

DEPARTAMENTO DE MATEMÁTICA

Probabilidades e Estatística

Tabela 1: Função de distribuição Binomial

$$F_X(x) = \sum_{k=0}^{x} {n \choose k} p^k (1-p)^{n-k}$$

n	$x \setminus p$	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
1	0 1	1			0.9600 1.0000														
2	0 1 2	0.9999	0.9996	0.9991	0.9216 0.9984 1.0000	0.9975	0.9964	0.9951	0.9936	0.9919	0.9900	0.9775	0.9600	0.9375	0.9100	0.8775	0.8400	0.7975	0.7500
3	0 1 2 3	0.9997	0.9988	0.9974	0.8847 0.9953 0.9999 1.0000	$0.9928 \\ 0.9999$	0.9896	$\begin{array}{c} 0.9860 \\ 0.9997 \end{array}$	$0.9818 \\ 0.9995$	$\begin{array}{c} 0.9772 \\ 0.9993 \end{array}$	$\begin{array}{c} 0.9720 \\ 0.9990 \end{array}$	$0.9393 \\ 0.9966$	$\begin{array}{c} 0.8960 \\ 0.9920 \end{array}$	$\begin{array}{c} 0.8438 \\ 0.9844 \end{array}$	$\begin{array}{c} 0.7840 \\ 0.9730 \end{array}$	$\begin{array}{c} 0.7183 \\ 0.9571 \end{array}$	$\begin{array}{c} 0.6480 \\ 0.9360 \end{array}$	$0.5748 \\ 0.9089$	$0.5000 \\ 0.8750$
4	0 1 2 3 4	0.9994	0.9977	$0.9948 \\ 0.9999$	0.8493 0.9909 0.9998 1.0000	$0.9860 \\ 0.9995$	$\begin{array}{c} 0.9801 \\ 0.9992 \end{array}$	$\begin{array}{c} 0.9733 \\ 0.9987 \end{array}$	$0.9656 \\ 0.9981$	$\begin{array}{c} 0.9570 \\ 0.9973 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.9477 \\ 0.9963 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8905 \\ 0.9880 \\ 0.9995 \end{array}$	$\begin{array}{c} 0.8192 \\ 0.9728 \\ 0.9984 \end{array}$	$\begin{array}{c} 0.7383 \\ 0.9492 \\ 0.9961 \end{array}$	$\begin{array}{c} 0.6517 \\ 0.9163 \\ 0.9919 \end{array}$	$\begin{array}{c} 0.5630 \\ 0.8735 \\ 0.9850 \end{array}$	$\begin{array}{c} 0.4752 \\ 0.8208 \\ 0.9744 \end{array}$	$0.3910 \\ 0.7585$	$\begin{array}{c} 0.3125 \\ 0.6875 \\ 0.9375 \end{array}$
5	0 1 2 3 4 5	0.9990	$0.9962 \\ 0.9999$	$0.9915 \\ 0.9997$	0.8154 0.9852 0.9994 1.0000	$\begin{array}{c} 0.9774 \\ 0.9988 \end{array}$	0.9681 0.9980 0.9999	$\begin{array}{c} 0.9575 \\ 0.9969 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.9456 \\ 0.9955 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.9326 \\ 0.9937 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.9185 \\ 0.9914 \\ 0.9995 \end{array}$	$\begin{array}{c} 0.8352 \\ 0.9734 \\ 0.9978 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7373 \\ 0.9421 \\ 0.9933 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.6328 \\ 0.8965 \\ 0.9844 \\ 0.9990 \end{array}$	$\begin{array}{c} 0.5282 \\ 0.8369 \\ 0.9692 \\ 0.9976 \end{array}$	$\begin{array}{c} 0.4284 \\ 0.7648 \\ 0.9460 \\ 0.9947 \end{array}$	$\begin{array}{c} 0.3370 \\ 0.6826 \\ 0.9130 \\ 0.9898 \end{array}$	$\begin{array}{c} 0.2562 \\ 0.5931 \end{array}$	$\begin{array}{c} 0.1875 \\ 0.5000 \\ 0.8125 \\ 0.9688 \end{array}$
