

# Appendix D: Statistical Tables

| <i>n</i> | <i>r</i> | <i>p</i> |        |        |        |        |        |        |        |        |        |
|----------|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|          |          | 0.10     | 0.20   | 0.25   | 0.30   | 0.40   | 0.50   | 0.60   | 0.70   | 0.80   | 0.90   |
| 1        | 0        | 0.9000   | 0.8000 | 0.7500 | 0.7000 | 0.6000 | 0.5000 | 0.4000 | 0.3000 | 0.2000 | 0.1000 |
|          | 1        | 1.0000   | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 2        | 0        | 0.8100   | 0.6400 | 0.5625 | 0.4900 | 0.3600 | 0.2500 | 0.1600 | 0.0900 | 0.0400 | 0.0100 |
|          | 1        | 0.9900   | 0.9600 | 0.9375 | 0.9100 | 0.8400 | 0.7500 | 0.6400 | 0.5100 | 0.3600 | 0.1900 |
|          | 2        | 1.0000   | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 3        | 0        | 0.7290   | 0.5120 | 0.4219 | 0.3430 | 0.2160 | 0.1250 | 0.0640 | 0.0270 | 0.0080 | 0.0010 |
|          | 1        | 0.9720   | 0.8960 | 0.8438 | 0.7840 | 0.6480 | 0.5000 | 0.3520 | 0.2160 | 0.1040 | 0.0280 |
|          | 2        | 0.9990   | 0.9920 | 0.9844 | 0.9730 | 0.9360 | 0.8750 | 0.7840 | 0.6570 | 0.4880 | 0.2710 |
|          | 3        | 1.0000   | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 4        | 0        | 0.6561   | 0.4096 | 0.3164 | 0.2401 | 0.1296 | 0.0625 | 0.0256 | 0.0081 | 0.0016 | 0.0001 |
|          | 1        | 0.9477   | 0.8192 | 0.7383 | 0.6517 | 0.4752 | 0.3125 | 0.1792 | 0.0837 | 0.0272 | 0.0037 |
|          | 2        | 0.9963   | 0.9728 | 0.9492 | 0.9163 | 0.8208 | 0.6875 | 0.5248 | 0.3483 | 0.1808 | 0.0523 |
|          | 3        | 0.9999   | 0.9984 | 0.9961 | 0.9919 | 0.9744 | 0.9375 | 0.8704 | 0.7599 | 0.5904 | 0.3439 |
|          | 4        | 1.0000   | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 5        | 0        | 0.5905   | 0.3277 | 0.2373 | 0.1681 | 0.0778 | 0.0313 | 0.0102 | 0.0024 | 0.0003 | 0.0000 |
|          | 1        | 0.9185   | 0.7373 | 0.6328 | 0.5282 | 0.3370 | 0.1875 | 0.0870 | 0.0308 | 0.0067 | 0.0005 |
|          | 2        | 0.9914   | 0.9421 | 0.8965 | 0.8369 | 0.6826 | 0.5000 | 0.3174 | 0.1631 | 0.0579 | 0.0086 |
|          | 3        | 0.9995   | 0.9933 | 0.9844 | 0.9692 | 0.9130 | 0.8125 | 0.6630 | 0.4718 | 0.2627 | 0.0815 |
|          | 4        | 1.0000   | 0.9997 | 0.9990 | 0.9976 | 0.9898 | 0.9688 | 0.9222 | 0.8319 | 0.6723 | 0.4095 |
|          | 5        | 1.0000   | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Table D.1 Binomial Probability Sums  $\sum_{x=0}^r b(x; n, p)$

| <i>n</i> | <i>r</i> | <i>p</i> |        |        |        |        |        |        |        |        |        |
|----------|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|          |          | 0.10     | 0.20   | 0.25   | 0.30   | 0.40   | 0.50   | 0.60   | 0.70   | 0.80   | 0.90   |
| 6        | 0        | 0.5314   | 0.2621 | 0.1780 | 0.1176 | 0.0467 | 0.0156 | 0.0041 | 0.0007 | 0.0001 | 0.0000 |
|          | 1        | 0.8857   | 0.6554 | 0.5339 | 0.4202 | 0.2333 | 0.1094 | 0.0410 | 0.0109 | 0.0016 | 0.0001 |
|          | 2        | 0.9842   | 0.9011 | 0.8306 | 0.7443 | 0.5443 | 0.3438 | 0.1792 | 0.0705 | 0.0170 | 0.0013 |
|          | 3        | 0.9987   | 0.9830 | 0.9624 | 0.9295 | 0.8208 | 0.6563 | 0.4557 | 0.2557 | 0.0989 | 0.0159 |
|          | 4        | 0.9999   | 0.9984 | 0.9954 | 0.9891 | 0.9590 | 0.8906 | 0.7667 | 0.5798 | 0.3446 | 0.1143 |
|          | 5        | 1.0000   | 0.9999 | 0.9998 | 0.9993 | 0.9959 | 0.9844 | 0.9533 | 0.8824 | 0.7379 | 0.4686 |
|          | 6        | 1.0000   | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 7        | 0        | 0.4783   | 0.2097 | 0.1335 | 0.0824 | 0.0280 | 0.0078 | 0.0016 | 0.0002 | 0.0000 |        |
|          | 1        | 0.8503   | 0.5767 | 0.4449 | 0.3294 | 0.1586 | 0.0625 | 0.0188 | 0.0038 | 0.0004 | 0.0000 |
|          | 2        | 0.9743   | 0.8520 | 0.7564 | 0.6471 | 0.4199 | 0.2266 | 0.0963 | 0.0288 | 0.0047 | 0.0002 |
|          | 3        | 0.9973   | 0.9667 | 0.9294 | 0.8740 | 0.7102 | 0.5000 | 0.2898 | 0.1260 | 0.0333 | 0.0027 |
|          | 4        | 0.9998   | 0.9953 | 0.9871 | 0.9712 | 0.9037 | 0.7734 | 0.5801 | 0.3529 | 0.1480 | 0.0257 |
|          | 5        | 1.0000   | 0.9996 | 0.9987 | 0.9962 | 0.9812 | 0.9375 | 0.8414 | 0.6706 | 0.4233 | 0.1497 |
|          | 6        |          | 1.0000 | 0.9999 | 0.9998 | 0.9984 | 0.9922 | 0.9720 | 0.9176 | 0.7903 | 0.5217 |
| 8        | 7        |          |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
|          | 0        | 0.4305   | 0.1678 | 0.1001 | 0.0576 | 0.0168 | 0.0039 | 0.0007 | 0.0001 | 0.0000 |        |
|          | 1        | 0.8131   | 0.5033 | 0.3671 | 0.2553 | 0.1064 | 0.0352 | 0.0085 | 0.0013 | 0.0001 |        |
|          | 2        | 0.9619   | 0.7969 | 0.6785 | 0.5518 | 0.3154 | 0.1445 | 0.0498 | 0.0113 | 0.0012 | 0.0000 |
|          | 3        | 0.9950   | 0.9437 | 0.8862 | 0.8059 | 0.5941 | 0.3633 | 0.1737 | 0.0580 | 0.0104 | 0.0004 |
|          | 4        | 0.9996   | 0.9896 | 0.9727 | 0.9420 | 0.8263 | 0.6367 | 0.4059 | 0.1941 | 0.0563 | 0.0050 |
|          | 5        | 1.0000   | 0.9988 | 0.9958 | 0.9887 | 0.9502 | 0.8555 | 0.6846 | 0.4482 | 0.2031 | 0.0381 |
|          | 6        |          | 0.9999 | 0.9996 | 0.9987 | 0.9915 | 0.9648 | 0.8936 | 0.7447 | 0.4967 | 0.1869 |
| 9        | 7        |          | 1.0000 | 1.0000 | 0.9999 | 0.9993 | 0.9961 | 0.9832 | 0.9424 | 0.8322 | 0.5695 |
|          | 8        |          |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
|          | 0        | 0.3874   | 0.1342 | 0.0751 | 0.0404 | 0.0101 | 0.0020 | 0.0003 | 0.0000 |        |        |
|          | 1        | 0.7748   | 0.4362 | 0.3003 | 0.1960 | 0.0705 | 0.0195 | 0.0038 | 0.0004 | 0.0000 |        |
|          | 2        | 0.9470   | 0.7382 | 0.6007 | 0.4628 | 0.2318 | 0.0898 | 0.0250 | 0.0043 | 0.0003 | 0.0000 |
|          | 3        | 0.9917   | 0.9144 | 0.8343 | 0.7297 | 0.4826 | 0.2539 | 0.0994 | 0.0253 | 0.0031 | 0.0001 |
|          | 4        | 0.9991   | 0.9804 | 0.9511 | 0.9012 | 0.7334 | 0.5000 | 0.2666 | 0.0988 | 0.0196 | 0.0009 |
|          | 5        | 0.9999   | 0.9969 | 0.9900 | 0.9747 | 0.9006 | 0.7461 | 0.5174 | 0.2703 | 0.0856 | 0.0083 |
|          | 6        | 1.0000   | 0.9997 | 0.9987 | 0.9957 | 0.9750 | 0.9102 | 0.7682 | 0.5372 | 0.2618 | 0.0530 |
| 10       | 7        |          | 1.0000 | 0.9999 | 0.9996 | 0.9962 | 0.9805 | 0.9295 | 0.8040 | 0.5638 | 0.2252 |
|          | 8        |          |        | 1.0000 | 1.0000 | 0.9997 | 0.9980 | 0.9899 | 0.9596 | 0.8658 | 0.6126 |
|          | 9        |          |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
|          | 0        | 0.3487   | 0.1074 | 0.0563 | 0.0282 | 0.0060 | 0.0010 | 0.0001 | 0.0000 |        |        |
|          | 1        | 0.7361   | 0.3758 | 0.2440 | 0.1493 | 0.0464 | 0.0107 | 0.0017 | 0.0001 | 0.0000 |        |
|          | 2        | 0.9298   | 0.6778 | 0.5256 | 0.3828 | 0.1673 | 0.0547 | 0.0123 | 0.0016 | 0.0001 |        |
|          | 3        | 0.9872   | 0.8791 | 0.7759 | 0.6496 | 0.3823 | 0.1719 | 0.0548 | 0.0106 | 0.0009 | 0.0000 |
|          | 4        | 0.9984   | 0.9672 | 0.9219 | 0.8497 | 0.6331 | 0.3770 | 0.1662 | 0.0473 | 0.0064 | 0.0001 |
|          | 5        | 0.9999   | 0.9936 | 0.9803 | 0.9527 | 0.8338 | 0.6230 | 0.3669 | 0.1503 | 0.0328 | 0.0016 |
|          | 6        | 1.0000   | 0.9991 | 0.9965 | 0.9894 | 0.9452 | 0.8281 | 0.6177 | 0.3504 | 0.1209 | 0.0128 |
|          | 7        |          | 0.9999 | 0.9996 | 0.9984 | 0.9877 | 0.9453 | 0.8327 | 0.6172 | 0.3222 | 0.0702 |
|          | 8        |          | 1.0000 | 1.0000 | 0.9999 | 0.9983 | 0.9893 | 0.9536 | 0.8507 | 0.6242 | 0.2639 |
|          | 9        |          |        |        | 1.0000 | 0.9999 | 0.9990 | 0.9940 | 0.9718 | 0.8926 | 0.6513 |
|          | 10       |          |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Table D.1 (continued) Binomial Probability Sums  $\sum_{x=0}^r b(x; n, p)$

