

**Table 3. PERCENTILES FOR THE  $t$  DISTRIBUTION [ $t_r$ ]**

[Calculated with  $qt$  (and  $qnorm$ ) in **Splus** V3.0R1 using 17-digit arithmetic;  
the accuracy of all digits in the table entries has *not* been verified]

| Df<br>(v)  | Each table entry is the value (y) of the random variable $Y \sim t_r$ , such that $\Pr(Y \leq y) =$ the probability given in the column heading |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |           |           | University of Waterloo |    |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|------------------------|----|
|            | 0.60                                                                                                                                            | 0.65     | 0.70     | 0.75     | 0.80     | 0.85     | 0.90     | 0.95     | 0.975    | 0.99     | 0.995    | 0.999    | 0.999 5  | 0.999 9  | 0.999 95 | 0.999 99 | 0.999 995 | 0.999 999 |                        |    |
| 2000-06-20 | 1                                                                                                                                               | .324 920 | .509 525 | .726 543 | 1.00 000 | 1.37 638 | 1.96 261 | 3.07 768 | 6.31 375 | 12.7 062 | 31.8 205 | 63.6 567 | 318. 309 | 636. 619 | 3,183.10 | 6,366.20 | 31,831.0  | 63,662.0  | 318,309.               | 1  |
|            | 2                                                                                                                                               | .288 675 | .444 750 | .617 213 | .816 497 | 1.06 066 | 1.38 621 | 1.88 562 | 2.91 999 | 4.30 265 | 6.96 456 | 9.92 484 | 22.3 271 | 31.5 991 | 70.7 001 | 99.9 925 | 223. 603  | 316. 225  | 707. 106               |    |
|            | 3                                                                                                                                               | .276 671 | .424 202 | .584 390 | .764 892 | .978 472 | 1.24 978 | 1.63 774 | 2.35 336 | 3.18 245 | 4.54 070 | 5.84 091 | 10.2 145 | 12.9 240 | 22.2 037 | 28.0 001 | 47.9 277  | 60.3 968  | 103. 299               |    |
|            | 4                                                                                                                                               | .270 722 | .414 163 | .568 649 | .740 697 | .940 965 | 1.18 957 | 1.53 321 | 2.13 185 | 2.77 645 | 3.74 695 | 4.60 409 | 7.17 318 | 8.61 030 | 13.0 337 | 15.5 441 | 23.3 322  | 27.7 716  | 41.5 779               |    |
|            | 5                                                                                                                                               | .267 181 | .408 229 | .559 430 | .726 687 | .919 544 | 1.15 577 | 1.47 588 | 2.01 505 | 2.57 058 | 3.36 493 | 4.03 214 | 5.89 343 | 6.86 883 | 9.67 757 | 11.1 777 | 15.5 469  | 17.8 969  | 24.7 710               | 5  |
|            | 6                                                                                                                                               | .264 835 | .404 313 | .553 381 | .717 558 | .905 703 | 1.13 416 | 1.43 976 | 1.94 318 | 2.44 691 | 3.14 267 | 3.70 743 | 5.20 763 | 5.95 882 | 8.02 479 | 9.08 235 | 12.0 317  | 13.5 553  | 17.8 303               |    |
|            | 7                                                                                                                                               | .263 167 | .401 538 | .549 110 | .711 142 | .896 030 | 1.11 916 | 1.41 492 | 1.89 458 | 2.36 462 | 2.99 795 | 3.49 948 | 4.78 529 | 5.40 788 | 7.06 343 | 7.88 458 | 10.1 027  | 11.2 148  | 14.2 415               |    |
|            | 8                                                                                                                                               | .261 921 | .399 469 | .545 934 | .706 387 | .888 890 | 1.10 815 | 1.39 682 | 1.85 955 | 2.30 600 | 2.89 646 | 3.35 539 | 4.50 079 | 5.04 131 | 6.44 200 | 7.12 000 | 8.90 703  | 9.78 253  | 12.1 098               |    |
|            | 9                                                                                                                                               | .260 955 | .397 868 | .543 480 | .702 722 | .883 404 | 1.09 972 | 1.38 303 | 1.83 311 | 2.26 216 | 2.82 144 | 3.24 984 | 4.29 681 | 4.78 091 | 6.01 013 | 6.59 368 | 8.10 206  | 8.82 748  | 10.7 202               |    |
