

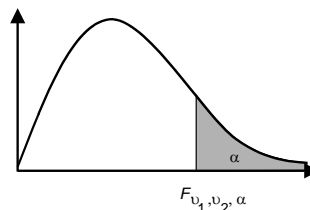
| Parte inteira e 1ª decimal de z | Segunda decimal de z |       |       |       |       |       |       |       |       |       |
|---------------------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                 | 0                    | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
| 0,0                             | 00000                | 00399 | 00798 | 01197 | 01595 | 01994 | 02392 | 02790 | 03188 | 03586 |
| 0,1                             | 03983                | 04380 | 04776 | 05172 | 05567 | 05962 | 06356 | 06749 | 07142 | 07535 |
| 0,2                             | 07926                | 08317 | 08706 | 09095 | 09483 | 09871 | 10257 | 10642 | 11026 | 11409 |
| 0,3                             | 11791                | 12172 | 12552 | 12930 | 13307 | 13683 | 14058 | 14431 | 14803 | 15173 |
| 0,4                             | 15542                | 15910 | 16276 | 16640 | 17003 | 17364 | 17724 | 18082 | 18439 | 18793 |
| 0,5                             | 19146                | 19497 | 19847 | 20194 | 20540 | 20884 | 21226 | 21566 | 21904 | 22240 |
| 0,6                             | 22575                | 22907 | 23237 | 23565 | 23891 | 24215 | 24537 | 24857 | 25175 | 25490 |
| 0,7                             | 25804                | 26115 | 26424 | 26730 | 27035 | 27337 | 27637 | 27935 | 28230 | 28524 |
| 0,8                             | 28814                | 29103 | 29389 | 29673 | 29955 | 30234 | 30511 | 30785 | 31057 | 31327 |
| 0,9                             | 31594                | 31859 | 32121 | 32381 | 32639 | 32894 | 33147 | 33398 | 33646 | 33891 |
| 1,0                             | 34134                | 34375 | 34614 | 34849 | 35083 | 35314 | 35543 | 35769 | 35993 | 36214 |
| 1,1                             | 36433                | 36650 | 36864 | 37076 | 37286 | 37493 | 37698 | 37900 | 38100 | 38298 |
| 1,2                             | 38493                | 38686 | 38877 | 39065 | 39251 | 39435 | 39617 | 39796 | 39973 | 40147 |
| 1,3                             | 40320                | 40490 | 40658 | 40824 | 40988 | 41149 | 41309 | 41466 | 41621 | 41774 |
| 1,4                             | 41924                | 42073 | 42220 | 42364 | 42507 | 42647 | 42785 | 42922 | 43056 | 43189 |
| 1,5                             | 43319                | 43448 | 43574 | 43699 | 43822 | 43943 | 44062 | 44179 | 44295 | 44408 |
| 1,6                             | 44520                | 44630 | 44738 | 44845 | 44950 | 45053 | 45154 | 45254 | 45352 | 45449 |
| 1,7                             | 45543                | 45637 | 45728 | 45818 | 45907 | 45994 | 46080 | 46164 | 46246 | 46327 |