| <i>n</i> | <i>r</i> | <i>p</i> |        |        |        |        |        |        |        |        |        |
|----------|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|          |          | 0.10     | 0.20   | 0.25   | 0.30   | 0.40   | 0.50   | 0.60   | 0.70   | 0.80   | 0.90   |
| 11       | 0        | 0.3138   | 0.0859 | 0.0422 | 0.0198 | 0.0036 | 0.0005 | 0.0000 |        |        |        |
|          | 1        | 0.6974   | 0.3221 | 0.1971 | 0.1130 | 0.0302 | 0.0059 | 0.0007 | 0.0000 |        |        |
|          | 2        | 0.9104   | 0.6174 | 0.4552 | 0.3127 | 0.1189 | 0.0327 | 0.0059 | 0.0006 | 0.0000 |        |
|          | 3        | 0.9815   | 0.8389 | 0.7133 | 0.5696 | 0.2963 | 0.1133 | 0.0293 | 0.0043 | 0.0002 |        |
|          | 4        | 0.9972   | 0.9496 | 0.8854 | 0.7897 | 0.5328 | 0.2744 | 0.0994 | 0.0216 | 0.0020 | 0.0000 |
|          | 5        | 0.9997   | 0.9883 | 0.9657 | 0.9218 | 0.7535 | 0.5000 | 0.2465 | 0.0782 | 0.0117 | 0.0003 |
|          | 6        | 1.0000   | 0.9980 | 0.9924 | 0.9784 | 0.9006 | 0.7256 | 0.4672 | 0.2103 | 0.0504 | 0.0028 |
|          | 7        |          | 0.9998 | 0.9988 | 0.9957 | 0.9707 | 0.8867 | 0.7037 | 0.4304 | 0.1611 | 0.0185 |
|          | 8        |          | 1.0000 | 0.9999 | 0.9994 | 0.9941 | 0.9673 | 0.8811 | 0.6873 | 0.3826 | 0.0896 |
|          | 9        |          |        | 1.0000 | 1.0000 | 0.9993 | 0.9941 | 0.9698 | 0.8870 | 0.6779 | 0.3026 |
|          | 10       |          |        |        |        | 1.0000 | 0.9995 | 0.9964 | 0.9802 | 0.9141 | 0.6862 |
|          | 11       |          |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 12       | 0        | 0.2824   | 0.0687 | 0.0317 | 0.0138 | 0.0022 | 0.0002 | 0.0000 |        |        |        |
|          | 1        | 0.6590   | 0.2749 | 0.1584 | 0.0850 | 0.0196 | 0.0032 | 0.0003 | 0.0000 |        |        |
|          | 2        | 0.8891   | 0.5583 | 0.3907 | 0.2528 | 0.0834 | 0.0193 | 0.0028 | 0.0002 | 0.0000 |        |
|          | 3        | 0.9744   | 0.7946 | 0.6488 | 0.4925 | 0.2253 | 0.0730 | 0.0153 | 0.0017 | 0.0001 |        |
|          | 4        | 0.9957   | 0.9274 | 0.8424 | 0.7237 | 0.4382 | 0.1938 | 0.0573 | 0.0095 | 0.0006 | 0.0000 |
|          | 5        | 0.9995   | 0.9806 | 0.9456 | 0.8822 | 0.6652 | 0.3872 | 0.1582 | 0.0386 | 0.0039 | 0.0001 |
|          | 6        | 0.9999   | 0.9961 | 0.9857 | 0.9614 | 0.8418 | 0.6128 | 0.3348 | 0.1178 | 0.0194 | 0.0005 |
|          | 7        | 1.0000   | 0.9994 | 0.9972 | 0.9905 | 0.9427 | 0.8062 | 0.5618 | 0.2763 | 0.0726 | 0.0043 |
|          | 8        |          | 0.9999 | 0.9996 | 0.9983 | 0.9847 | 0.9270 | 0.7747 | 0.5075 | 0.2054 | 0.0256 |
|          | 9        |          | 1.0000 | 1.0000 | 0.9998 | 0.9972 | 0.9807 | 0.9166 | 0.7472 | 0.4417 | 0.1109 |
|          | 10       |          |        |        | 1.0000 | 0.9997 | 0.9968 | 0.9804 | 0.9150 | 0.7251 | 0.3410 |
|          | 11       |          |        |        |        | 1.0000 | 0.9998 | 0.9978 | 0.9862 | 0.9313 | 0.7176 |
|          | 12       |          |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 13       | 0        | 0.2542   | 0.0550 | 0.0238 | 0.0097 | 0.0013 | 0.0001 | 0.0000 |        |        |        |
|          | 1        | 0.6213   | 0.2336 | 0.1267 | 0.0637 | 0.0126 | 0.0017 | 0.0001 | 0.0000 |        |        |
|          | 2        | 0.8661   | 0.5017 | 0.3326 | 0.2025 | 0.0579 | 0.0112 | 0.0013 | 0.0001 |        |        |
|          | 3        | 0.9658   | 0.7473 | 0.5843 | 0.4206 | 0.1686 | 0.0461 | 0.0078 | 0.0007 | 0.0000 |        |
|          | 4        | 0.9935   | 0.9009 | 0.7940 | 0.6543 | 0.3530 | 0.1334 | 0.0321 | 0.0040 | 0.0002 |        |
|          | 5        | 0.9991   | 0.9700 | 0.9198 | 0.8346 | 0.5744 | 0.2905 | 0.0977 | 0.0182 | 0.0012 | 0.0000 |
|          | 6        | 0.9999   | 0.9930 | 0.9757 | 0.9376 | 0.7712 | 0.5000 | 0.2288 | 0.0624 | 0.0070 | 0.0001 |
|          | 7        | 1.0000   | 0.9988 | 0.9944 | 0.9818 | 0.9023 | 0.7095 | 0.4256 | 0.1654 | 0.0300 | 0.0009 |
|          | 8        |          | 0.9998 | 0.9990 | 0.9960 | 0.9679 | 0.8666 | 0.6470 | 0.3457 | 0.0991 | 0.0065 |
|          | 9        |          | 1.0000 | 0.9999 | 0.9993 | 0.9922 | 0.9539 | 0.8314 | 0.5794 | 0.2527 | 0.0342 |
|          | 10       |          |        | 1.0000 | 0.9999 | 0.9987 | 0.9888 | 0.9421 | 0.7975 | 0.4983 | 0.1339 |
|          | 11       |          |        |        | 1.0000 | 0.9999 | 0.9983 | 0.9874 | 0.9363 | 0.7664 | 0.3787 |
|          | 12       |          |        |        |        | 1.0000 | 0.9999 | 0.9987 | 0.9903 | 0.9450 | 0.7458 |
|          | 13       |          |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Table D.1 (continued) Binomial Probability Sums  $\sum_{x=0}^r b(x; n, p)$