|            | 10                                                                                                                                              | .260 185 | .396 591 | .541 528 | .699 812 | .879 058 | 1.09 306 | 1.37 218 | 1.81 246 | 2.22 814 | 2.76 377 | 3.16 927 | 4.14 370 | 4.58 689 | 5.69 382 | 6.21 105 | 7.52 695  | 8.15 029  | 9.75 200               | 10 |
|            | 11                                                                                                                                              | .259 556 | .395 551 | .539 938 | .697 445 | .875 530 | 1.08 767 | 1.36 343 | 1.79 588 | 2.20 099 | 2.71 808 | 3.10 581 | 4.02 470 | 4.43 698 | 5.45 276 | 5.92 119 | 7.09 736  | 7.64 749  | 9.04 328               |    |
|            | 12                                                                                                                                              | .259 033 | .394 686 | .538 618 | .695 483 | .872 609 | 1.08 321 | 1.35 622 | 1.78 229 | 2.17 881 | 2.68 100 | 3.05 454 | 3.92 963 | 4.31 779 | 5.26 327 | 5.69 447 | 6.76 517  | 7.26 063  | 8.50 430               |    |
|            | 13                                                                                                                                              | .258 591 | .393 955 | .537 504 | .693 829 | .870 152 | 1.07 947 | 1.35 017 | 1.77 093 | 2.16 037 | 2.65 031 | 3.01 228 | 3.85 198 | 4.22 083 | 5.11 058 | 5.51 252 | 6.50 114  | 6.95 444  | 8.08 184               |    |
|            | 14                                                                                                                                              | .258 213 | .393 331 | .536 552 | .692 417 | .868 055 | 1.07 628 | 1.34 503 | 1.76 131 | 2.14 479 | 2.62 449 | 2.97 684 | 3.78 739 | 4.14 045 | 4.98 501 | 5.36 341 | 6.28 655  | 6.70 645  | 7.74 251               |    |
|            | 15                                                                                                                                              | .257 885 | .392 790 | .535 729 | .691 197 | .866 245 | 1.07 353 | 1.34 061 | 1.75 305 | 2.13 145 | 2.60 248 | 2.94 671 | 3.73 283 | 4.07 277 | 4.88 000 | 5.23 909 | 6.10 887  | 6.50 175  | 7.46 438               | 15 |
|            | 16                                                                                                                                              | .257 599 | .392 318 | .535 010 | .690 132 | .864 667 | 1.07 114 | 1.33 676 | 1.74 588 | 2.11 991 | 2.58 349 | 2.92 078 | 3.68 615 | 4.01 500 | 4.79 091 | 5.13 389 | 5.95 944  | 6.33 005  | 7.23 254               |    |
|            | 17                                                                                                                                              | .257 347 | .391 902 | .534 377 | .689 195 | .863 279 | 1.06 903 | 1.33 338 | 1.73 961 | 2.10 982 | 2.56 693 | 2.89 823 | 3.64 577 | 3.96 513 | 4.71 441 | 5.04 376 | 5.83 210  | 6.18 406  | 7.03 649               |    |
|            | 18                                                                                                                                              | .257 123 | .391 533 | .533 816 | .688 364 | .862 049 | 1.06 717 | 1.33 039 | 1.73 406 | 2.10 092 | 2.55 238 | 2.87 844 | 3.61 048 | 3.92 165 | 4.64 801 | 4.96 571 | 5.72 233  | 6.05 848  | 6.86 864               |    |
|            | 19                                                                                                                                              | .256 923 | .391 202 | .533 314 | .687 621 | .860 951 | 1.06 551 | 1.32 773 | 1.72 913 | 2.09 302 | 2.53 948 | 2.86 093 | 3.57 940 | 3.88 341 | 4.58 986 | 4.89 746 | 5.62 677  | 5.94 935  | 6.72 339               |    |
| 20         | .256 743                                                                                                                                        | .390 906 | .532 863 | .686 954 | .859 964 | 1.06 402 | 1.32 534 | 1.72 472 | 2.08 596 | 2.52 798 | 2.84 534 | 3.55 181 | 3.84 952 | 4.53 852 | 4.83 730 | 5.54 284 | 5.85 367  | 6.59 653  | 20                     |    |
| 21         | .256 580                                                                                                                                        | .390 637 | .532 455 | .686 352 | .859 074 | 1.06 267 | 1.32 319 | 1.72 074 | 2.07 961 | 2.51 765 | 2.83 136 | 3.52 715 | 3.81 928 | 4.49 286 | 4.78 388 | 5.46 856 | 5.76 911  | 6.48 480  |                        |    |