| 1,8                             | 46407                | 46485 | 46562 | 46638 | 46712 | 46784 | 46856 | 46926 | 46995 | 47062 |
| 1,9                             | 47128                | 47193 | 47257 | 47320 | 47381 | 47441 | 47500 | 47558 | 47615 | 47670 |
| 2,0                             | 47725                | 47778 | 47831 | 47882 | 47932 | 47982 | 48030 | 48077 | 48124 | 48169 |
| 2,1                             | 48214                | 48257 | 48300 | 48341 | 48382 | 48422 | 48461 | 48500 | 48537 | 48574 |
| 2,2                             | 48610                | 48645 | 48679 | 48713 | 48745 | 48778 | 48809 | 48840 | 48870 | 48899 |
| 2,3                             | 48928                | 48956 | 48983 | 49010 | 49036 | 49061 | 49086 | 49111 | 49134 | 49158 |
| 2,4                             | 49180                | 49202 | 49224 | 49245 | 49266 | 49286 | 49305 | 49324 | 49343 | 49361 |
| 2,5                             | 49379                | 49396 | 49413 | 49430 | 49446 | 49461 | 49477 | 49492 | 49506 | 49520 |
| 2,6                             | 49534                | 49547 | 49560 | 49573 | 49585 | 49598 | 49609 | 49621 | 49632 | 49643 |
| 2,7                             | 49653                | 49664 | 49674 | 49683 | 49693 | 49702 | 49711 | 49720 | 49728 | 49736 |
| 2,8                             | 49744                | 49752 | 49760 | 49767 | 49774 | 49781 | 49788 | 49795 | 49801 | 49807 |
| 2,9                             | 49813                | 49819 | 49825 | 49831 | 49836 | 49841 | 49846 | 49851 | 49856 | 49861 |
| 3,0                             | 49865                | 49869 | 49874 | 49878 | 49882 | 49886 | 49889 | 49893 | 49896 | 49900 |
| 3,1                             | 49903                | 49906 | 49910 | 49913 | 49916 | 49918 | 49921 | 49924 | 49926 | 49929 |
| 3,2                             | 49931                | 49934 | 49936 | 49938 | 49940 | 49942 | 49944 | 49946 | 49948 | 49950 |
| 3,3                             | 49952                | 49953 | 49955 | 49957 | 49958 | 49960 | 49961 | 49962 | 49964 | 49965 |
| 3,4                             | 49966                | 49968 | 49969 | 49970 | 49971 | 49972 | 49973 | 49974 | 49975 | 49976 |
| 3,5                             | 49977                | 49978 | 49978 | 49979 | 49980 | 49981 | 499   |       |       |       |

# DISTRIBUIÇÃO t BICAUDAL

| gl  | $\alpha$ |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|     | 0,9      | 0,8   | 0,7   | 0,6   | 0,5   | 0,4   | 0,3   | 0,2   | 0,1   | 0,05  | 0,04  | 0,02  | 0,01  | 0,002 | 0,001 |
| 1   | 0,158    | 0,325 | 0,510 | 0,727 | 1,000 | 1,376 | 1,963 | 3,078 | 6,314 | 12,71 | 15,89 | 31,82 | 63,65 | 318,3 | 636,6 |
| 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 | 22,33 | 31,60 |