| <i>n</i> | <i>r</i> | <i>p</i> |        |        |        |        |        |        |        |        |        |
|----------|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|          |          | 0.10     | 0.20   | 0.25   | 0.30   | 0.40   | 0.50   | 0.60   | 0.70   | 0.80   | 0.90   |
| 14       | 0        | 0.2288   | 0.0440 | 0.0178 | 0.0068 | 0.0008 | 0.0001 | 0.0000 |        |        |        |
|          | 1        | 0.5846   | 0.1979 | 0.1010 | 0.0475 | 0.0081 | 0.0009 | 0.0001 |        |        |        |
|          | 2        | 0.8416   | 0.4481 | 0.2811 | 0.1608 | 0.0398 | 0.0065 | 0.0006 | 0.0000 |        |        |
|          | 3        | 0.9559   | 0.6982 | 0.5213 | 0.3552 | 0.1243 | 0.0287 | 0.0039 | 0.0002 |        |        |
|          | 4        | 0.9908   | 0.8702 | 0.7415 | 0.5842 | 0.2793 | 0.0898 | 0.0175 | 0.0017 | 0.0000 |        |
|          | 5        | 0.9985   | 0.9561 | 0.8883 | 0.7805 | 0.4859 | 0.2120 | 0.0583 | 0.0083 | 0.0004 |        |
|          | 6        | 0.9998   | 0.9884 | 0.9617 | 0.9067 | 0.6925 | 0.3953 | 0.1501 | 0.0315 | 0.0024 | 0.0000 |
|          | 7        | 1.0000   | 0.9976 | 0.9897 | 0.9685 | 0.8499 | 0.6047 | 0.3075 | 0.0933 | 0.0116 | 0.0002 |
|          | 8        |          | 0.9996 | 0.9978 | 0.9917 | 0.9417 | 0.7880 | 0.5141 | 0.2195 | 0.0439 | 0.0015 |
|          | 9        |          | 1.0000 | 0.9997 | 0.9983 | 0.9825 | 0.9102 | 0.7207 | 0.4158 | 0.1298 | 0.0092 |
|          | 10       |          |        | 1.0000 | 0.9998 | 0.9961 | 0.9713 | 0.8757 | 0.6448 | 0.3018 | 0.0441 |
|          | 11       |          |        |        | 1.0000 | 0.9994 | 0.9935 | 0.9602 | 0.8392 | 0.5519 | 0.1584 |
|          | 12       |          |        |        |        | 0.9999 | 0.9991 | 0.9919 | 0.9525 | 0.8021 | 0.4154 |
|          | 13       |          |        |        |        | 1.0000 | 0.9999 | 0.9992 | 0.9932 | 0.9560 | 0.7712 |
|          | 14       |          |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 15       | 0        | 0.2059   | 0.0352 | 0.0134 | 0.0047 | 0.0005 | 0.0000 |        |        |        |        |
|          | 1        | 0.5490   | 0.1671 | 0.0802 | 0.0353 | 0.0052 | 0.0005 | 0.0000 |        |        |        |
|          | 2        | 0.8159   | 0.3980 | 0.2361 | 0.1268 | 0.0271 | 0.0037 | 0.0003 | 0.0000 |        |        |
|          | 3        | 0.9444   | 0.6482 | 0.4613 | 0.2969 | 0.0905 | 0.0176 | 0.0019 | 0.0001 |        |        |
|          | 4        | 0.9873   | 0.8358 | 0.6865 | 0.5155 | 0.2173 | 0.0592 | 0.0093 | 0.0007 | 0.0000 |        |
|          | 5        | 0.9978   | 0.9389 | 0.8516 | 0.7216 | 0.4032 | 0.1509 | 0.0338 | 0.0037 | 0.0001 |        |
|          | 6        | 0.9997   | 0.9819 | 0.9434 | 0.8689 | 0.6098 | 0.3036 | 0.0950 | 0.0152 | 0.0008 |        |
|          | 7        | 1.0000   | 0.9958 | 0.9827 | 0.9500 | 0.7869 | 0.5000 | 0.2131 | 0.0500 | 0.0042 | 0.0000 |
|          | 8        |          | 0.9992 | 0.9958 | 0.9848 | 0.9050 | 0.6964 | 0.3902 | 0.1311 | 0.0181 | 0.0003 |
|          | 9        |          | 0.9999 | 0.9992 | 0.9963 | 0.9662 | 0.8491 | 0.5968 | 0.2784 | 0.0611 | 0.0022 |
|          | 10       |          | 1.0000 | 0.9999 | 0.9993 | 0.9907 | 0.9408 | 0.7827 | 0.4845 | 0.1642 | 0.0127 |
|          | 11       |          |        | 1.0000 | 0.9999 | 0.9981 | 0.9824 | 0.9095 | 0.7031 | 0.3518 | 0.0556 |
|          | 12       |          |        |        | 1.0000 | 0.9997 | 0.9963 | 0.9729 | 0.8732 | 0.6020 | 0.1841 |
|          | 13       |          |        |        |        | 1.0000 | 0.9995 | 0.9948 | 0.9647 | 0.8329 | 0.4510 |
|          | 14       |          |        |        |        |        | 1.0000 | 0.9995 | 0.9953 | 0.9648 | 0.7941 |
|          | 15       |          |        |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 16       | 0        | 0.1853   | 0.0281 | 0.0100 | 0.0033 | 0.0003 | 0.0000 |        |        |        |        |
|          | 1        | 0.5147   | 0.1407 | 0.0635 | 0.0261 | 0.0033 | 0.0003 | 0.0000 |        |        |        |
|          | 2        | 0.7892   | 0.3518 | 0.1971 | 0.0994 | 0.0183 | 0.0021 | 0.0001 |        |        |        |
|          | 3        | 0.9316   | 0.5981 | 0.4050 | 0.2459 | 0.0651 | 0.0106 | 0.0009 | 0.0000 |        |        |
|          | 4        | 0.9830   | 0.7982 | 0.6302 | 0.4499 | 0.1666 | 0.0384 | 0.0049 | 0.0003 |        |        |
|          | 5        | 0.9967   | 0.9183 | 0.8103 | 0.6598 | 0.3288 | 0.1051 | 0.0191 | 0.0016 | 0.0000 |        |
|          | 6        | 0.9995   | 0.9733 | 0.9204 | 0.8247 | 0.5272 | 0.2272 | 0.0583 | 0.0071 | 0.0002 |        |
|          | 7        | 0.9999   | 0.9930 | 0.9729 | 0.9256 | 0.7161 | 0.4018 | 0.1423 | 0.0257 | 0.0015 | 0.0000 |
|          | 8        | 1.0000   | 0.9985 | 0.9925 | 0.9743 | 0.8577 | 0.5982 | 0.2839 | 0.0744 | 0.0070 | 0.0001 |
|          | 9        |          | 0.9998 | 0.9984 | 0.9929 | 0.9417 | 0.7728 | 0.4728 | 0.1753 | 0.0267 | 0.0005 |
|          | 10       |          | 1.0000 | 0.9997 | 0.9984 | 0.9809 | 0.8949 | 0.6712 | 0.3402 | 0.0817 | 0.0033 |
|          | 11       |          |        | 1.0000 | 0.9997 | 0.9951 | 0.9616 | 0.8334 | 0.5501 | 0.2018 | 0.0170 |
|          | 12       |          |        |        | 1.0000 | 0.9991 | 0.9894 | 0.9349 | 0.7541 | 0.4019 | 0.0684 |
|          | 13       |          |        |        |        | 0.9999 | 0.9979 | 0.9817 | 0.9006 | 0.6482 | 0.2108 |
|          | 14       |          |        |        |        | 1.0000 | 0.9997 | 0.9967 | 0.9739 | 0.8593 | 0.4853 |
|          | 15       |          |        |        |        |        | 1.0000 | 0.9997 | 0.9967 | 0.9719 | 0.8147 |
|          | 16       |          |        |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Table D.1 (continued) Binomial Probability Sums  $\sum_{x=0}^r b(x; n, p)$