| 22         | .256 432                                                                                                                                        | .390 394 | .532 085 | .685 805 | .858 266 | 1.06 145 | 1.32 124 | 1.71 714 | 2.07 387 | 2.50 832 | 2.81 876 | 3.50 499 | 3.79 213 | 4.45 199 | 4.73 612 | 5.40 237 | 5.69 386  | 6.38 568  |                        |    |
| 23         | .256 297                                                                                                                                        | .390 171 | .531 747 | .685 306 | .857 530 | 1.06 034 | 1.31 946 | 1.71 387 | 2.06 866 | 2.49 987 | 2.80 734 | 3.48 496 | 3.76 763 | 4.41 520 | 4.69 319 | 5.34 303 | 5.62 647  | 6.29 717  |                        |    |
| 24         | .256 173                                                                                                                                        | .389 967 | .531 438 | .684 850 | .856 855 | 1.05 932 | 1.31 784 | 1.71 088 | 2.06 390 | 2.49 216 | 2.79 694 | 3.46 678 | 3.74 540 | 4.38 192 | 4.65 438 | 5.28 952 | 5.56 578  | 6.21 766  |                        |    |
| 25         | .256 060                                                                                                                                        | .389 780 | .531 154 | .684 430 | .856 236 | 1.05 838 | 1.31 635 | 1.70 814 | 2.05 954 | 2.48 511 | 2.78 744 | 3.45 019 | 3.72 514 | 4.35 165 | 4.61 914 | 5.24 104 | 5.51 085  | 6.14 586  | 25                     |    |
| 26         | .255 955                                                                                                                                        | .389 607 | .530 892 | .684 043 | .855 665 | 1.05 752 | 1.31 497 | 1.70 562 | 2.05 553 | 2.47 863 | 2.77 871 | 3.43 500 | 3.70 661 | 4.32 402 | 4.58 698 | 5.19 692 | 5.46 089  | 6.08 072  |                        |    |
| 27         | .255 858                                                                                                                                        | .389 448 | .530 649 | .683 685 | .855 137 | 1.05 673 | 1.31 370 | 1.70 329 | 2.05 183 | 2.47 266 | 2.77 068 | 3.42 103 | 3.68 959 | 4.29 870 | 4.55 754 | 5.15 658 | 5.41 527  | 6.02 134  |                        |    |
| 28         | .255 768                                                                                                                                        | .389 299 | .530 424 | .683 353 | .854 647 | 1.05 599 | 1.31 253 | 1.70 113 | 2.04 841 | 2.46 714 | 2.76 326 | 3.40 816 | 3.67 391 | 4.27 540 | 4.53 047 | 5.11 958 | 5.37 345  | 5.96 701  |                        |    |
| 29         | .255 684                                                                                                                                        | .389 161 | .530 214 | .683 044 | .854 192 | 1.05 530 | 1.31 143 | 1.69 913 | 2.04 523 | 2.46 202 | 2.75 639 | 3.39 624 | 3.65 941 | 4.25 389 | 4.50 551 | 5.08 550 | 5.33 497  | 5.91 711  |                        |    |
| 30         | .255 605                                                                                                                                        | .389 032 | .530 019 | .682 756 | .853 767 | 1.05 466 | 1.31 042 | 1.69 726 | 2.04 227 | 2.45 726 | 2.75 000 | 3.38 518 | 3.64 596 | 4.23 399 | 4.48 242 | 5.05 403 | 5.29 945  | 5.87 112  | 30                     |    |
| 31         | .255 532                                                                                                                                        | .388 912 | .529 836 | .682 486 | .853 370 | 1.05 406 | 1.30 946 | 1.69 552 | 2.03 951 | 2.45 282 | 2.74 404 | 3.37 490 | 3.63 346 | 4.21 550 | 4.46 099 | 5.02 487 | 5.26 657  | 5.82 860  |                        |    |
| 32         | .255 464                                                                                                                                        | .388 799 | .529 665 | .682 234 | .852 998 | 1.05 350 | 1.30 857 | 1.69 389 | 2.03 693 | 2.44 868 | 2.73 848 | 3.36 531 | 3.62 180 | 4.19 830 | 4.44 105 | 4.99 779 | 5.23 603  | 5.78 918  |                        |    |