| 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 | 10,22 | 12,92 |
| 4   | 0,134    | 0,271 | 0,414 | 0,569 | 0,741 | 0,941 | 1,190 | 1,533 | 2,132 | 2,776 | 2,999 | 3,747 | 4,604 | 7,173 | 8,610 |
| 5   | 0,132    | 0,267 | 0,408 | 0,559 | 0,727 | 0,920 | 1,156 | 1,476 | 2,015 | 2,571 | 2,757 | 3,365 | 4,032 | 5,893 | 6,869 |
| 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 | 3,707 | 5,208 | 5,959 |
| 7   | 0,130    | 0,263 | 0,402 | 0,549 | 0,711 | 0,896 | 1,119 | 1,415 | 1,895 | 2,365 | 2,517 | 2,998 | 3,499 | 4,785 | 5,408 |
| 8   | 0,130    | 0,262 | 0,399 | 0,546 | 0,706 | 0,889 | 1,108 | 1,397 | 1,860 | 2,306 | 2,449 | 2,896 | 3,355 | 4,501 | 5,041 |
| 9   | 0,129    | 0,261 | 0,398 | 0,543 | 0,703 | 0,883 | 1,100 | 1,383 | 1,833 | 2,262 | 2,398 | 2,821 | 3,250 | 4,297 | 4,781 |
| 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 |
| 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 | 4,025 | 4,437 |
| 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 |
| 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 |
| 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 |
| 15  | 0,128    | 0,258 | 0,393 | 0,536 | 0,691 | 0,866 | 1,074 | 1,341 | 1,753 | 2,131 | 2,249 | 2,602 | 2,947 | 3,733 | 4,073 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 23  | 0,127    | 0,256 | 0,390 | 0,532 | 0,685 | 0,858 | 1,060 | 1,319 | 1,714 | 2,069 | 2,177 | 2,500 | 2,807 | 3,485 | 3,768 |
| 24  | 0,127    | 0,256 | 0,390 | 0,531 | 0,685 | 0,857 | 1,059 | 1,318 | 1,711 | 2,064 | 2,172 | 2,492 | 2,797 | 3,467 | 3,745 |
| 25  | 0,127    | 0,256 | 0,390 | 0,531 | 0,684 | 0,856 | 1,058 | 1,316 | 1,708 | 2,060 | 2,167 | 2,485 | 2,787 | 3,450 | 3,725 |
| 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 |
| 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 |
| 28  | 0,127    | 0,256 | 0,389 | 0,530 | 0,683 | 0,855 | 1,056 | 1,313 | 1,701 | 2,048 | 2,154 | 2,467 | 2,763 | 3,408 | 3,674 |
| 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 |
| 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 |
| 35  | 0,127    | 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 |
| 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 |
| 50  | 0,126    | 0,255 | 0,388 | 0,528 | 0,679 | 0,849 | 1,047 | 1,299 | 1,676 | 2,009 | 2,109 | 2,403 | 2,678 | 3,261 | 3,496 |
| 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 |
| 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 |

## DISTRIBUIÇÃO F:

$$P(F_{v_1, v_2} > F_{v_1, v_2, 5\%}) = 5\%$$



| gl<br>denominador | gl numerador |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                   | 1            | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 12   | 15   | 20   | 24   | 30   | 40   | 60   | 120  |