6	0 1 2 3 4 5 6	0.9985	$\begin{array}{c} 0.9943 \\ 0.9998 \end{array}$	$0.9875 \\ 0.9995$	0.7828 0.9784 0.9988 1.0000	$\begin{array}{c} 0.9672 \\ 0.9978 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.9541 \\ 0.9962 \end{array}$	$\begin{array}{c} 0.9392 \\ 0.9942 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.9227 \\ 0.9915 \\ 0.9995 \end{array}$	$\begin{array}{c} 0.9048 \\ 0.9882 \\ 0.9992 \end{array}$	$\begin{array}{c} 0.8857 \\ 0.9842 \\ 0.9987 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7765 \\ 0.9527 \\ 0.9941 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.6554 \\ 0.9011 \\ 0.9830 \\ 0.9984 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.5339 \\ 0.8306 \\ 0.9624 \\ 0.9954 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.4202 \\ 0.7443 \\ 0.9295 \\ 0.9891 \\ 0.9993 \end{array}$	$\begin{array}{c} 0.3191 \\ 0.6471 \\ 0.8826 \\ 0.9777 \\ 0.9982 \end{array}$	$\begin{array}{c} 0.2333 \\ 0.5443 \\ 0.8208 \\ 0.9590 \\ 0.9959 \end{array}$	$0.1636 \\ 0.4415 \\ 0.7447$	$\begin{array}{c} 0.1094 \\ 0.3438 \\ 0.6563 \\ 0.8906 \\ 0.9844 \end{array}$
7	0 1 2 3 4 5 6 7	0.9980	$\begin{array}{c} 0.9921 \\ 0.9997 \end{array}$	$0.9829 \\ 0.9991$	0.7514 0.9706 0.9980 0.9999 1.0000	$\begin{array}{c} 0.9556 \\ 0.9962 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.9382 \\ 0.9937 \end{array}$	$\begin{array}{c} 0.9187 \\ 0.9903 \\ 0.9993 \end{array}$	$\begin{array}{c} 0.8974 \\ 0.9860 \\ 0.9988 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8745 \\ 0.9807 \\ 0.9982 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8503 \\ 0.9743 \\ 0.9973 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.7166 \\ 0.9262 \\ 0.9879 \\ 0.9988 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.5767 \\ 0.8520 \\ 0.9667 \\ 0.9953 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.4449 \\ 0.7564 \\ 0.9294 \\ 0.9871 \\ 0.9987 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.3294 \\ 0.6471 \\ 0.8740 \\ 0.9712 \\ 0.9962 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.2338 \\ 0.5323 \\ 0.8002 \\ 0.9444 \\ 0.9910 \\ 0.9994 \end{array}$	$\begin{array}{c} 0.1586 \\ 0.4199 \\ 0.7102 \\ 0.9037 \\ 0.9812 \\ 0.9984 \end{array}$	$0.1024 \\ 0.3164 \\ 0.6083$	$\begin{array}{c} 0.0625 \\ 0.2266 \\ 0.5000 \\ 0.7734 \\ 0.9375 \\ 0.9922 \end{array}$