| 33         | .255 399                                                                                                                                        | .388 693 | .529 504 | .681 997 | .852 649 | 1.05 298 | 1.30 774 | 1.69 236 | 2.03 452 | 2.44 479 | 2.73 328 | 3.35 634 | 3.61 091 | 4.18 224 | 4.42 246 | 4.97 255 | 5.20 761  | 5.75 253  |                        |    |
| 34         | .255 339                                                                                                                                        | .388 593 | .529 353 | .681 774 | .852 321 | 1.05 248 | 1.30 695 | 1.69 092 | 2.03 224 | 2.44 115 | 2.72 839 | 3.34 793 | 3.60 072 | 4.16 722 | 4.40 508 | 4.94 899 | 5.18 108  | 5.71 838  |                        |    |
| 35         | .255 281                                                                                                                                        | .388 499 | .529 211 | .681 564 | .852 012 | 1.05 202 | 1.30 621 | 1.68 957 | 2.03 011 | 2.43 772 | 2.72 381 | 3.34 005 | 3.59 115 | 4.15 315 | 4.38 880 | 4.92 695 | 5.15 627  | 5.68 647  | 35                     |    |
| 36         | .255 227                                                                                                                                        | .388 410 | .529 076 | .681 366 | .851 720 | 1.05 158 | 1.30 551 | 1.68 830 | 2.02 809 | 2.43 449 | 2.71 948 | 3.33 262 | 3.58 215 | 4.13 993 | 4.37 351 | 4.90 627 | 5.13 302  | 5.65 659  |                        |    |
| 37         | .255 176                                                                                                                                        | .388 326 | .528 949 | .681 178 | .851 444 | 1.05 117 | 1.30 485 | 1.68 709 | 2.02 619 | 2.43 145 | 2.71 541 | 3.32 563 | 3.57 367 | 4.12 748 | 4.35 913 | 4.88 685 | 5.11 117  | 5.62 856  |                        |    |
| 38         | .255 128                                                                                                                                        | .388 247 | .528 828 | .681 001 | .851 183 | 1.05 077 | 1.30 423 | 1.68 595 | 2.02 439 | 2.42 857 | 2.71 156 | 3.31 903 | 3.56 568 | 4.11 576 | 4.34 558 | 4.86 856 | 5.09 062  | 5.60 220  |                        |    |
| 39         | .255 082                                                                                                                                        | .388 171 | .528 714 | .680 833 | .850 935 | 1.05 040 | 1.30 364 | 1.68 488 | 2.02 269 | 2.42 584 | 2.70 791 | 3.31 279 | 3.55 812 | 4.10 468 | 4.33 279 | 4.85 131 | 5.07 125  | 5.57 738  |                        |    |
| 40         | .255 039                                                                                                                                        | .3888    |          |          |          |          |          |          |          |          |          |          |          |          |          |          |           |           |                        |    |

2000-06-20

$t_{\nu}$   
right  
half

| $Df$<br>( $\nu$ ) | Each table entry is the value ( $y$ ) of the random variable $Y \sim t_{\nu}$ such that $\Pr(Y \leq y)$ = the probability given in the column heading |          |            |          |          |          |          |          |          |          |          |          |          |          |          |          |           |           |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
|                   | 0.60                                                                                                                                                  | 0.65     | 0.70       | 0.75     | 0.80     | 0.85     | 0.90     | 0.95     | 0.975    | 0.99     | 0.995    | 0.999    | 0.999 5  | 0.999 9  | 0.999 95 | 0.999 99 | 0.999 995 | 0.999 999 |
| 58                | .254 512                                                                                                                                              | .387 234 | .527 295   | .678 743 | .847 862 | 1.04 578 | 1.29 632 | 1.67 155 | 2.00 172 | 2.39 238 | 2.66 329 | 3.23 680 | 3.46 633 | 3.97 096 | 4.17 876 | 4.64 484 | 4.83 988  | 5.28 278  |
| 60                | .254 473                                                                                                                                              | .387 170 | .527 198   | .678 601 | .847 653 | 1.04 547 | 1.29 582 | 1.67 065 | 2.00 030 | 2.39 012 | 2.66 028 | 3.23 171 | 3.46 020 | 3.96 209 | 4.16 857 | 4.63 125 | 4.82 470  | 5.26 355  |