| 1                 | 161          | 199  | 216  | 225  | 230  | 234  | 237  | 239  | 241  | 242  | 244  | 246  | 248  | 249  | 250  | 251  | 252  | 253  |
| 2                 | 18,5         | 19,0 | 19,2 | 19,2 | 19,3 | 19,3 | 19,4 | 19,4 | 19,4 | 19,4 | 19,4 | 19,4 | 19,4 | 19,5 | 19,5 | 19,5 | 19,5 | 19,5 |
| 3                 | 10,1         | 9,55 | 9,28 | 9,12 | 9,01 | 8,94 | 8,89 | 8,85 | 8,81 | 8,79 | 8,74 | 8,70 | 8,66 | 8,64 | 8,62 | 8,59 | 8,57 | 8,55 |
| 4                 | 7,71         | 6,94 | 6,59 | 6,39 | 6,26 | 6,16 | 6,09 | 6,04 | 6,00 | 5,96 | 5,91 | 5,86 | 5,80 | 5,77 | 5,75 | 5,72 | 5,69 | 5,66 |
| 5                 | 6,61         | 5,79 | 5,41 | 5,19 | 5,05 | 4,95 | 4,88 | 4,82 | 4,77 | 4,74 | 4,68 | 4,62 | 4,56 | 4,53 | 4,50 | 4,46 | 4,43 | 4,40 |
| 6                 | 5,99         | 5,14 | 4,76 | 4,53 | 4,39 | 4,28 | 4,21 | 4,15 | 4,10 | 4,06 | 4,00 | 3,94 | 3,87 | 3,84 | 3,81 | 3,77 | 3,74 | 3,70 |
| 7                 | 5,59         | 4,74 | 4,35 | 4,12 | 3,97 | 3,87 | 3,79 | 3,73 | 3,68 | 3,64 | 3,57 | 3,51 | 3,44 | 3,41 | 3,38 | 3,34 | 3,30 | 3,27 |
| 8                 | 5,32         | 4,46 | 4,07 | 3,84 | 3,69 | 3,58 | 3,50 | 3,44 | 3,39 | 3,35 | 3,28 | 3,22 | 3,15 | 3,12 | 3,08 | 3,04 | 3,01 | 2,97 |
| 9                 | 5,12         | 4,26 | 3,86 | 3,63 | 3,48 | 3,37 | 3,29 | 3,23 | 3,18 | 3,14 | 3,07 | 3,01 | 2,94 | 2,90 | 2,86 | 2,83 | 2,79 | 2,75 |
| 10                | 4,96         | 4,10 | 3,71 | 3,48 | 3,33 | 3,22 | 3,14 | 3,07 | 3,02 | 2,98 | 2,91 | 2,85 | 2,77 | 2,74 | 2,70 | 2,66 | 2,62 | 2,58 |
| 11                | 4,84         | 3,98 | 3,59 | 3,36 | 3,20 | 3,09 | 3,01 | 2,95 | 2,90 | 2,85 | 2,79 | 2,72 | 2,65 | 2,61 | 2,57 | 2,53 | 2,49 | 2,45 |
| 12                | 4,75         | 3,89 | 3,49 | 3,26 | 3,11 | 3,00 | 2,91 | 2,85 | 2,80 | 2,75 | 2,69 | 2,62 | 2,54 | 2,51 | 2,47 | 2,43 | 2,38 | 2,34 |
| 13                | 4,67         | 3,81 | 3,41 | 3,18 | 3,03 | 2,92 | 2,83 | 2,77 | 2,71 | 2,67 | 2,60 | 2,53 | 2,46 | 2,42 | 2,38 | 2,34 | 2,30 | 2,25 |
| 14                | 4,60         | 3,74 | 3,34 | 3,11 | 2,96 | 2,85 | 2,76 | 2,70 | 2,65 | 2,60 | 2,53 | 2,46 | 2,39 | 2,35 | 2,31 | 2,27 | 2,22 | 2,18 |
| 15                | 4,54         | 3,68 | 3,29 | 3,06 | 2,90 | 2,79 | 2,71 | 2,64 | 2,59 | 2,54 | 2,48 | 2,40 | 2,33 | 2,29 | 2,25 | 2,20 | 2,16 | 2,11 |
| 16                | 4,49         | 3,63 | 3,24 | 3,01 | 2,85 | 2,74 | 2,66 | 2,59 | 2,54 | 2,49 | 2,42 | 2,35 | 2,28 | 2,24 | 2,19 | 2,15 | 2,11 | 2,06 |
| 17                | 4,45         | 3,59 | 3,20 | 2,96 | 2,81 | 2,70 | 2,61 | 2,55 | 2,49 | 2,45 | 2,38 | 2,31 | 2,23 | 2,19 | 2,15 | 2,10 | 2,06 | 2,01 |