8	0 1 2 3 4 5 6 7 8	0.9973 0.9999	$0.9897 \\ 0.9996$	0.9777 0.9987 0.9999	0.7214 0.9619 0.9969 0.9998 1.0000	$\begin{array}{c} 0.9428 \\ 0.9942 \\ 0.9996 \end{array}$	$0.9208 \\ 0.9904 \\ 0.9993$	$\begin{array}{c} 0.8965 \\ 0.9853 \\ 0.9987 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8702 \\ 0.9789 \\ 0.9978 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8423 \\ 0.9711 \\ 0.9966 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.8131 \\ 0.9619 \\ 0.9950 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.6572 \\ 0.8948 \\ 0.9786 \\ 0.9971 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.5033 \\ 0.7969 \\ 0.9437 \\ 0.9896 \\ 0.9988 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.3671 \\ 0.6785 \\ 0.8862 \\ 0.9727 \\ 0.9958 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.2553 \\ 0.5518 \\ 0.8059 \\ 0.9420 \\ 0.9887 \\ 0.9987 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.1691 \\ 0.4278 \\ 0.7064 \\ 0.8939 \\ 0.9747 \\ 0.9964 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.1064 \\ 0.3154 \\ 0.5941 \\ 0.8263 \\ 0.9502 \\ 0.9915 \\ 0.9993 \end{array}$	$\begin{array}{c} 0.0632 \\ 0.2201 \\ 0.4770 \end{array}$	$\begin{array}{c} 0.0352 \\ 0.1445 \\ 0.3633 \\ 0.6367 \\ 0.8555 \\ 0.9648 \\ 0.9961 \end{array}$
9	0 1 2 3 4 5 6 7 8	0.9966 0.9999	$\begin{array}{c} 0.9869 \\ 0.9994 \end{array}$	0.9718 0.9980 0.9999	0.6925 0.9522 0.9955 0.9997 1.0000	$\begin{array}{c} 0.9288 \\ 0.9916 \\ 0.9994 \end{array}$	$\begin{array}{c} 0.9022 \\ 0.9862 \\ 0.9987 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8729 \\ 0.9791 \\ 0.9977 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.8417 \\ 0.9702 \\ 0.9963 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.8088 \\ 0.9595 \\ 0.9943 \\ 0.9995 \end{array}$	$\begin{array}{c} 0.7748 \\ 0.9470 \\ 0.9917 \\ 0.9991 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.5995 \\ 0.8591 \\ 0.9661 \\ 0.9944 \\ 0.9994 \end{array}$	$\begin{array}{c} 0.4362 \\ 0.7382 \\ 0.9144 \\ 0.9804 \\ 0.9969 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.3003 \\ 0.6007 \\ 0.8343 \\ 0.9511 \\ 0.9900 \\ 0.9987 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.1960 \\ 0.4628 \\ 0.7297 \\ 0.9012 \\ 0.9747 \\ 0.9957 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.1211 \\ 0.3373 \\ 0.6089 \\ 0.8283 \\ 0.9464 \\ 0.9888 \\ 0.9986 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0705 \\ 0.2318 \\ 0.4826 \\ 0.7334 \\ 0.9006 \\ 0.9750 \\ 0.9962 \\ 0.9997 \end{array}$	$0.0385 \\ 0.1495 \\ 0.3614$	$\begin{array}{c} 0.0195 \\ 0.0898 \\ 0.2539 \\ 0.5000 \\ 0.7461 \\ 0.9102 \\ 0.9805 \\ 0.9980 \end{array}$

n	$x \setminus p$	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