| 62                | .254 437                                                                                                                                              | .387 111 | .527 108   | .678 467 | .847 457 | 1.04 518 | 1.29 536 | 1.66 980 | 1.99 897 | 2.38 801 | 2.65 748 | 3.22 696 | 3.45 448 | 3.95 382 | 4.15 906 | 4.61 860 | 4.81 056  | 5.24 568  |
| 64                | .254 403                                                                                                                                              | .387 054 | .527 023   | .678 342 | .847 274 | 1.04 490 | 1.29 492 | 1.66 901 | 1.99 773 | 2.38 604 | 2.65 485 | 3.22 253 | 3.44 914 | 3.94 609 | 4.15 019 | 4.60 679 | 4.79 737  | 5.22 901  |
| 66                | .254 371                                                                                                                                              | .387 002 | .526 943   | .678 225 | .847 101 | 1.04 464 | 1.29 451 | 1.66 827 | 1.99 656 | 2.38 419 | 2.65 339 | 3.21 837 | 3.44 414 | 3.93 885 | 4.14 188 | 4.59 575 | 4.78 504  | 5.21 343  |
| 68                | .254 341                                                                                                                                              | .386 952 | .526 868   | .678 115 | .846 939 | 1.04 440 | 1.29 413 | 1.66 757 | 1.99 547 | 2.38 245 | 2.65 008 | 3.21 446 | 3.43 944 | 3.93 207 | 4.13 409 | 4.58 539 | 4.77 348  | 5.19 884  |
| 70                | .254 312                                                                                                                                              | .386 905 | .526 797   | .678 011 | .846 786 | 1.04 417 | 1.29 376 | 1.66 691 | 1.99 444 | 2.38 081 | 2.64 790 | 3.21 079 | 3.43 501 | 3.92 568 | 4.12 677 | 4.57 567 | 4.76 262  | 5.18 514  |
| 72                | .254 285                                                                                                                                              | .386 861 | .526 730   | .677 912 | .846 642 | 1.04 395 | 1.29 342 | 1.66 629 | 1.99 346 | 2.37 926 | 2.64 585 | 3.20 733 | 3.43 085 | 3.91 967 | 4.11 987 | 4.56 651 | 4.75 241  | 5.17 226  |
| 74                | .254 260                                                                                                                                              | .386 819 | .526 667   | .677 820 | .846 506 | 1.04 375 | 1.29 310 | 1.66 571 | 1.99 254 | 2.37 780 | 2.64 391 | 3.20 406 | 3.42 692 | 3.91 400 | 4.11 337 | 4.55 788 | 4.74 278  | 5.16 013  |
| 76                | .254 236                                                                                                                                              | .386 780 | .526 607   | .677 732 | .846 376 | 1.04 355 | 1.29 279 | 1.66 515 | 1.99 167 | 2.37 642 | 2.64 208 | 3.20 096 | 3.42 320 | 3.90 864 | 4.10 722 | 4.54 973 | 4.73 369  | 5.14 868  |
| 78                | .254 213                                                                                                                                              | .386 742 | .526 550   | .677 648 | .846 254 | 1.04 337 | 1.29 250 | 1.66 462 | 1.99 085 | 2.37 511 | 2.64 034 | 3.19 804 | 3.41 968 | 3.90 357 | 4.10 141 | 4.54 202 | 4.72 509  | 5.13 785  |
| 80                | .254 191                                                                                                                                              | .386 707 | .526 497   | .677 569 | .846 137 | 1.04 320 | 1.29 222 | 1.66 412 | 1.99 006 | 2.37 387 | 2.63 869 | 3.19 526 | 3.41 634 | 3.89 876 | 4.09 589 | 4.53 472 | 4.71 695  | 5.12 760  |
| 82                | .254 171                                                                                                                                              | .386 673 | .526 445   | .677 493 | .846 027 | 1.04 303 | 1.29 196 | 1.66 365 | 1.98 932 | 2.37 269 | 2.63 712 | 3.19 262 | 3.41 317 | 3.89 419 | 4.09 066 | 4.52 779 | 4.70 922  | 5.11 789  |
| 84                | .254 151                                                                                                                                              | .386 641 | .526 396   | .677 422 | .845 921 | 1.04 287 | 1.29 171 | 1.66 320 | 1.98 861 | 2.37 156 | 2.63 563 | 3.19 011 | 3.41 015 | 3.88 985 | 4.08 569 | 4.52 120 | 4.70 189  | 5.10 866  |
