6,72 | 5,26 | 4,63 | 4,28 | 4,04 | 3,88 | 3,76 | 3,66 | 3,59 | 3,53 | 3,43 | 3,33 | 3,23 | 3,17 | 3,12 | 3,06 | 3,00 | 2,94 | 2,88 | 11 |
| 12 | 6,55 | 5,10 | 4,47 | 4,12 | 3,89 | 3,73 | 3,61 | 3,51 | 3,44 | 3,37 | 3,28 | 3,18 | 3,07 | 3,02 | 2,96 | 2,91 | 2,85 | 2,79 | 2,72 | 12 |
| 13 | 6,41 | 4,97 | 4,35 | 4,00 | 3,77 | 3,60 | 3,48 | 3,39 | 3,31 | 3,25 | 3,15 | 3,05 | 2,95 | 2,89 | 2,84 | 2,78 | 2,72 | 2,66 | 2,60 | 13 |
| 14 | 6,30 | 4,86 | 4,24 | 3,89 | 3,66 | 3,50 | 3,38 | 3,29 | 3,21 | 3,15 | 3,05 | 2,95 | 2,84 | 2,79 | 2,73 | 2,67 | 2,61 | 2,55 | 2,49 | 14 |
| 15 | 6,20 | 4,77 | 4,15 | 3,80 | 3,58 | 3,41 | 3,29 | 3,20 | 3,12 | 3,06 | 2,96 | 2,80 | 2,76 | 2,70 | 2,64 | 2,59 | 2,52 | 2,46 | 2,40 | 15 |
| 17 | 6,04 | 4,69 | 4,08 | 3,66 | 3,44 | 3,28 | 3,16 | 3,06 | 2,98 | 2,92 | 2,82 | 2,79 | 2,62 | 2,56 | 2,50 | 2,44 | 2,38 | 2,30 | 2,32 | 17 |
| 18 | 5,98 | 4,56 | 3.95 | 3,61 | 3,38 | 3,22 | 3,10 | 3.01 | 2,93 | 2,87 | 2,77 | 2,67 | 2,56 | 2,50 | 2,44 | 2,38 | 2,32 | 2,26 | 2,19 | 18 |
| 19 | 5,92 | 4,51 | 3,90 | 3,56 | 3,33 | 3,17 | 3,05 | 2.96 | 2,88 | 2,82 | 2.72 | 2.62 | 2,51 | 2,45 | 2.39 | 2,33 | 2,27 | 2,20 | 2,13 | 19 |
| 20 | 5,87 | 4,46 | 3,86 | 3,51 | 3,29 | 3,13 | 3,01 | 2,91 | 2.84 | 2,77 | 2,68 | 2,57 | 2,46 | 2,41 | 2,35 | 2,29 | 2,22 | 2,16 | 2,09 | 20 |
| 21 | 5,83 | 4,42 | 3,82 | 3,48 | 3,25 | 3,09 | 2,97 | 2,87 | 2,80 | 2.73 | 2.64 | 2,53 | 2,42 | 2,37 | 2,31 | 2,25 | 2,18 | 2,11 | 2,04 | 21 |
| 22 | 5,79 | 4,38 | 3,78 | 3,44 | 3,22 | 3,05 | 2,93 | 2,84 | 276 | 2,70 | 2,60 | 2,50 | 2,39 | 2,33 | 2,27 | 2,21 | 2,14 | 2,08 | 2,00 | 22 |
| 23 | 5,75 | 4,35 | 3,75 | 3,41 | 3,18 | 3,02 | 2,90 | 2,81 | 2,73 | 2,67 | 2,57 | 2,47 | 2,36 | 2,30 | 2,24 | 2,18 | 2,11 | 2,04 | 1,97 | 23 |
| 24 | 5,72 | 4,32 | 3,72 | 3,38 | 3,15 | 2,99 | 2,87 | 2,78 | 2,70 | 2,64 | 2,54 | 2,44 | 2,33 | 2,27 | 2,21 | 2,15 | 2,08 | 2,01 | 1,94 | 24 |
| 25 | 5,69 | 4,29 | 3,69 | 3,35 | 3,13 | 2,97 | 2,85 | 2,75 | 2,68 | 2,61 | 2,51 | 2,41 | 2,30 | 2,24 | 2,18 | 2,12 | 2,05 | 1,98 | 1,91 | 25 |
| 26 | 5,66 | 4,27 | 3,67 | 3,33 | 3,10 | 2,94 | 2,82 | 2,73 | 2,65 | 2,59 | 2,49 | 2,39 | 2,28 | 2,22 | 2,16 | 2,09 | 2,03 | 1,95 | 1,88 | 26 |
| 27 | 5,63 | 4,24 | 3,65 | 3,31 | 3,08 | 2,92 | 2,80 | 2,71 | 2,63 | 2,57 | 2,47 | 2,36 | 2,25 | 2,19 | 2,13 | 2,07 | 2,00 | 1,93 | 1,85 | 27 |
| 28 | 5,61 | 4,22 | 3,63 | 3,29 | 3,06 | 2,90 | 2,78 | 2,69 | 2,61 | 2,55 | 2,45 | 2,34 | 2,23 | 2,17 | 2,11 | 2,05 | 1,98 | 1,91 | 1,83 | 28 |
| 29 | 5,59 | 4,20 | 3,61 | 3,27 | 3,04 | 2,88 | 2,76 | 2,67 | 2,59 | 2,53 | 2,43 | 2,32 | 2,21 | 2,15 | 2,09 | 2,03 | 1,96 | 1,89 | 1,81 | 29 |
| 30 40 | 5,57 | 4,18 | 3,59 | 3,25 | 3,03 | 2,87 | 2,75 | 2,65 | 2,57 | 2,51 | 2,41 | 2,31 | 2,20 | 2,14 | 2,07 | 2,01 | 1,94 | 1,87 | 179 | 30 |
| - | 5,42 | 4,05 | 3,46 | 3,13 | 2,90 | 2,74 | 2,62 | 2,53 | 2,45 | 2,39 | | 2,18 | 2,07 | 2,01 | 1,94 | 1,88 | 1,80 | 1,72 | 1,64 | 40 |
| 100 | 5,29 | 3,93 | 3,34 | 2,89 | 2,79 | 2,63 | 2,51 | 2,41 | 2,33 | 2,27 | 2,17 | 2,06 | 1,94 | 1,88 | 1,82 | 1,74 | 1,67 | 1,58 | 1,48 | 100 |
| 120 | 5,15 | 3,69 | 3,23 | 2,89 | 2,57 | 2,52 | 2,39 | 2,30 | 2,22 | 2,10 | 1,94 | 1,94 | 1,82 | 1,64 | 1,69 | 1,61 | 1,53 | 1,43 | 1,00 | 120 |
| -00 | 202 | 3,09 | 3,12 | 2,14 | 5 | 2,41 | 7 | 2,19 | 9 | 2,05 | 1,94 | 1,03 | 1,/1 | 1,04 | 1,0/ | 40 | 1,39 | 120 | 1,00 | |