10	0 1 2 3 4 5 6 7 8 9	0.9957 0.9999	$0.9838 \\ 0.9991$	0.9655 0.9972 0.9999	0.6648 0.9418 0.9938 0.9996 1.0000	$\begin{array}{c} 0.9139 \\ 0.9885 \\ 0.9990 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8824 \\ 0.9812 \\ 0.9980 \end{array}$	$\begin{array}{c} 0.8483 \\ 0.9717 \\ 0.9964 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.8121 \\ 0.9599 \\ 0.9942 \\ 0.9994 \end{array}$	$\begin{array}{c} 0.7746 \\ 0.9460 \\ 0.9912 \\ 0.9990 \\ 0.9999 \end{array}$	0.7361 0.9298 0.9872 0.9984 0.9999	$\begin{array}{c} 0.5443 \\ 0.8202 \\ 0.9500 \\ 0.9901 \\ 0.9986 \\ 0.9999 \end{array}$	0.3758 0.6778 0.8791 0.9672 0.9936 0.9991 0.9999	$\begin{array}{c} 0.2440 \\ 0.5256 \\ 0.7759 \\ 0.9219 \\ 0.9803 \\ 0.9965 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.1493 \\ 0.3828 \\ 0.6496 \\ 0.8497 \\ 0.9527 \\ 0.9894 \\ 0.9984 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0860 \\ 0.2616 \\ 0.5138 \\ 0.7515 \\ 0.9051 \\ 0.9740 \\ 0.9952 \\ 0.9995 \end{array}$	$\begin{array}{c} 0.0464 \\ 0.1673 \\ 0.3823 \\ 0.6331 \\ 0.8338 \\ 0.9452 \\ 0.9877 \\ 0.9983 \\ 0.9999 \end{array}$	0.0233 0.0996 0.2660 0.5044 0.7384 0.8980	0.0107 0.0547 0.1719 0.3770 0.6230 0.8281 0.9453 0.9893 0.9990
11	0 1 2 3 4 5 6 7 8 9 10	0.9948 0.9998	$0.9805 \\ 0.9988$	0.9587 0.9963 0.9998	0.6382 0.9308 0.9917 0.9993 1.0000	$\begin{array}{c} 0.8981 \\ 0.9848 \\ 0.9984 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.8618 \\ 0.9752 \\ 0.9970 \end{array}$	$\begin{array}{c} 0.8228 \\ 0.9630 \\ 0.9947 \\ 0.9995 \end{array}$	$\begin{array}{c} 0.7819 \\ 0.9481 \\ 0.9915 \\ 0.9990 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7399 \\ 0.9305 \\ 0.9871 \\ 0.9983 \\ 0.9998 \end{array}$	0.6974 0.9104 0.9815 0.9972 0.9997	0.4922 0.7788 0.9306 0.9841 0.9973 0.9997	0.3221 0.6174 0.8389 0.9496 0.9883 0.9980 0.9998	$\begin{array}{c} 0.1971 \\ 0.4552 \\ 0.7133 \\ 0.8854 \\ 0.9657 \\ 0.9924 \\ 0.9988 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.1130 \\ 0.3127 \\ 0.5696 \\ 0.7897 \\ 0.9218 \\ 0.9784 \\ 0.9957 \\ 0.9994 \end{array}$	$\begin{array}{c} 0.0606 \\ 0.2001 \\ 0.4256 \\ 0.6683 \\ 0.8513 \\ 0.9499 \\ 0.9878 \\ 0.9980 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.0302 \\ 0.1189 \\ 0.2963 \\ 0.5328 \\ 0.7535 \\ 0.9006 \\ 0.9707 \\ 0.9941 \\ 0.9993 \end{array}$	0.0139 0.0652 0.1911 0.3971 0.6331 0.8262 0.9390 0.9852 0.9978 0.9998	$\begin{array}{c} 0.0059 \\ 0.0327 \\ 0.1133 \\ 0.2744 \\ 0.5000 \\ 0.7256 \\ 0.8867 \\ 0.9673 \\ 0.9941 \end{array}$