| 86                | .254 132                                                                                                                                              | .386 610 | .526 350   | .677 353 | .845 821 | 1.04 272 | 1.29 147 | 1.66 277 | 1.98 793 | 2.37 049 | 2.63 421 | 3.18 772 | 3.40 728 | 3.88 573 | 4.08 096 | 4.51 494 | 4.69 491  | 5.09 989  |
| 88                | .254 114                                                                                                                                              | .386 580 | .526 305   | .677 288 | .845 725 | 1.04 258 | 1.29 125 | 1.66 235 | 1.98 729 | 2.36 947 | 2.63 286 | 3.18 544 | 3.40 455 | 3.88 179 | 4.07 645 | 4.50 898 | 4.68 827  | 5.09 154  |
| 90                | .254 097                                                                                                                                              | .386 552 | .526 263   | .677 225 | .845 633 | 1.04 244 | 1.29 103 | 1.66 196 | 1.98 667 | 2.36 850 | 2.63 157 | 3.18 327 | 3.40 194 | 3.87 804 | 4.07 216 | 4.50 330 | 4.68 193  | 5.08 359  |
| 92                | .254 081                                                                                                                                              | .386 526 | .526 222   | .677 166 | .845 546 | 1.04 231 | 1.29 082 | 1.66 159 | 1.98 609 | 2.36 757 | 2.63 033 | 3.18 119 | 3.39 944 | 3.87 445 | 4.06 805 | 4.49 787 | 4.67 589  | 5.07 600  |
| 94                | .254 065                                                                                                                                              | .386 500 | .526 184   | .677 109 | .845 462 | 1.04 218 | 1.29 062 | 1.66 123 | 1.98 552 | 2.36 667 | 2.62 915 | 3.17 921 | 3.39 706 | 3.87 103 | 4.06 413 | 4.49 268 | 4.67 012  | 5.06 875  |
| 96                | .254 050                                                                                                                                              | .386 475 | .526 146   | .677 054 | .845 381 | 1.04 206 | 1.29 043 | 1.66 088 | 1.98 498 | 2.36 582 | 2.62 802 | 3.17 731 | 3.39 477 | 3.86 775 | 4.06 038 | 4.48 773 | 4.66 459  | 5.06 182  |
| 98                | .254 036                                                                                                                                              | .386 452 | .526 111   | .677 001 | .845 304 | 1.04 195 | 1.29 025 | 1.66 055 | 1.98 447 | 2.36 500 | 2.62 693 | 3.17 549 | 3.39 259 | 3.86 461 | 4.05 678 | 4.48 298 | 4.65 931  | 5.05 518  |
| 99                | .254 029                                                                                                                                              | .386 440 | .526 093   | .676 976 | .845 267 | 1.04 189 | 1.29 016 | 1.66 039 | 1.98 422 | 2.36 461 | 2.62 641 | 3.17 460 | 3.39 153 | 3.86 309 | 4.05 504 | 4.48 068 | 4.65 675  | 5.05 197  |
| 100               | .254 022                                                                                                                                              | .386 429 | .526 076   | .676 951 | .845 230 | 1.04 184 | 1.29 007 | 1.66 023 | 1.98 397 | 2.36 422 | 2.62 589 | 3.17 374 | 3.39 049 | 3.86 160 | 4.05 334 | 4.47 843 | 4.65 424  | 5.04 883  |
| 105               | .253 990                                                                                                                                              | .386 376 | .525 996   | .676 833 | .845 058 | 1.04 158 | 1.28 967 | 1.65 950 | 1.98 282 | 2.36 239 | 2.62 347 | 3.16 967 | 3.38 561 | 3.85 459 | 4.04 532 | 4.46 784 | 4.64 246  | 5.03 406  |
| 110               | .253 961                                                                                                                                              | .386 328 | .525 924   | .676 727 | .844 901 | 1.04 134 | 1.28 930 | 1.65 882 | 1.98 177 | 2.36 073 | 2.62 126 | 3.16 598 | 3.38 118 | 3.84 824 | 4.03 805 | 4.45 825 | 4.63 179  | 5.02 069  |
| 115               | .253 934                                                                                                                                              | .386 284 | .525 857   | .676 629 | .844 758 | 1.04 113 | 1.28 896 | 1.65 821 | 1.98 081 | 2.35 921 | 2.61 926 | 3.16 262 | 3.37 714 | 3.84 246 | 4.03 144 | 4.44 953 | 4.62 209  | 5.00 854  |