| <i>n</i> | <i>r</i> | <i>p</i> |        |        |        |        |        |        |        |        |        |
|----------|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|          |          | 0.10     | 0.20   | 0.25   | 0.30   | 0.40   | 0.50   | 0.60   | 0.70   | 0.80   | 0.90   |
| 17       | 0        | 0.1668   | 0.0225 | 0.0075 | 0.0023 | 0.0002 | 0.0000 |        |        |        |        |
|          | 1        | 0.4818   | 0.1182 | 0.0501 | 0.0193 | 0.0021 | 0.0001 | 0.0000 |        |        |        |
|          | 2        | 0.7618   | 0.3096 | 0.1637 | 0.0774 | 0.0123 | 0.0012 | 0.0001 |        |        |        |
|          | 3        | 0.9174   | 0.5489 | 0.3530 | 0.2019 | 0.0464 | 0.0064 | 0.0005 | 0.0000 |        |        |
|          | 4        | 0.9779   | 0.7582 | 0.5739 | 0.3887 | 0.1260 | 0.0245 | 0.0025 | 0.0001 |        |        |
|          | 5        | 0.9953   | 0.8943 | 0.7653 | 0.5968 | 0.2639 | 0.0717 | 0.0106 | 0.0007 | 0.0000 |        |
|          | 6        | 0.9992   | 0.9623 | 0.8929 | 0.7752 | 0.4478 | 0.1662 | 0.0348 | 0.0032 | 0.0001 |        |
|          | 7        | 0.9999   | 0.9891 | 0.9598 | 0.8954 | 0.6405 | 0.3145 | 0.0919 | 0.0127 | 0.0005 |        |
|          | 8        | 1.0000   | 0.9974 | 0.9876 | 0.9597 | 0.8011 | 0.5000 | 0.1989 | 0.0403 | 0.0026 | 0.0000 |
|          | 9        |          | 0.9995 | 0.9969 | 0.9873 | 0.9081 | 0.6855 | 0.3595 | 0.1046 | 0.0109 | 0.0001 |
|          | 10       |          | 0.9999 | 0.9994 | 0.9968 | 0.9652 | 0.8338 | 0.5522 | 0.2248 | 0.0377 | 0.0008 |
|          | 11       |          | 1.0000 | 0.9999 | 0.9993 | 0.9894 | 0.9283 | 0.7361 | 0.4032 | 0.1057 | 0.0047 |
|          | 12       |          |        | 1.0000 | 0.9999 | 0.9975 | 0.9755 | 0.8740 | 0.6113 | 0.2418 | 0.0221 |
|          | 13       |          |        |        | 1.0000 | 0.9995 | 0.9936 | 0.9536 | 0.7981 | 0.4511 | 0.0826 |
|          | 14       |          |        |        |        | 0.9999 | 0.9988 | 0.9877 | 0.9226 | 0.6904 | 0.2382 |
|          | 15       |          |        |        |        | 1.0000 | 0.9999 | 0.9979 | 0.9807 | 0.8818 | 0.5182 |
|          | 16       |          |        |        |        |        | 1.0000 | 0.9998 | 0.9977 | 0.9775 | 0.8332 |
|          | 17       |          |        |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 18       | 0        | 0.1501   | 0.0180 | 0.0056 | 0.0016 | 0.0001 | 0.0000 |        |        |        |        |
|          | 1        | 0.4503   | 0.0991 | 0.0395 | 0.0142 | 0.0013 | 0.0001 |        |        |        |        |
|          | 2        | 0.7338   | 0.2713 | 0.1353 | 0.0600 | 0.0082 | 0.0007 | 0.0000 |        |        |        |
|          | 3        | 0.9018   | 0.5010 | 0.3057 | 0.1646 | 0.0328 | 0.0038 | 0.0002 |        |        |        |
|          | 4        | 0.9718   | 0.7164 | 0.5187 | 0.3327 | 0.0942 | 0.0154 | 0.0013 | 0.0000 |        |        |
|          | 5        | 0.9936   | 0.8671 | 0.7175 | 0.5344 | 0.2088 | 0.0481 | 0.0058 | 0.0003 |        |        |
|          | 6        | 0.9988   | 0.9487 | 0.8610 | 0.7217 | 0.3743 | 0.1189 | 0.0203 | 0.0014 | 0.0000 |        |
|          | 7        | 0.9998   | 0.9837 | 0.9431 | 0.8593 | 0.5634 | 0.2403 | 0.0576 | 0.0061 | 0.0002 |        |
|          | 8        | 1.0000   | 0.9957 | 0.9807 | 0.9404 | 0.7368 | 0.4073 | 0.1347 | 0.0210 | 0.0009 |        |
|          | 9        |          | 0.9991 | 0.9946 | 0.9790 | 0.8653 | 0.5927 | 0.2632 | 0.0596 | 0.0043 | 0.0000 |
|          | 10       |          | 0.9998 | 0.9988 | 0.9939 | 0.9424 | 0.7597 | 0.4366 | 0.1407 | 0.0163 | 0.0002 |
|          | 11       |          | 1.0000 | 0.9998 | 0.9986 | 0.9797 | 0.8811 | 0.6257 | 0.2783 | 0.0513 | 0.0012 |
|          | 12       |          |        | 1.0000 | 0.9997 | 0.9942 | 0.9519 | 0.7912 | 0.4656 | 0.1329 | 0.0064 |
|          | 13       |          |        |        | 1.0000 | 0.9987 | 0.9846 | 0.9058 | 0.6673 | 0.2836 | 0.0282 |
|          | 14       |          |        |        |        | 0.9998 | 0.9962 | 0.9672 | 0.8354 | 0.4990 | 0.0982 |
|          | 15       |          |        |        |        | 1.0000 | 0.9993 | 0.9918 | 0.9400 | 0.7287 | 0.2662 |
|          | 16       |          |        |        |        |        | 0.9999 | 0.9987 | 0.9858 | 0.9009 | 0.5497 |
|          | 17       |          |        |        |        |        | 1.0000 | 0.9999 | 0.9984 | 0.9820 | 0.8499 |
|          | 18       |          |        |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Table D.1 (continued) Binomial Probability Sums  $\sum_{x=0}^r b(x; n, p)$

|          |          | <i>p</i> |        |        |        |        |        |        |        |        |        |
|----------|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <i>n</i> | <i>r</i> | 0.10     | 0.20   | 0.25   | 0.30   | 0.40   | 0.50   | 0.60   | 0.70   | 0.80   | 0.90   |
| 19       | 0        | 0.1351   | 0.0144 | 0.0042 | 0.0011 | 0.0001 |        |        |        |        |        |
|          | 1        | 0.4203   | 0.0829 | 0.0310 | 0.0104 | 0.0008 | 0.0000 |        |        |        |        |
|          | 2        | 0.7054   | 0.2369 | 0.1113 | 0.0462 | 0.0055 | 0.0004 | 0.0000 |        |        |        |
|          | 3        | 0.8850   | 0.4551 | 0.2631 | 0.1332 | 0.0230 | 0.0022 | 0.0001 |        |        |        |
|          | 4        | 0.9648   | 0.6733 | 0.4654 | 0.2822 | 0.0696 | 0.0096 | 0.0006 | 0.0000 |        |        |
|          | 5        | 0.9914   | 0.8369 | 0.6678 | 0.4739 | 0.1629 | 0.0318 | 0.0031 | 0.0001 |        |        |
|          | 6        | 0.9983   | 0.9324 | 0.8251 | 0.6655 | 0.3081 | 0.0835 | 0.0116 | 0.0006 |        |        |
|          | 7        | 0.9997   | 0.9767 | 0.9225 | 0.8180 | 0.4878 | 0.1796 | 0.0352 | 0.0028 | 0.0000 |        |
|          | 8        | 1.0000   | 0.9933 | 0.9713 | 0.9161 | 0.6675 | 0.3238 | 0.0885 | 0.0105 | 0.0003 |        |
|          | 9        |          | 0.9984 | 0.9911 | 0.9674 | 0.8139 | 0.5000 | 0.1861 | 0.0326 | 0.0016 |        |
|          | 10       |          | 0.9997 | 0.9977 | 0.9895 | 0.9115 | 0.6762 | 0.3325 | 0.0839 | 0.0067 | 0.0000 |
|          | 11       |          | 1.0000 | 0.9995 | 0.9972 | 0.9648 | 0.8204 | 0.5122 | 0.1820 | 0.0233 | 0.0003 |
|          | 12       |          |        | 0.9999 | 0.9994 | 0.9884 | 0.9165 | 0.6919 | 0.3345 | 0.0676 | 0.0017 |
|          | 13       |          |        | 1.0000 | 0.9999 | 0.9969 | 0.9682 | 0.8371 | 0.5261 | 0.1631 | 0.0086 |
|          | 14       |          |        |        | 1.0000 | 0.9994 | 0.9904 | 0.9304 | 0.7178 | 0.3267 | 0.0352 |
|          | 15       |          |        |        |        | 0.9999 | 0.9978 | 0.9770 | 0.8668 | 0.5449 | 0.1150 |
|          | 16       |          |        |        |        | 1.0000 | 0.9996 | 0.9945 | 0.9538 | 0.7631 | 0.2946 |
|          | 17       |          |        |        |        |        | 1.0000 | 0.9992 | 0.9896 | 0.9171 | 0.5797 |
|          | 18       |          |        |        |        |        |        | 0.9999 | 0.9989 | 0.9856 | 0.8649 |
|          | 19       |          |        |        |        |        |        | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 20       | 0        | 0.1216   | 0.0115 | 0.0032 | 0.0008 | 0.0000 |        |        |        |        |        |
|          | 1        | 0.3917   | 0.0692 | 0.0243 | 0.0076 | 0.0005 | 0.0000 |        |        |        |        |
|          | 2        | 0.6769   | 0.2061 | 0.0913 | 0.0355 | 0.0036 | 0.0002 |        |        |        |        |
|          | 3        | 0.8670   | 0.4114 | 0.2252 | 0.1071 | 0.0160 | 0.0013 | 0.0000 |        |        |        |
|          | 4        | 0.9568   | 0.6296 | 0.4148 | 0.2375 | 0.0510 | 0.0059 | 0.0003 |        |        |        |
|          | 5        | 0.9887   | 0.8042 | 0.6172 | 0.4164 | 0.1256 | 0.0207 | 0.0016 | 0.0000 |        |        |
|          | 6        | 0.9976   | 0.9133 | 0.7858 | 0.6080 | 0.2500 | 0.0577 | 0.0065 | 0.0003 |        |        |
|          | 7        | 0.9996   | 0.9679 | 0.8982 | 0.7723 | 0.4159 | 0.1316 | 0.0210 | 0.0013 | 0.0000 |        |
|          | 8        | 0.9999   | 0.9900 | 0.9591 | 0.8867 | 0.5956 | 0.2517 | 0.0565 | 0.0051 | 0.0001 |        |
|          | 9        | 1.0000   | 0.9974 | 0.9861 | 0.9520 | 0.7553 | 0.4119 | 0.1275 | 0.0171 | 0.0006 |        |
|          | 10       |          | 0.9994 | 0.9961 | 0.9829 | 0.8725 | 0.5881 | 0.2447 | 0.0480 | 0.0026 | 0.0000 |
|          | 11       |          | 0.9999 | 0.9991 | 0.9949 | 0.9435 | 0.7483 | 0.4044 | 0.1133 | 0.0100 | 0.0001 |
|          | 12       |          | 1.0000 | 0.9998 | 0.9987 | 0.9790 | 0.8684 | 0.5841 | 0.2277 | 0.0321 | 0.0004 |
|          | 13       |          |        | 1.0000 | 0.9997 | 0.9935 | 0.9423 | 0.7500 | 0.3920 | 0.0867 | 0.0024 |
|          | 14       |          |        |        | 1.0000 | 0.9984 | 0.9793 | 0.8744 | 0.5836 | 0.1958 | 0.0113 |
|          | 15       |          |        |        |        | 0.9997 | 0.9941 | 0.9490 | 0.7625 | 0.3704 | 0.0432 |
|          | 16       |          |        |        |        | 1.0000 | 0.9987 | 0.9840 | 0.8929 | 0.5886 | 0.1330 |
|          | 17       |          |        |        |        |        | 0.9998 | 0.9964 | 0.9645 | 0.7939 | 0.3231 |
|          | 18       |          |        |        |        |        | 1.0000 | 0.9995 | 0.9924 | 0.9308 | 0.6083 |
|          | 19       |          |        |        |        |        |        | 1.0000 | 0.9992 | 0.9885 | 0.8784 |
|          | 20       |          |        |        |        |        |        |        | 1.0000 | 1.0000 | 1.0000 |