| 18                | 4,41         | 3,55 | 3,16 | 2,93 | 2,77 | 2,66 | 2,58 | 2,51 | 2,46 | 2,41 | 2,34 | 2,27 | 2,19 | 2,15 | 2,11 | 2,06 | 2,02 | 1,97 |
| 19                | 4,38         | 3,52 | 3,13 | 2,90 | 2,74 | 2,63 | 2,54 | 2,48 | 2,42 | 2,38 | 2,31 | 2,23 | 2,16 | 2,11 | 2,07 | 2,03 | 1,98 | 1,93 |
| 20                | 4,35         | 3,49 | 3,10 | 2,87 | 2,71 | 2,60 | 2,51 | 2,45 | 2,39 | 2,35 | 2,28 | 2,20 | 2,12 | 2,08 | 2,04 | 1,99 | 1,95 | 1,90 |
| 21                | 4,32         | 3,47 | 3,07 | 2,84 | 2,68 | 2,57 | 2,49 | 2,42 | 2,37 | 2,32 | 2,25 | 2,18 | 2,10 | 2,05 | 2,01 | 1,96 | 1,92 | 1,87 |
| 22                | 4,30         | 3,44 | 3,05 | 2,82 | 2,66 | 2,55 | 2,46 | 2,40 | 2,34 | 2,30 | 2,23 | 2,15 | 2,07 | 2,03 | 1,98 | 1,94 | 1,89 | 1,84 |
| 23                | 4,28         | 3,42 | 3,03 | 2,80 | 2,64 | 2,53 | 2,44 | 2,37 | 2,32 | 2,27 | 2,20 | 2,13 | 2,05 | 2,01 | 1,96 | 1,91 | 1,86 | 1,81 |
| 24                | 4,26         | 3,40 | 3,01 | 2,78 | 2,62 | 2,51 | 2,42 | 2,36 | 2,30 | 2,25 | 2,18 | 2,11 | 2,03 | 1,98 | 1,94 | 1,89 | 1,84 | 1,79 |
| 25                | 4,24         | 3,39 | 2,99 | 2,76 | 2,60 | 2,49 | 2,40 | 2,34 | 2,28 | 2,24 | 2,16 | 2,09 | 2,01 | 1,96 | 1,92 | 1,87 | 1,82 | 1,77 |
| 26                | 4,23         | 3,37 | 2,98 | 2,74 | 2,59 | 2,47 | 2,39 | 2,32 | 2,27 | 2,22 | 2,15 | 2,07 | 1,99 | 1,95 | 1,90 | 1,85 | 1,80 | 1,75 |
| 27                | 4,21         | 3,35 | 2,96 | 2,73 | 2,57 | 2,46 | 2,37 | 2,31 | 2,25 | 2,20 | 2,13 | 2,06 | 1,97 | 1,93 | 1,88 | 1,84 | 1,79 | 1,73 |
| 28                | 4,20         | 3,34 | 2,95 | 2,71 | 2,56 | 2,45 | 2,36 | 2,29 | 2,24 | 2,19 | 2,12 | 2,04 | 1,96 | 1,91 | 1,87 | 1,82 | 1,77 | 1,71 |
| 29                | 4,18         | 3,33 | 2,93 | 2,70 | 2,55 | 2,43 | 2,35 | 2,28 | 2,22 | 2,18 | 2,10 | 2,03 | 1,94 | 1,90 | 1,85 | 1,81 | 1,75 | 1,70 |
| 30                | 4,17         | 3,32 | 2,92 | 2,69 | 2,53 | 2,42 | 2,33 | 2,27 | 2,21 | 2,16 | 2,09 | 2,01 | 1,93 | 1,89 | 1,84 | 1,79 | 1,74 | 1,68 |
| 31                | 4,16         | 3,30 | 2,91 | 2,68 | 2,52 | 2,41 | 2,32 | 2,25 | 2,20 | 2,15 | 2,08 | 2,00 | 1,92 | 1,88 | 1,83 | 1,78 | 1,73 | 1,67 |
| 32                | 4,15         | 3,29 | 2,90 | 2,67 | 2,51 | 2,40 | 2,31 | 2,24 | 2,19 | 2,14 | 2,07 | 1,99 | 1,91 | 1,86 | 1,82 | 1,77 | 1,71 | 1,66 |
| 33                | 4,14         | 3,28 | 2,89 | 2,66 | 2,50 | 2,39 | 2,30 | 2,23 | 2,18 | 2,13 | 2,06 | 1,98 | 1,90 | 1,85 | 1,81 | 1,76 | 1,70 | 1,64 |
| 34                | 4,13         | 3,28 | 2,88 | 2,65 | 2,49 | 2,38 | 2,29 | 2,23 | 2,17 | 2,12 | 2,05 | 1,97 | 1,89 | 1,84 | 1,80 | 1,75 | 1,69 | 1,63 |
| 35                | 4,12         | 3,27 | 2,87 | 2,64 | 2,49 | 2,37 | 2,29 | 2,22 | 2,16 | 2,11 | 2,04 | 1,96 | 1,88 | 1,83 | 1,79 | 1,74 | 1,68 | 1,62 |