12	0 1 2 3 4 5 6 7 8 9 10 11	0.9938 0.9998	$\begin{array}{c} 0.9769 \\ 0.9985 \\ 0.9999 \end{array}$	0.9514 0.9952 0.9997	0.6127 0.9191 0.9893 0.9990 0.9999 1.0000	$\begin{array}{c} 0.8816 \\ 0.9804 \\ 0.9978 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.8405 \\ 0.9684 \\ 0.9957 \end{array}$	0.7967 0.9532 0.9925 0.9991 0.9999	0.7513 0.9348 0.9880 0.9984 0.9998	0.7052 0.9134 0.9820 0.9973 0.9997	0.6590 0.8891 0.9744 0.9957 0.9995 0.9999	0.4435 0.7358 0.9078 0.9761 0.9954 0.9993 0.9999	0.2749 0.5583 0.7946 0.9274 0.9806 0.9961 0.9994 0.9999	$\begin{array}{c} 0.1584 \\ 0.3907 \\ 0.6488 \\ 0.8424 \\ 0.9456 \\ 0.9857 \\ 0.9972 \\ 0.9996 \end{array}$	0.0850 0.2528 0.4925 0.7237 0.8822 0.9614 0.9905 0.9983 0.9998	$\begin{array}{c} 0.0424 \\ 0.1513 \\ 0.3467 \\ 0.5833 \\ 0.7873 \\ 0.9154 \\ 0.9745 \\ 0.9944 \\ 0.9992 \\ 0.9999 \end{array}$	0.0196 0.0834 0.2253 0.4382 0.6652 0.8418 0.9427 0.9847 0.9972	0.0083 0.0421 0.1345 0.3044 0.5269 0.7393 0.8883 0.9644 0.9921 0.9989 0.9999	0.0032 0.0193 0.0730 0.1938 0.3872 0.6128 0.8062 0.9270 0.9807 0.9968
13	0 1 2 3 4 5 6 7 8 9 10 11 12 13	0.9928 0.9997	$\begin{array}{c} 0.9730 \\ 0.9980 \\ 0.9999 \end{array}$	0.9436 0.9938 0.9995	0.5882 0.9068 0.9865 0.9986 0.9999 1.0000	$\begin{array}{c} 0.8646 \\ 0.9755 \\ 0.9969 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.8186 \\ 0.9608 \\ 0.9940 \\ 0.9993 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7702 \\ 0.9422 \\ 0.9897 \\ 0.9987 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7206 \\ 0.9201 \\ 0.9837 \\ 0.9976 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.6707 \\ 0.8946 \\ 0.9758 \\ 0.9959 \\ 0.9995 \\ 0.9999 \end{array}$	0.6213 0.8661 0.9658 0.9935 0.9991 0.9999	0.3983 0.6920 0.8820 0.9658 0.9925 0.9987 0.9998	0.2336 0.5017 0.7473 0.9009 0.9700 0.9930 0.9988 0.9998	$\begin{array}{c} 0.1267 \\ 0.3326 \\ 0.5843 \\ 0.7940 \\ 0.9198 \\ 0.9757 \\ 0.9944 \\ 0.9990 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0637 \\ 0.2025 \\ 0.4206 \\ 0.6543 \\ 0.8346 \\ 0.9376 \\ 0.9818 \\ 0.9960 \\ 0.9993 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0296 \\ 0.1132 \\ 0.2783 \\ 0.5005 \\ 0.7159 \\ 0.8705 \\ 0.9538 \\ 0.9874 \\ 0.9975 \\ 0.9997 \\ 1.0000 \end{array}$	$\begin{array}{c} 0.0126 \\ 0.0579 \\ 0.1686 \\ 0.3530 \\ 0.5744 \\ 0.7712 \\ 0.9023 \\ 0.9679 \\ 0.9922 \\ 0.9987 \\ 0.9999 \end{array}$	0.0049 0.0269 0.0929 0.2279 0.4268 0.6437 0.8212 0.9302 0.9797 0.9959	0.0017 0.0112 0.0461 0.1334 0.2905 0.5000 0.7095 0.8666 0.9539 0.9888