Table D.1 (continued) Binomial Probability Sums  $\sum_{x=0}^r b(x; n, p)$

| $r$ | $\mu$  |        |        |        |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|     | 0.1    | 0.2    | 0.3    | 0.4    | 0.5    | 0.6    | 0.7    | 0.8    | 0.9    |
| 0   | 0.9048 | 0.8187 | 0.7408 | 0.6703 | 0.6065 | 0.5488 | 0.4966 | 0.4493 | 0.4066 |
| 1   | 0.9953 | 0.9825 | 0.9631 | 0.9384 | 0.9098 | 0.8781 | 0.8442 | 0.8088 | 0.7725 |
| 2   | 0.9998 | 0.9989 | 0.9964 | 0.9921 | 0.9856 | 0.9769 | 0.9659 | 0.9526 | 0.9371 |
| 3   | 1.0000 | 0.9999 | 0.9997 | 0.9992 | 0.9982 | 0.9966 | 0.9942 | 0.9909 | 0.9865 |
| 4   |        | 1.0000 | 1.0000 | 0.9999 | 0.9998 | 0.9996 | 0.9992 | 0.9986 | 0.9977 |
| 5   |        |        |        | 1.0000 | 1.0000 | 1.0000 | 0.9999 | 0.9998 | 0.9997 |
| 6   |        |        |        |        |        |        | 1.0000 | 1.0000 | 1.0000 |

| $r$ | $\mu$  |        |        |        |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|     | 1.0    | 1.5    | 2.0    | 2.5    | 3.0    | 3.5    | 4.0    | 4.5    | 5.0    |
| 0   | 0.3679 | 0.2231 | 0.1353 | 0.0821 | 0.0498 | 0.0302 | 0.0183 | 0.0111 | 0.0067 |
| 1   | 0.7358 | 0.5578 | 0.4060 | 0.2873 | 0.1991 | 0.1359 | 0.0916 | 0.0611 | 0.0404 |
| 2   | 0.9197 | 0.8088 | 0.6767 | 0.5438 | 0.4232 | 0.3208 | 0.2381 | 0.1736 | 0.1247 |
| 3   | 0.9810 | 0.9344 | 0.8571 | 0.7576 | 0.6472 | 0.5366 | 0.4335 | 0.3423 | 0.2650 |
| 4   | 0.9963 | 0.9814 | 0.9473 | 0.8912 | 0.8153 | 0.7254 | 0.6288 | 0.5321 | 0.4405 |
| 5   | 0.9994 | 0.9955 | 0.9834 | 0.9580 | 0.9161 | 0.8576 | 0.7851 | 0.7029 | 0.6160 |
| 6   | 0.9999 | 0.9991 | 0.9955 | 0.9858 | 0.9665 | 0.9347 | 0.8893 | 0.8311 | 0.7622 |
| 7   | 1.0000 | 0.9998 | 0.9989 | 0.9958 | 0.9881 | 0.9733 | 0.9489 | 0.9134 | 0.8666 |
| 8   |        | 1.0000 | 0.9998 | 0.9989 | 0.9962 | 0.9901 | 0.9786 | 0.9597 | 0.9319 |
| 9   |        |        | 1.0000 | 0.9997 | 0.9989 | 0.9967 | 0.9919 | 0.9829 | 0.9682 |
| 10  |        |        |        | 0.9999 | 0.9997 | 0.9990 | 0.9972 | 0.9933 | 0.9863 |
| 11  |        |        |        | 1.0000 | 0.9999 | 0.9997 | 0.9991 | 0.9976 | 0.9945 |
| 12  |        |        |        |        | 1.0000 | 0.9999 | 0.9997 | 0.9992 | 0.9980 |
| 13  |        |        |        |        |        | 1.0000 | 0.9999 | 0.9997 | 0.9993 |
| 14  |        |        |        |        |        |        | 1.0000 | 0.9999 | 0.9998 |
| 15  |        |        |        |        |        |        |        | 1.0000 | 0.9999 |
| 16  |        |        |        |        |        |        |        |        | 1.0000 |

Table D.2 Poisson Probability Sums  $\sum_{x=0}^r p(x; \mu)$

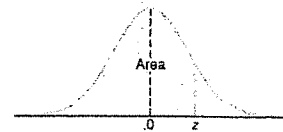
| $r$ | $\mu$  |        |        |        |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|     | 5.5    | 6.0    | 6.5    | 7.0    | 7.5    | 8.0    | 8.5    | 9.0    | 9.5    |
| 0   | 0.0041 | 0.0025 | 0.0015 | 0.0009 | 0.0006 | 0.0003 | 0.0002 | 0.0001 | 0.0001 |
| 1   | 0.0266 | 0.0174 | 0.0113 | 0.0073 | 0.0047 | 0.0030 | 0.0019 | 0.0012 | 0.0008 |
| 2   | 0.0884 | 0.0620 | 0.0430 | 0.0296 | 0.0203 | 0.0138 | 0.0093 | 0.0062 | 0.0042 |
| 3   | 0.2017 | 0.1512 | 0.1118 | 0.0818 | 0.0591 | 0.0424 | 0.0301 | 0.0212 | 0.0149 |
| 4   | 0.3575 | 0.2851 | 0.2237 | 0.1730 | 0.1321 | 0.0996 | 0.0744 | 0.0550 | 0.0403 |
| 5   | 0.5289 | 0.4457 | 0.3690 | 0.3007 | 0.2414 | 0.1912 | 0.1496 | 0.1157 | 0.0885 |
| 6   | 0.6860 | 0.6063 | 0.5265 | 0.4497 | 0.3782 | 0.3134 | 0.2562 | 0.2068 | 0.1649 |
| 7   | 0.8095 | 0.7440 | 0.6728 | 0.5987 | 0.5246 | 0.4530 | 0.3856 | 0.3239 | 0.2687 |
| 8   | 0.8944 | 0.8472 | 0.7916 | 0.7291 | 0.6620 | 0.5925 | 0.5231 | 0.4557 | 0.3918 |
| 9   | 0.9462 | 0.9161 | 0.8774 | 0.8305 | 0.7764 | 0.7166 | 0.6530 | 0.5874 | 0.5218 |
| 10  | 0.9747 | 0.9574 | 0.9332 | 0.9015 | 0.8622 | 0.8159 | 0.7634 | 0.7060 | 0.6453 |
| 11  | 0.9890 | 0.9799 | 0.9661 | 0.9467 | 0.9208 | 0.8881 | 0.8487 | 0.8030 | 0.7520 |
| 12  | 0.9955 | 0.9912 | 0.9840 | 0.9730 | 0.9573 | 0.9362 | 0.9091 | 0.8758 | 0.8364 |
| 13  | 0.9983 | 0.9964 | 0.9929 | 0.9872 | 0.9784 | 0.9658 | 0.9486 | 0.9261 | 0.8981 |
| 14  | 0.9994 | 0.9986 | 0.9970 | 0.9943 | 0.9897 | 0.9827 | 0.9726 | 0.9585 | 0.9400 |
| 15  | 0.9998 | 0.9995 | 0.9988 | 0.9976 | 0.9954 | 0.9918 | 0.9862 | 0.9780 | 0.9665 |
| 16  | 0.9999 | 0.9998 | 0.9996 | 0.9990 | 0.9980 | 0.9963 | 0.9934 | 0.9889 | 0.9823 |
| 17  | 1.0000 | 0.9999 | 0.9998 | 0.9996 | 0.9992 | 0.9984 | 0.9970 | 0.9947 | 0.9911 |
| 18  |        | 1.0000 | 0.9999 | 0.9999 | 0.9997 | 0.9993 | 0.9987 | 0.9976 | 0.9957 |
| 19  |        |        | 1.0000 | 1.0000 | 0.9999 | 0.9997 | 0.9995 | 0.9989 | 0.9980 |
| 20  |        |        |        |        |        | 0.9999 | 0.9998 | 0.9996 | 0.9991 |
| 21  |        |        |        |        |        | 1.0000 | 0.9999 | 0.9998 | 0.9996 |
| 22  |        |        |        |        |        |        | 1.0000 | 0.9999 | 0.9999 |
| 23  |        |        |        |        |        |        |        | 1.0000 | 0.9999 |
| 24  |        |        |        |        |        |        |        |        | 1.0000 |