| 36                | 4,11         | 3,26 | 2,87 | 2,63 | 2,48 | 2,36 | 2,28 | 2,21 | 2,15 | 2,11 | 2,03 | 1,95 | 1,87 | 1,82 | 1,78 | 1,73 | 1,67 | 1,61 |
| 37                | 4,11         | 3,25 | 2,86 | 2,63 | 2,47 | 2,36 | 2,27 | 2,20 | 2,14 | 2,10 | 2,02 | 1,95 | 1,86 | 1,82 | 1,77 | 1,72 | 1,66 | 1,60 |
| 38                | 4,10         | 3,24 | 2,85 | 2,62 | 2,46 | 2,35 | 2,26 | 2,19 | 2,14 | 2,09 | 2,02 | 1,94 | 1,85 | 1,81 | 1,76 | 1,71 | 1,65 | 1,59 |
| 39                | 4,09         | 3,24 | 2,85 | 2,61 | 2,46 | 2,34 | 2,26 | 2,19 | 2,13 | 2,08 | 2,01 | 1,93 | 1,85 | 1,80 | 1,75 | 1,70 | 1,65 | 1,58 |
| 40                | 4,08         | 3,23 | 2,84 | 2,61 | 2,45 | 2,34 | 2,25 | 2,18 | 2,12 | 2,08 | 2,00 | 1,92 | 1,84 | 1,79 | 1,74 | 1,69 | 1,64 | 1,58 |
| 60                | 4,00         | 3,15 | 2,76 | 2,53 | 2,37 | 2,25 | 2,17 | 2,10 | 2,04 | 1,99 | 1,92 | 1,84 | 1,75 | 1,70 | 1,65 | 1,59 | 1,53 | 1,47 |
| 120               | 3,92         | 3,07 | 2,68 | 2,45 | 2,29 | 2,18 | 2,09 | 2,02 | 1,96 | 1,91 | 1,83 | 1,75 | 1,66 | 1,61 | 1,55 | 1,50 | 1,43 | 1,35 |

**DISTRIBUIÇÃO QUI-QUADRADO – fornece valor cuja probabilidade à direita é  $\alpha$**

| gl  | $\alpha$ |         |        |        |        |         |         |         |         |         |
|-----|----------|---------|--------|--------|--------|---------|---------|---------|---------|---------|
|     | 0,995    | 0,99    | 0,975  | 0,95   | 0,9    | 0,1     | 0,05    | 0,025   | 0,01    | 0,005   |
| 1   | 3,9E-05  | 1,6E-04 | 0,001  | 0,004  | 0,016  | 2,706   | 3,841   | 5,024   | 6,635   | 7,879   |
| 2   | 0,010    | 0,020   | 0,051  | 0,103  | 0,211  | 4,605   | 5,991   | 7,378   | 9,210   | 10,597  |
| 3   | 0,072    | 0,115   | 0,216  | 0,352  | 0,584  | 6,251   | 7,815   | 9,348   | 11,345  | 12,838  |
| 4   | 0,207    | 0,297   | 0,484  | 0,711  | 1,064  | 7,779   | 9,488   | 11,143  | 13,277  | 14,860  |
| 5   | 0,412    | 0,554   | 0,831  | 1,145  | 1,610  | 9,236   | 11,070  | 12,833  | 15,086  | 16,750  |
| 6   | 0,676    | 0,872   | 1,237  | 1,635  | 2,204  | 10,645  | 12,592  | 14,449  | 16,812  | 18,548  |
| 7   | 0,989    | 1,239   | 1,690  | 2,167  | 2,833  | 12,017  | 14,067  | 16,013  | 18,475  | 20,278  |
| 8   | 1,344    | 1,646   | 2,180  | 2,733  | 3,490  | 13,362  | 15,507  | 17,535  | 20,090  | 21,955  |
| 9   | 1,735    | 2,088   | 2,700  | 3,325  | 4,168  | 14,684  | 16,919  | 19,023  | 21,666  | 23,589  |
| 10  | 2,156    | 2,558   | 3,247  | 3,940  | 4,865  | 15,987  | 18,307  | 20,483  | 23,209  | 25,188  |
| 11  | 2,603    | 3,053   | 3,816  | 4,575  | 5,578  | 17,275  | 19,675  | 21,920  | 24,725  | 26,757  |