14	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	0.9916 0.9997	$\begin{array}{c} 0.9690 \\ 0.9975 \\ 0.9999 \end{array}$	0.9355 0.9923 0.9994	0.5647 0.8941 0.9833 0.9981 0.9998 1.0000	$\begin{array}{c} 0.8470 \\ 0.9699 \\ 0.9958 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.7963 \\ 0.9522 \\ 0.9920 \\ 0.9990 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7436 \\ 0.9302 \\ 0.9864 \\ 0.9980 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.6900 \\ 0.9042 \\ 0.9786 \\ 0.9965 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.6368 \\ 0.8745 \\ 0.9685 \\ 0.9941 \\ 0.9992 \\ 0.9999 \end{array}$	0.5846 0.8416 0.9559 0.9908 0.9985 0.9998	0.3567 0.6479 0.8535 0.9533 0.9885 0.9978 0.9997	$\begin{array}{c} 0.1979 \\ 0.4481 \\ 0.6982 \\ 0.8702 \\ 0.9561 \\ 0.9884 \\ 0.9976 \\ 0.9996 \end{array}$	$\begin{array}{c} 0.1010 \\ 0.2811 \\ 0.5213 \\ 0.7415 \\ 0.8883 \\ 0.9617 \\ 0.9897 \\ 0.9978 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0475 \\ 0.1608 \\ 0.3552 \\ 0.5842 \\ 0.7805 \\ 0.9067 \\ 0.9685 \\ 0.9917 \\ 0.9983 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.0205 \\ 0.0839 \\ 0.2205 \\ 0.4227 \\ 0.6405 \\ 0.8164 \\ 0.9247 \\ 0.9757 \\ 0.9940 \\ 0.9989 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0081 \\ 0.0398 \\ 0.1243 \\ 0.2793 \\ 0.4859 \\ 0.6925 \\ 0.8499 \\ 0.9417 \\ 0.9825 \\ 0.9961 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0029 \\ 0.0170 \\ 0.0632 \\ 0.1672 \\ 0.3373 \\ 0.5461 \\ 0.7414 \end{array}$	$\begin{array}{c} 0.0009 \\ 0.0065 \\ 0.0287 \\ 0.0898 \\ 0.2120 \\ 0.3953 \\ 0.6047 \\ 0.7880 \\ 0.9102 \\ 0.9713 \\ 0.9935 \\ 0.9991 \end{array}$
15	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	0.9904 0.9996	$\begin{array}{c} 0.9647 \\ 0.9970 \\ 0.9998 \end{array}$	0.9270 0.9906 0.9992 0.9999	0.5421 0.8809 0.9797 0.9976 0.9998 1.0000	$\begin{array}{c} 0.8290 \\ 0.9638 \\ 0.9945 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7738 \\ 0.9429 \\ 0.9896 \\ 0.9986 \end{array}$	$\begin{array}{c} 0.7168 \\ 0.9171 \\ 0.9825 \\ 0.9972 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.6597 \\ 0.8870 \\ 0.9727 \\ 0.9950 \\ 0.9993 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.6035 \\ 0.8531 \\ 0.9601 \\ 0.9918 \\ 0.9987 \\ 0.9998 \end{array}$	0.5490 0.8159 0.9444 0.9873 0.9978 0.9997	$\begin{array}{c} 0.3186 \\ 0.6042 \\ 0.8227 \\ 0.9383 \\ 0.9832 \\ 0.9964 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.1671 \\ 0.3980 \\ 0.6482 \\ 0.8358 \\ 0.9389 \\ 0.9819 \\ 0.9958 \\ 0.9992 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0802 \\ 0.2361 \\ 0.4613 \\ 0.6865 \\ 0.8516 \\ 0.9434 \\ 0.9827 \\ 0.9958 \\ 0.9992 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0353 \\ 0.1268 \\ 0.2969 \\ 0.5155 \\ 0.7216 \\ 0.8689 \\ 0.9500 \\ 0.9848 \\ 0.9963 \\ 0.9999 \\ \end{array}$	$\begin{array}{c} 0.0142 \\ 