Table D.2 (continued) Poisson Probability Sums  $\sum_{x=0}^r p(x; \mu)$



| $r$ | $\mu$  |        |        |        |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|     | 10.0   | 11.0   | 12.0   | 13.0   | 14.0   | 15.0   | 16.0   | 17.0   | 18.0   |
| 0   | 0.0000 | 0.0000 | 0.0000 |        |        |        |        |        |        |
| 1   | 0.0005 | 0.0002 | 0.0001 | 0.0000 | 0.0000 |        |        |        |        |
| 2   | 0.0028 | 0.0012 | 0.0005 | 0.0002 | 0.0001 | 0.0000 | 0.0000 |        |        |
| 3   | 0.0103 | 0.0049 | 0.0023 | 0.0011 | 0.0005 | 0.0002 | 0.0001 | 0.0000 | 0.0000 |
| 4   | 0.0293 | 0.0151 | 0.0076 | 0.0037 | 0.0018 | 0.0009 | 0.0004 | 0.0002 | 0.0001 |
| 5   | 0.0671 | 0.0375 | 0.0203 | 0.0107 | 0.0055 | 0.0028 | 0.0014 | 0.0007 | 0.0003 |
| 6   | 0.1301 | 0.0786 | 0.0458 | 0.0259 | 0.0142 | 0.0076 | 0.0040 | 0.0021 | 0.0010 |
| 7   | 0.2202 | 0.1432 | 0.0895 | 0.0540 | 0.0316 | 0.0180 | 0.0100 | 0.0054 | 0.0029 |
| 8   | 0.3328 | 0.2320 | 0.1550 | 0.0998 | 0.0621 | 0.0374 | 0.0220 | 0.0126 | 0.0071 |
| 9   | 0.4579 | 0.3405 | 0.2424 | 0.1658 | 0.1094 | 0.0699 | 0.0433 | 0.0261 | 0.0154 |
| 10  | 0.5830 | 0.4599 | 0.3472 | 0.2517 | 0.1757 | 0.1185 | 0.0774 | 0.0491 | 0.0304 |
| 11  | 0.6968 | 0.5793 | 0.4616 | 0.3532 | 0.2600 | 0.1848 | 0.1270 | 0.0847 | 0.0549 |
| 12  | 0.7916 | 0.6887 | 0.5760 | 0.4631 | 0.3585 | 0.2676 | 0.1931 | 0.1350 | 0.0917 |
| 13  | 0.8645 | 0.7813 | 0.6815 | 0.5730 | 0.4644 | 0.3632 | 0.2745 | 0.2009 | 0.1426 |
| 14  | 0.9165 | 0.8540 | 0.7720 | 0.6751 | 0.5704 | 0.4657 | 0.3675 | 0.2808 | 0.2081 |
| 15  | 0.9513 | 0.9074 | 0.8444 | 0.7636 | 0.6694 | 0.5681 | 0.4667 | 0.3715 | 0.2867 |
| 16  | 0.9730 | 0.9441 | 0.8987 | 0.8355 | 0.7559 | 0.6641 | 0.5660 | 0.4677 | 0.3751 |
| 17  | 0.9857 | 0.9678 | 0.9370 | 0.8905 | 0.8272 | 0.7489 | 0.6593 | 0.5640 | 0.4686 |
| 18  | 0.9928 | 0.9823 | 0.9626 | 0.9302 | 0.8826 | 0.8195 | 0.7423 | 0.6550 | 0.5622 |
| 19  | 0.9965 | 0.9907 | 0.9787 | 0.9573 | 0.9235 | 0.8752 | 0.8122 | 0.7363 | 0.6509 |
| 20  | 0.9984 | 0.9953 | 0.9884 | 0.9750 | 0.9521 | 0.9170 | 0.8682 | 0.8055 | 0.7307 |
| 21  | 0.9993 | 0.9977 | 0.9939 | 0.9859 | 0.9712 | 0.9469 | 0.9108 | 0.8615 | 0.7991 |
| 22  | 0.9997 | 0.9990 | 0.9970 | 0.9924 | 0.9833 | 0.9673 | 0.9418 | 0.9047 | 0.8551 |
| 23  | 0.9999 | 0.9995 | 0.9985 | 0.9960 | 0.9907 | 0.9805 | 0.9633 | 0.9367 | 0.8989 |
| 24  | 1.0000 | 0.9998 | 0.9993 | 0.9980 | 0.9950 | 0.9888 | 0.9777 | 0.9594 | 0.9317 |
| 25  |        | 0.9999 | 0.9997 | 0.9990 | 0.9974 | 0.9938 | 0.9869 | 0.9748 | 0.9554 |
| 26  |        | 1.0000 | 0.9999 | 0.9995 | 0.9987 | 0.9967 | 0.9925 | 0.9848 | 0.9718 |
| 27  |        |        | 0.9999 | 0.9998 | 0.9994 | 0.9983 | 0.9959 | 0.9912 | 0.9827 |
| 28  |        |        | 1.0000 | 0.9999 | 0.9997 | 0.9991 | 0.9978 | 0.9950 | 0.9897 |
| 29  |        |        |        | 1.0000 | 0.9999 | 0.9996 | 0.9989 | 0.9973 | 0.9941 |
| 30  |        |        |        |        | 0.9999 | 0.9998 | 0.9994 | 0.9986 | 0.9967 |
| 31  |        |        |        |        | 1.0000 | 0.9999 | 0.9997 | 0.9993 | 0.9982 |
| 32  |        |        |        |        |        | 1.0000 | 0.9999 | 0.9996 | 0.9990 |
| 33  |        |        |        |        |        |        | 0.9999 | 0.9998 | 0.9995 |
| 34  |        |        |        |        |        |        | 1.0000 | 0.9999 | 0.9998 |
| 35  |        |        |        |        |        |        |        | 1.0000 | 0.9999 |
| 36  |        |        |        |        |        |        |        |        | 0.9999 |
| 37  |        |        |        |        |        |        |        |        | 1.0000 |