| 12  | 3,074    | 3,571   | 4,404  | 5,226  | 6,304  | 18,549  | 21,026  | 23,337  | 26,217  | 28,300  |
| 13  | 3,565    | 4,107   | 5,009  | 5,892  | 7,042  | 19,812  | 22,362  | 24,736  | 27,688  | 29,819  |
| 14  | 4,075    | 4,660   | 5,629  | 6,571  | 7,790  | 21,064  | 23,685  | 26,119  | 29,141  | 31,319  |
| 15  | 4,601    | 5,229   | 6,262  | 7,261  | 8,547  | 22,307  | 24,996  | 27,488  | 30,578  | 32,801  |
| 16  | 5,142    | 5,812   | 6,908  | 7,962  | 9,312  | 23,542  | 26,296  | 28,845  | 32,000  | 34,267  |
| 17  | 5,697    | 6,408   | 7,564  | 8,672  | 10,085 | 24,769  | 27,587  | 30,191  | 33,409  | 35,718  |
| 18  | 6,265    | 7,015   | 8,231  | 9,390  | 10,865 | 25,989  | 28,869  | 31,526  | 34,805  | 37,156  |
| 19  | 6,844    | 7,633   | 8,907  | 10,117 | 11,651 | 27,204  | 30,144  | 32,852  | 36,191  | 38,582  |
| 20  | 7,434    | 8,260   | 9,591  | 10,851 | 12,443 | 28,412  | 31,410  | 34,170  | 37,566  | 39,997  |
| 21  | 8,034    | 8,897   | 10,283 | 11,591 | 13,240 | 29,615  | 32,671  | 35,479  | 38,932  | 41,401  |
| 22  | 8,643    | 9,542   | 10,982 | 12,338 | 14,041 | 30,813  | 33,924  | 36,781  | 40,289  | 42,796  |
| 23  | 9,260    | 10,196  | 11,689 | 13,091 | 14,848 | 32,007  | 35,172  | 38,076  | 41,638  | 44,181  |
| 24  | 9,886    | 10,856  | 12,401 | 13,848 | 15,659 | 33,196  | 36,415  | 39,364  | 42,980  | 45,559  |
| 25  | 10,520   | 11,524  | 13,120 | 14,611 | 16,473 | 34,382  | 37,652  | 40,646  | 44,314  | 46,928  |
| 26  | 11,160   | 12,198  | 13,844 | 15,379 | 17,292 | 35,563  | 38,885  | 41,923  | 45,642  | 48,290  |
| 27  | 11,808   | 12,879  | 14,573 | 16,151 | 18,114 | 36,741  | 40,113  | 43,195  | 46,963  | 49,645  |
| 28  | 12,461   | 13,565  | 15,308 | 16,928 | 18,939 | 37,916  | 41,337  | 44,461  | 48,278  | 50,993  |
| 29  | 13,121   | 14,256  | 16,047 | 17,708 | 19,768 | 39,087  | 42,557  | 45,722  | 49,588  | 52,336  |
| 30  | 13,787   | 14,953  | 16,791 | 18,493 | 20,599 | 40,256  | 43,773  | 46,979  | 50,892  | 53,672  |
| 40  | 20,707   | 22,164  | 24,433 | 26,509 | 29,051 | 51,805  | 55,758  | 59,342  | 63,691  | 66,766  |
| 50  | 27,991   | 29,707  | 32,357 | 34,764 | 37,689 | 63,167  | 67,505  | 71,420  | 76,154  | 79,490  |
| 60  | 35,534   | 37,485  | 40,482 | 43,188 | 46,459 | 74,397  | 79,082  | 83,298  | 88,379  | 91,952  |
| 70  | 43,275   | 45,442  | 48,758 | 51,739 | 55,329 | 85,527  | 90,531  | 95,023  | 100,425 | 104,215 |
| 80  | 51,172   | 53,540  | 57,153 | 60,391 | 64,278 | 96,578  | 101,879 | 106,629 | 112,329 | 116,321 |
| 90  | 59,196   | 61,754  | 65,647 | 69,126 | 73,291 | 107,565 | 113,145 | 118,136 | 124,116 | 128,299 |
| 100 | 67,328   | 70,065  | 74,222 | 77,929 | 82,358 | 118,498 | 124,342 | 129,561 | 135,807 | 140,169 |