0.0617 \\ 0.1727 \\ 0.3519 \\ 0.5643 \\ 0.7548 \\ 0.8868 \\ 0.9578 \\ 0.9876 \\ 0.9972 \\ 0.9995 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0052 \\ 0.0271 \\ 0.0905 \\ 0.2173 \\ 0.4032 \\ 0.6098 \\ 0.7869 \\ 0.9050 \\ 0.9662 \\ 0.9907 \\ 0.9981 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0017 \\ 0.0107 \\ 0.0424 \\ 0.1204 \\ 0.2608 \\ 0.4522 \\ 0.6535 \\ 0.8182 \\ 0.9231 \\ 0.9745 \\ 0.9989 \\ 0.9999 \end{array}$	0.0005 0.0037 0.0176 0.0592 0.1509 0.3036 0.5000 0.6964 0.8491 0.9408 0.9824 0.9963

n	$x \setminus p$	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
10	5 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.9891 0.9995	$\begin{array}{c} 0.9601 \\ 0.9963 \\ 0.9998 \end{array}$	0.9182 0.9887 0.9989 0.9999	0.5204 0.8673 0.9758 0.9968 0.9997 1.0000	$\begin{array}{c} 0.8108 \\ 0.9571 \\ 0.9930 \\ 0.9991 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7511 \\ 0.9327 \\ 0.9868 \\ 0.9981 \\ 0.9998 \end{array}$	0.6902 0.9031 0.9779 0.9962 0.9995 0.9999	0.6299 0.8689 0.9658 0.9932 0.9990 0.9999	$\begin{array}{c} 0.5711 \\ 0.8306 \\ 0.9504 \\ 0.9889 \\ 0.9981 \\ 0.9997 \end{array}$	0.5147 0.7892 0.9316 0.9830 0.9967 0.9995 0.9999	0.2839 0.5614 0.7899 0.9209 0.9765 0.9944 0.9989 0.9998	0.1407 0.3518 0.5981 0.7982 0.9183 0.9733 0.9930 0.9985 0.9998	$\begin{array}{c} 0.0635 \\ 0.1971 \\ 0.4050 \\ 0.6302 \\ 0.8103 \\ 0.9204 \\ 0.9729 \\ 0.9925 \\ 0.9984 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0261 \\ 0.0994 \\ 0.2459 \\ 0.4499 \\ 0.6598 \\ 0.8247 \\ 0.9256 \\ 0.9743 \\ 0.9929 \\ 0.9984 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0098 \\ 0.0451 \\ 0.1339 \\ 0.2892 \\ 0.4900 \\ 0.6881 \\ 0.8406 \\ 0.9329 \\ 0.9771 \\ 0.9938 \\ 0.9987 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.0033 \\ 0.0183 \\ 0.0651 \\ 0.1666 \\ 0.3288 \\ 0.5272 \\ 0.7161 \\ 0.8577 \\ 0.9417 \\ 0.9809 \\ 0.9951 \\ 0.9999 \\ \end{array}$	$\begin{array}{c} 0.0010 \\ 0.0066 \\ 0.0281 \\ 0.0853 \\ 0.1976 \\ 0.3660 \\ 0.5629 \\ 0.7441 \\ 0.8759 \\ 0.9514 \\ 0.9851 \\ 0.9965 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0003 \\ 0.0021 \\ 0.0106 \\ 0.0384 \\ 0.1051 \\ 0.2272 \\ 0.4018 \\ 0.5982 \\ 0.7728 \\ 0.8949 \\ 0.9616 \\ 0.9894 \\ 0.9979 \end{array}$