Table D.2 (continued) Poisson Probability Sums  $\sum_{x=0}^r p(x; \mu)$

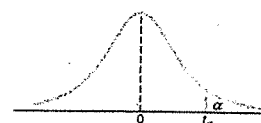


| $z$  | .00    | .01    | .02    | .03    | .04    | .05    | .06    | .07    | .08    | .09    |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| -3.4 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0002 |
| -3.3 | 0.0005 | 0.0005 | 0.0005 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0003 |
| -3.2 | 0.0007 | 0.0007 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0005 | 0.0005 | 0.0005 |
| -3.1 | 0.0010 | 0.0009 | 0.0009 | 0.0009 | 0.0008 | 0.0008 | 0.0008 | 0.0008 | 0.0007 | 0.0007 |
| -3.0 | 0.0013 | 0.0013 | 0.0013 | 0.0012 | 0.0012 | 0.0011 | 0.0011 | 0.0011 | 0.0010 | 0.0010 |
| -2.9 | 0.0019 | 0.0018 | 0.0018 | 0.0017 | 0.0016 | 0.0016 | 0.0015 | 0.0015 | 0.0014 | 0.0014 |
| -2.8 | 0.0026 | 0.0025 | 0.0024 | 0.0023 | 0.0023 | 0.0022 | 0.0021 | 0.0021 | 0.0020 | 0.0019 |
| -2.7 | 0.0035 | 0.0034 | 0.0033 | 0.0032 | 0.0031 | 0.0030 | 0.0029 | 0.0028 | 0.0027 | 0.0026 |
| -2.6 | 0.0047 | 0.0045 | 0.0044 | 0.0043 | 0.0041 | 0.0040 | 0.0039 | 0.0038 | 0.0037 | 0.0036 |
| -2.5 | 0.0062 | 0.0060 | 0.0059 | 0.0057 | 0.0055 | 0.0054 | 0.0052 | 0.0051 | 0.0049 | 0.0048 |
| -2.4 | 0.0082 | 0.0080 | 0.0078 | 0.0075 | 0.0073 | 0.0071 | 0.0069 | 0.0068 | 0.0066 | 0.0064 |
| -2.3 | 0.0107 | 0.0104 | 0.0102 | 0.0099 | 0.0096 | 0.0094 | 0.0091 | 0.0089 | 0.0087 | 0.0084 |
| -2.2 | 0.0139 | 0.0136 | 0.0132 | 0.0129 | 0.0125 | 0.0122 | 0.0119 | 0.0116 | 0.0113 | 0.0110 |
| -2.1 | 0.0179 | 0.0174 | 0.0170 | 0.0166 | 0.0162 | 0.0158 | 0.0154 | 0.0150 | 0.0146 | 0.0143 |
| -2.0 | 0.0228 | 0.0222 | 0.0217 | 0.0212 | 0.0207 | 0.0202 | 0.0197 | 0.0192 | 0.0188 | 0.0183 |
| -1.9 | 0.0287 | 0.0281 | 0.0274 | 0.0268 | 0.0262 | 0.0256 | 0.0250 | 0.0244 | 0.0239 | 0.0233 |
| -1.8 | 0.0359 | 0.0351 | 0.0344 | 0.0336 | 0.0329 | 0.0322 | 0.0314 | 0.0307 | 0.0301 | 0.0294 |
| -1.7 | 0.0446 | 0.0436 | 0.0427 | 0.0418 | 0.0409 | 0.0401 | 0.0392 | 0.0384 | 0.0375 | 0.0367 |
| -1.6 | 0.0548 | 0.0537 | 0.0526 | 0.0516 | 0.0505 | 0.0495 | 0.0485 | 0.0475 | 0.0465 | 0.0455 |
| -1.5 | 0.0668 | 0.0655 | 0.0643 | 0.0630 | 0.0618 | 0.0606 | 0.0594 | 0.0582 | 0.0571 | 0.0559 |
| -1.4 | 0.0808 | 0.0793 | 0.0778 | 0.0764 | 0.0749 | 0.0735 | 0.0721 | 0.0708 | 0.0694 | 0.0681 |
| -1.3 | 0.0968 | 0.0951 | 0.0934 | 0.0918 | 0.0901 | 0.0885 | 0.0869 | 0.0853 | 0.0838 | 0.0823 |
| -1.2 | 0.1151 | 0.1131 | 0.1112 | 0.1093 | 0.1075 | 0.1056 | 0.1038 | 0.1020 | 0.1003 | 0.0985 |
| -1.1 | 0.1357 | 0.1335 | 0.1314 | 0.1292 | 0.1271 | 0.1251 | 0.1230 | 0.1210 | 0.1190 | 0.1170 |
| -1.0 | 0.1587 | 0.1562 | 0.1539 | 0.1515 | 0.1492 | 0.1469 | 0.1446 | 0.1423 | 0.1401 | 0.1379 |
| -0.9 | 0.1841 | 0.1814 | 0.1788 | 0.1762 | 0.1736 | 0.1711 | 0.1685 | 0.1660 | 0.1635 | 0.1611 |
| -0.8 | 0.2119 | 0.2090 | 0.2061 | 0.2033 | 0.2005 | 0.1977 | 0.1949 | 0.1922 | 0.1894 | 0.1867 |
| -0.7 | 0.2420 | 0.2389 | 0.2358 | 0.2327 | 0.2296 | 0.2266 | 0.2236 | 0.2206 | 0.2177 | 0.2148 |
| -0.6 | 0.2743 | 0.2709 | 0.2676 | 0.2643 | 0.2611 | 0.2578 | 0.2546 | 0.2514 | 0.2483 | 0.2451 |
| -0.5 | 0.3085 | 0.3050 | 0.3015 | 0.2981 | 0.2946 | 0.2912 | 0.2877 | 0.2843 | 0.2810 | 0.2776 |
| -0.4 | 0.3446 | 0.3409 | 0.3372 | 0.3336 | 0.3300 | 0.3264 | 0.3228 | 0.3192 | 0.3156 | 0.3121 |
| -0.3 | 0.3821 | 0.3783 | 0.3745 | 0.3707 | 0.3669 | 0.3632 | 0.3594 | 0.3557 | 0.3520 | 0.3483 |
| -0.2 | 0.4207 | 0.4168 | 0.4129 | 0.4090 | 0.4052 | 0.4013 | 0.3974 | 0.3936 | 0.3897 | 0.3859 |
| -0.1 | 0.4602 | 0.4562 | 0.4522 | 0.4483 | 0.4443 | 0.4404 | 0.4364 | 0.4325 | 0.4286 | 0.4247 |
| -0.0 | 0.5000 | 0.4960 | 0.4920 | 0.4880 | 0.4840 | 0.4801 | 0.4761 | 0.4721 | 0.4681 | 0.4641 |

Table D.3 Areas under the Normal Curve

| <i>z</i> | .00    | .01    | .02    | .03    | .04    | .05    | .06    | .07    | .08    | .09    |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0      | 0.5000 | 0.5040 | 0.5080 | 0.5120 | 0.5160 | 0.5199 | 0.5239 | 0.5279 | 0.5319 | 0.5359 |
| 0.1      | 0.5398 | 0.5438 | 0.5478 | 0.5517 | 0.5557 | 0.5596 | 0.5636 | 0.5675 | 0.5714 | 0.5753 |
| 0.2      | 0.5793 | 0.5832 | 0.5871 | 0.5910 | 0.5948 | 0.5987 | 0.6026 | 0.6064 | 0.6103 | 0.6141 |
| 0.3      | 0.6179 | 0.6217 | 0.6255 | 0.6293 | 0.6331 | 0.6368 | 0.6406 | 0.6443 | 0.6480 | 0.6517 |
| 0.4      | 0.6554 | 0.6591 | 0.6628 | 0.6664 | 0.6700 | 0.6736 | 0.6772 | 0.6808 | 0.6844 | 0.6879 |
| 0.5      | 0.6915 | 0.6950 | 0.6985 | 0.7019 | 0.7054 | 0.7088 | 0.7123 | 0.7157 | 0.7190 | 0.7224 |
| 0.6      | 0.7257 | 0.7291 | 0.7324 | 0.7357 | 0.7389 | 0.7422 | 0.7454 | 0.7486 | 0.7517 | 0.7549 |
| 0.7      | 0.7580 | 0.7611 | 0.7642 | 0.7673 | 0.7704 | 0.7734 | 0.7764 | 0.7794 | 0.7823 | 0.7852 |
| 0.8      | 0.7881 | 0.7910 | 0.7939 | 0.7967 | 0.7995 | 0.8023 | 0.8051 | 0.8078 | 0.8106 | 0.8133 |
| 0.9      | 0.8159 | 0.8186 | 0.8212 | 0.8238 | 0.8264 | 0.8289 | 0.8315 | 0.8340 | 0.8365 | 0.8389 |
| 1.0      | 0.8413 | 0.8438 | 0.8461 | 0.8485 | 0.8508 | 0.8531 | 0.8554 | 0.8577 | 0.8599 | 0.8621 |
| 1.1      | 0.8643 | 0.8665 | 0.8686 | 0.8708 | 0.8729 | 0.8749 | 0.8770 | 0.8790 | 0.8810 | 0.8830 |
| 1.2      | 0.8849 | 0.8869 | 0.8888 | 0.8907 | 0.8925 | 0.8944 | 0.8962 | 0.8980 | 0.8997 | 0.9015 |
| 1.3      | 0.9032 | 0.9049 | 0.9066 | 0.9082 | 0.9099 | 0.9115 | 0.9131 | 0.9147 | 0.9162 | 0.9177 |
| 1.4      | 0.9192 | 0.9207 | 0.9222 | 0.9236 | 0.9251 | 0.9265 | 0.9279 | 0.9292 | 0.9306 | 0.9319 |
| 1.5      | 0.9332 | 0.9345 | 0.9357 | 0.9370 | 0.9382 | 0.9394 | 0.9406 | 0.9418 | 0.9429 | 0.9441 |
| 1.6      | 0.9452 | 0.9463 | 0.9474 | 0.9484 | 0.9495 | 0.9505 | 0.9515 | 0.9525 | 0.9535 | 0.9545 |
| 1.7      | 0.9554 | 0.9564 | 0.9573 | 0.9582 | 0.9591 | 0.9599 | 0.9608 | 0.9616 | 0.9625 | 0.9633 |
| 1.8      | 0.9641 | 0.9649 | 0.9656 | 0.9664 | 0.9671 | 0.9678 | 0.9686 | 0.9693 | 0.9699 | 0.9706 |
| 1.9      | 0.9713 | 0.9719 | 0.9726 | 0.9732 | 0.9738 | 0.9744 | 0.9750 | 0.9756 | 0.9761 | 0.9767 |
| 2.0      | 0.9772 | 0.9778 | 0.9783 | 0.9788 | 0.9793 | 0.9798 | 0.9803 | 0.9808 | 0.9812 | 0.9817 |
| 2.1      | 0.9821 | 0.9826 | 0.9830 | 0.9834 | 0.9838 | 0.9842 | 0.9846 | 0.9850 | 0.9854 | 0.9857 |
| 2.2      | 0.9861 | 0.9864 | 0.9868 | 0.9871 | 0.9875 | 0.9878 | 0.9881 | 0.9884 | 0.9887 | 0.9890 |
| 2.3      | 0.9893 | 0.9896 | 0.9898 | 0.9901 | 0.9904 | 0.9906 | 0.9909 | 0.9911 | 0.9913 | 0.9916 |
| 2.4      | 0.9918 | 0.9920 | 0.9922 | 0.9925 | 0.9927 | 0.9929 | 0.9931 | 0.9932 | 0.9934 | 0.9936 |
| 2.5      | 0.9938 | 0.9940 | 0.9941 | 0.9943 | 0.9945 | 0.9946 | 0.9948 | 0.9949 | 0.9951 | 0.9952 |
| 2.6      | 0.9953 | 0.9955 | 0.9956 | 0.9957 | 0.9959 | 0.9960 | 0.9961 | 0.9962 | 0.9963 | 0.9964 |
| 2.7      | 0.9965 | 0.9966 | 0.9967 | 0.9968 | 0.9969 | 0.9970 | 0.9971 | 0.9972 | 0.9973 | 0.9974 |
| 2.8      | 0.9974 | 0.9975 | 0.9976 | 0.9977 | 0.9977 | 0.9978 | 0.9979 | 0.9979 | 0.9980 | 0.9981 |
| 2.9      | 0.9981 | 0.9982 | 0.9982 | 0.9983 | 0.9984 | 0.9984 | 0.9985 | 0.9985 | 0.9986 | 0.9986 |
| 3.0      | 0.9987 | 0.9987 | 0.9987 | 0.9988 | 0.9988 | 0.9989 | 0.9989 | 0.9989 | 0.9990 | 0.9990 |
| 3.1      | 0.9990 | 0.9991 | 0.9991 | 0.9991 | 0.9992 | 0.9992 | 0.9992 | 0.9992 | 0.9993 | 0.9993 |
| 3.2      | 0.9993 | 0.9993 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9995 | 0.9995 | 0.9995 |
| 3.3      | 0.9995 | 0.9995 | 0.9995 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9997 |
| 3.4      | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9998 |