| 120               | .253 910                                                                                                                                              | .386 244 | .525 796   | .676 540 | .844 627 | 1.04 093 | 1.28 865 | 1.65 765 | 1.97 993 | 2.35 782 | 2.61 742 | 3.15 954 | 3.37 345 | 3.83 717 | 4.02 539 | 4.44 156 | 4.61 322  | 4.99 744  |
| 125               | .253 887                                                                                                                                              | .386 207 | .525 740   | .676 458 | .844 506 | 1.04 075 | 1.28 836 | 1.65 714 | 1.97 912 | 2.35 655 | 2.61 573 | 3.15 671 | 3.37 006 | 3.83 232 | 4.01 984 | 4.43 425 | 4.60 509  | 4.98 727  |
| 130               | .253 866                                                                                                                                              | .386 173 | .525 689   | .676 382 | .844 395 | 1.04 058 | 1.28 810 | 1.65 666 | 1.97 838 | 2.35 537 | 2.61 418 | 3.15 411 | 3.36 694 | 3.82 785 | 4.01 473 | 4.42 752 | 4.59 761  | 4.97 792  |
| 135               | .253 847                                                                                                                                              | .386 141 | .525 641   | .676 311 | .844 292 | 1.04 043 | 1.28 785 | 1.65 622 | 1.97 769 | 2.35 429 | 2.61 274 | 3.15 170 | 3.36 405 | 3.82 372 | 4.01 001 | 4.42 131 | 4.59 070  | 4.96 928  |
| 140               | .253 829                                                                                                                                              | .386 112 | .525 597   | .676 246 | .844 196 | 1.04 029 | 1.28 763 | 1.65 581 | 1.97 705 | 2.35 328 | 2.61 140 | 3.14 947 | 3.36 138 | 3.81 989 | 4.00 563 | 4.41 555 | 4.58 430  | 4.96 128  |
| 145               | .253 812                                                                                                                                              | .386 084 | .525 555   | .676 185 | .844 107 | 1.04 015 | 1.28 742 | 1.65 543 | 1.97 646 | 2.35 234 | 2.61 016 | 3.14 739 | 3.35 889 | 3.81 633 | 4.00 157 | 4.41 020 | 4.57 835  | 4.95 385  |
| 150               | .253 797                                                                                                                                              | .386 059 | .525 517   | .676 129 | .844 024 | 1.04 003 | 1.28 722 | 1.65 508 | 1.97 591 | 2.35 146 | 2.60 900 | 3.14 545 | 3.35 657 | 3.81 301 | 3.99 778 | 4.40 522 | 4.57 282  | 4.94 694  |
| 160               | .253 769                                                                                                                                              | .386 013 | .525 447   | .676 026 | .843 874 | 1.03 980 | 1.28 687 | 1.65 443 | 1.97 490 | 2.34 988 | 2.60 691 | 3.14 195 | 3.35 237 | 3.80 701 | 3.99 093 | 4.39 621 | 4.56 281  | 4.93 445  |
| 170               | .253 744                                                                                                                                              | .385 972 | .525 385   | .675 936 | .843 741 | 1.03 960 | 1.28 655 | 1.65 387 | 1.97 402 | 2.34 848 | 2.60 506 | 3.13 886 | 3.34 868 | 3.80 174 | 3.98 490 | 4.38 830 | 4.55 402  | 4.92 347  |
| 180               | .253 722                                                                                                                                              | .385 936 | .525 330   | .675 855 | .843 623 | 1.03 943 | 1.28 627 | 1.65 336 | 1.97 323 | 2.34 724 | 2.60 342 | 3.13 612 | 3.34 540 | 3.79 706 | 3.97 955 | 4.38 128 | 4.54 622  | 4.91 375  |
| 190               | .253 702                                                                                                                                              | .385 903 | .525 281   | .675 783 | .843 517 | 1.03 927 | 1.28 602 | 1.65 291 | 1.97 253 | 2.34 613 | 2.60 195 | 3.13 368 | 3.34 247 | 3.79 288 | 3.97 478 | 4.37 501 | 4.53 927  | 4.90 508  |
| 200               | .253 684                                                                                                                                              | .385 874 | .525 237   | .675 718 | .843 422 | 1.03 913 | 1.28 580 | 1.65 251 | 1.97 190 | 2.34 514 | 2.60 063 | 3.13 148 | 3.33 984 | 3.78 912 | 3.97 050 | 4.36 939 | 4.53 302  | 4.89 730  |