Table D.3 (continued) Areas under the Normal Curve



| $v$      | $\alpha$ |       |       |       |       |       |        |
|----------|----------|-------|-------|-------|-------|-------|--------|
|          | 0.40     | 0.30  | 0.20  | 0.15  | 0.10  | 0.05  | 0.025  |
| 1        | 0.325    | 0.727 | 1.376 | 1.963 | 3.078 | 6.314 | 12.706 |
| 2        | 0.289    | 0.617 | 1.061 | 1.386 | 1.886 | 2.920 | 4.303  |
| 3        | 0.277    | 0.584 | 0.978 | 1.250 | 1.638 | 2.353 | 3.182  |
| 4        | 0.271    | 0.569 | 0.941 | 1.190 | 1.533 | 2.132 | 2.776  |
| 5        | 0.267    | 0.559 | 0.920 | 1.156 | 1.476 | 2.015 | 2.571  |
| 6        | 0.265    | 0.553 | 0.906 | 1.134 | 1.440 | 1.943 | 2.447  |
| 7        | 0.263    | 0.549 | 0.896 | 1.119 | 1.415 | 1.895 | 2.365  |
| 8        | 0.262    | 0.546 | 0.889 | 1.108 | 1.397 | 1.860 | 2.306  |
| 9        | 0.261    | 0.543 | 0.883 | 1.100 | 1.383 | 1.833 | 2.262  |
| 10       | 0.260    | 0.542 | 0.879 | 1.093 | 1.372 | 1.812 | 2.228  |
| 11       | 0.260    | 0.540 | 0.876 | 1.088 | 1.363 | 1.796 | 2.201  |
| 12       | 0.259    | 0.539 | 0.873 | 1.083 | 1.356 | 1.782 | 2.179  |
| 13       | 0.259    | 0.538 | 0.870 | 1.079 | 1.350 | 1.771 | 2.160  |
| 14       | 0.258    | 0.537 | 0.868 | 1.076 | 1.345 | 1.761 | 2.145  |
| 15       | 0.258    | 0.536 | 0.866 | 1.074 | 1.341 | 1.753 | 2.131  |
| 16       | 0.258    | 0.535 | 0.865 | 1.071 | 1.337 | 1.746 | 2.120  |
| 17       | 0.257    | 0.534 | 0.863 | 1.069 | 1.333 | 1.740 | 2.110  |
| 18       | 0.257    | 0.534 | 0.862 | 1.067 | 1.330 | 1.734 | 2.101  |
| 19       | 0.257    | 0.533 | 0.861 | 1.066 | 1.328 | 1.729 | 2.093  |
| 20       | 0.257    | 0.533 | 0.860 | 1.064 | 1.325 | 1.725 | 2.086  |
| 21       | 0.257    | 0.532 | 0.859 | 1.063 | 1.323 | 1.721 | 2.080  |
| 22       | 0.256    | 0.532 | 0.858 | 1.061 | 1.321 | 1.717 | 2.074  |
| 23       | 0.256    | 0.532 | 0.858 | 1.060 | 1.319 | 1.714 | 2.069  |
| 24       | 0.256    | 0.531 | 0.857 | 1.059 | 1.318 | 1.711 | 2.064  |
| 25       | 0.256    | 0.531 | 0.856 | 1.058 | 1.316 | 1.708 | 2.060  |
| 26       | 0.256    | 0.531 | 0.856 | 1.058 | 1.315 | 1.706 | 2.056  |
| 27       | 0.256    | 0.531 | 0.855 | 1.057 | 1.314 | 1.703 | 2.052  |
| 28       | 0.256    | 0.530 | 0.855 | 1.056 | 1.313 | 1.701 | 2.048  |
| 29       | 0.256    | 0.530 | 0.854 | 1.055 | 1.311 | 1.699 | 2.045  |
| 30       | 0.256    | 0.530 | 0.854 | 1.055 | 1.310 | 1.697 | 2.042  |
| 40       | 0.255    | 0.529 | 0.851 | 1.050 | 1.303 | 1.684 | 2.021  |
| 60       | 0.254    | 0.527 | 0.848 | 1.045 | 1.296 | 1.671 | 2.000  |
| 120      | 0.254    | 0.526 | 0.845 | 1.041 | 1.289 | 1.658 | 1.980  |
| $\infty$ | 0.253    | 0.524 | 0.842 | 1.036 | 1.282 | 1.645 | 1.960  |

Table D.4 Critical Values of the  $t$ -Distribution

| $v$      | $\alpha$ |        |        |        |        |         |         |
|----------|----------|--------|--------|--------|--------|---------|---------|
|          | 0.02     | 0.015  | 0.01   | 0.0075 | 0.005  | 0.0025  | 0.0005  |
| 1        | 15.894   | 21.205 | 31.821 | 42.433 | 63.656 | 127.321 | 636.578 |
| 2        | 4.849    | 5.643  | 6.965  | 8.073  | 9.925  | 14.089  | 31.600  |
| 3        | 3.482    | 3.896  | 4.541  | 5.047  | 5.841  | 7.453   | 12.924  |
| 4        | 2.999    | 3.298  | 3.747  | 4.088  | 4.604  | 5.598   | 8.610   |
| 5        | 2.757    | 3.003  | 3.365  | 3.634  | 4.032  | 4.773   | 6.869   |
| 6        | 2.612    | 2.829  | 3.143  | 3.372  | 3.707  | 4.317   | 5.959   |
| 7        | 2.517    | 2.715  | 2.998  | 3.203  | 3.499  | 4.029   | 5.408   |
| 8        | 2.449    | 2.634  | 2.896  | 3.085  | 3.355  | 3.833   | 5.041   |
| 9        | 2.398    | 2.574  | 2.821  | 2.998  | 3.250  | 3.690   | 4.781   |
| 10       | 2.359    | 2.527  | 2.764  | 2.932  | 3.169  | 3.581   | 4.587   |
| 11       | 2.328    | 2.491  | 2.718  | 2.879  | 3.106  | 3.497   | 4.437   |
| 12       | 2.303    | 2.461  | 2.681  | 2.836  | 3.055  | 3.428   | 4.318   |
| 13       | 2.282    | 2.436  | 2.650  | 2.801  | 3.012  | 3.372   | 4.221   |
| 14       | 2.264    | 2.415  | 2.624  | 2.771  | 2.977  | 3.326   | 4.140   |
| 15       | 2.249    | 2.397  | 2.602  | 2.746  | 2.947  | 3.286   | 4.073   |
| 16       | 2.235    | 2.382  | 2.583  | 2.724  | 2.921  | 3.252   | 4.015   |
| 17       | 2.224    | 2.368  | 2.567  | 2.706  | 2.898  | 3.222   | 3.965   |
| 18       | 2.214    | 2.356  | 2.552  | 2.689  | 2.878  | 3.197   | 3.922   |
| 19       | 2.205    | 2.346  | 2.539  | 2.674  | 2.861  | 3.174   | 3.883   |
| 20       | 2.197    | 2.336  | 2.528  | 2.661  | 2.845  | 3.153   | 3.850   |
| 21       | 2.189    | 2.328  | 2.518  | 2.649  | 2.831  | 3.135   | 3.819   |
| 22       | 2.183    | 2.320  | 2.508  | 2.639  | 2.819  | 3.119   | 3.792   |
| 23       | 2.177    | 2.313  | 2.500  | 2.629  | 2.807  | 3.104   | 3.768   |
| 24       | 2.172    | 2.307  | 2.492  | 2.620  | 2.797  | 3.091   | 3.745   |
| 25       | 2.167    | 2.301  | 2.485  | 2.612  | 2.787  | 3.078   | 3.725   |
| 26       | 2.162    | 2.296  | 2.479  | 2.605  | 2.779  | 3.067   | 3.707   |
| 27       | 2.158    | 2.291  | 2.473  | 2.598  | 2.771  | 3.057   | 3.689   |
| 28       | 2.154    | 2.286  | 2.467  | 2.592  | 2.763  | 3.047   | 3.674   |
| 29       | 2.150    | 2.282  | 2.462  | 2.586  | 2.756  | 3.038   | 3.660   |
| 30       | 2.147    | 2.278  | 2.457  | 2.581  | 2.750  | 3.030   | 3.646   |
| 40       | 2.123    | 2.250  | 2.423  | 2.542  | 2.704  | 2.971   | 3.551   |
| 60       | 2.099    | 2.223  | 2.390  | 2.504  | 2.660  | 2.915   | 3.460   |
| 120      | 2.076    | 2.196  | 2.358  | 2.468  | 2.617  | 2.860   | 3.373   |
| $\infty$ | 2.054    | 2.170  | 2.326  | 2.432  | 2.576  | 2.807   | 3.290   |

Table D.4 (continued) Critical Values of the  $t$ -Distribution