| 250               | .253 617                                                                                                                                              | .385 763 | .525 070   | .675 472 | .843 061 | 1.03 859 | 1.28 495 | 1.65 097 | 1.96 950 | 2.34 136 | 2.59 564 | 3.12 315 | 3.32 987 | 3.77 491 | 3.95 428 | 4.34 813 | 4.50 943  | 4.86 793  |
| 300               | .253 572                                                                                                                                              | .385 689 | .524 958   | .675 308 | .842 821 | 1.03 823 | 1.28 438 | 1.64 995 | 1.96 790 | 2.33 884 | 2.59 232 | 3.11 762 | 3.32 325 | 3.76 549 | 3.94 354 | 4.33 406 | 4.49 382  | 4.84 851  |
| 350               | .253 540                                                                                                                                              | .385 637 | .524 878   | .675 191 | .842 649 | 1.03 797 | 1.28 398 | 1.64 922 | 1.96 677 | 2.33 705 | 2.58 995 | 3.11 368 | 3.31 854 | 3.75 879 | 3.93 590 | 4.32 406 | 4.48 273  | 4.83 473  |
| 400               | .253 516                                                                                                                                              | .385 597 | .524 819   | .675 104 | .842 521 | 1.03 778 | 1.28 367 | 1.64 867 | 1.96 591 | 2.33 571 | 2.58 818 | 3.11 073 | 3.31 502 | 3.75 378 | 3.93 018 | 4.31 659 | 4.47 444  | 4.82 443  |
| 450               | .253 497                                                                                                                                              | .385 566 | .524 772   | .675 035 | .842 421 | 1.03 763 | 1.28 344 | 1.64 825 | 1.96 525 | 2.33 466 | 2.58 680 | 3.10 844 | 3.31 228 | 3.74 989 | 3.92 575 | 4.31 079 | 4.46 802  | 4.81 645  |
| 500               | .253 482                                                                                                                                              | .385 542 | .524 735   | .674 981 | .842 341 | 1.03 751 | 1.28 325 | 1.64 791 | 1.96 472 | 2.33 383 | 2.58 570 | 3.10 661 | 3.31 009 | 3.74 678 | 3.92 221 | 4.30 616 | 4.46 289  | 4.81 009  |
| 600               | .253 459                                                                                                                                              | .385 505 | .524 679   | .674 899 | .842 221 | 1.03 733 | 1.28 296 | 1.64 740 | 1.96 393 | 2.33 258 | 2.58 405 | 3.10 387 | 3.30 682 | 3.74 213 | 3.91 691 | 4.29 923 | 4.45 521  | 4.80 056  |
| 700               | .253 443                                                                                                                                              | .385 479 | .524 639   | .674 840 | .842 135 | 1.03 720 | 1.28 276 | 1.64 703 | 1.96 336 | 2.33 169 | 2.58 287 | 3.10 192 | 3.30 448 | 3.73 881 | 3.91 313 | 4.29 430 | 4.44 974  | 4.79 378  |
| 800               | .253 431                                                                                                                                              | .385 459 | .524 610   | .674 797 | .842 071 | 1.03 711 | 1.28 261 | 1.64 676 | 1.96 293 | 2.33 102 | 2.58 199 | 3.10 045 | 3.30 273 | 3.73 632 | 3.91 030 | 4.29 060 | 4.44 565  | 4.78 870  |
| 900               | .253 422                                                                                                                                              | .385 443 | .524 586   | .674 762 | .842 021 | 1.03 703 | 1.28 249 | 1.64 655 | 1.96 260 | 2.33 050 | 2.58 130 | 3.09 931 | 3.30 137 | 3.73 439 | 3.90 810 | 4.28 773 | 4.44 247  | 4.78 476  |
| 1000              | .253 415                                                                                                                                              | .385 431 | .524 568   | .674 735 | .841 981 | 1.03 697 | 1.28 240 | 1.64 638 | 1.96 234 | 2.33 008 | 2.58 075 | 3.09 840 | 3.30 028 | 3.73 285 | 3.90 634 | 4.28 544 | 4.43 993  | 4.78 161  |
| 1500              | .253 392                                                                                                                                              | .385 394 | .524 512</ |          |          |          |          |          |          |          |          |          |          |          |          |          |           |           |