1	7 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	0.9877 0.9994	0.9554 0.9956 0.9997	0.9091 0.9866 0.9986 0.9999	0.4996 0.8535 0.9714 0.9960 0.9996 1.0000	$\begin{array}{c} 0.7922 \\ 0.9497 \\ 0.9912 \\ 0.9988 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.7283 \\ 0.9218 \\ 0.9836 \\ 0.9974 \\ 0.9997 \end{array}$	0.6638 0.8882 0.9727 0.9949 0.9993 0.9999	$\begin{array}{c} 0.6005 \\ 0.8497 \\ 0.9581 \\ 0.9911 \\ 0.9985 \\ 0.9998 \end{array}$	0.5396 0.8073 0.9397 0.9855 0.9973 0.9996	0.4818 0.7618 0.9174 0.9779 0.9953 0.9992 0.9999	0.2525 0.5198 0.7556 0.9013 0.9681 0.9917 0.9983 0.9997	$\begin{array}{c} 0.1182 \\ 0.3096 \\ 0.5489 \\ 0.7582 \\ 0.8943 \\ 0.9623 \\ 0.9891 \\ 0.9974 \\ 0.9995 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0501 \\ 0.1637 \\ 0.3530 \\ 0.5739 \\ 0.7653 \\ 0.8929 \\ 0.9598 \\ 0.9876 \\ 0.9969 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0193 \\ 0.0774 \\ 0.2019 \\ 0.3887 \\ 0.5968 \\ 0.7752 \\ 0.8954 \\ 0.9597 \\ 0.9873 \\ 0.9968 \\ 0.9993 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0067 \\ 0.0327 \\ 0.1028 \\ 0.2348 \\ 0.4197 \\ 0.6188 \\ 0.7872 \\ 0.9006 \\ 0.9617 \\ 0.9880 \\ 0.9970 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0021 \\ 0.0123 \\ 0.0464 \\ 0.1260 \\ 0.2639 \\ 0.4478 \\ 0.6405 \\ 0.8011 \\ 0.9081 \\ 0.9952 \\ 0.9894 \\ 0.9975 \\ 0.9999 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0006 \\ 0.0041 \\ 0.0184 \\ 0.0596 \\ 0.1471 \\ 0.2902 \\ 0.4743 \\ 0.6626 \end{array}$	0.0001 0.0012 0.0064 0.0245 0.0717 0.1662 0.3145 0.5000 0.6855 0.8338 0.9283 0.9755 0.9936
1:	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	0.9862 0.9993	$0.9505 \\ 0.9948 \\ 0.9996$	0.8997 0.9843 0.9982 0.9998	0.4796 0.8393 0.9667 0.9950 0.9994 1.0000	$\begin{array}{c} 0.7735 \\ 0.9419 \\ 0.9891 \\ 0.9985 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.7055 \\ 0.9102 \\ 0.9799 \\ 0.9966 \\ 0.9995 \end{array}$	0.6378 0.8725 0.9667 0.9933 0.9990 0.9999	$\begin{array}{c} 0.5719 \\ 0.8298 \\ 0.9494 \\ 0.9884 \\ 0.9979 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.5091 \\ 0.7832 \\ 0.9277 \\ 0.9814 \\ 0.9962 \\ 0.9994 \\ 0.9999 \end{array}$	0.4503 0.7338 0.9018 0.9718	$\begin{array}{c} 0.2241 \\ 0.4797 \\ 0.7202 \\ 0.8794 \\ 0.9581 \\ 0.9882 \\ 0.9973 \\ 0.9995 \\ 0.9999 \end{array}$	0.0991 0.2713 0.5010 0.7164 0.8671 0.9487 0.9837 0.9957 0.9991 0.9998	$\begin{array}{c} 0.0395 \\ 0.1353 \\ 0.3057 \\ 0.5187 \\ 0.7175 \\ 0.8610 \\ 0.9431 \\ 0.9807 \\ 0.9946 \\ 0.9988 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.0142 \\ 0.0600 \\ 0.1646 \\ 0.3327 \\ 0.5344 \\ 0.7217 \\ 0.8593 \\ 0.9404 \\ 0.9790 \\ 0.9939 \\ 0.9986 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0046 \\ 0.0236 \\ 0.0783 \\ 0.1886 \\ 0.3550 \\ 0.5491 \\ 0.7283 \\ 0.8609 \\ 0.9403 \\ 0.9788 \\ 0.9938 \\ 0.9986 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0013 \\ 0.0082 \\ 0.0328 \\ 0.0942 \\ 0.2088 \\ 0.3743 \\ 0.5634 \\ 0.7368 \\ 0.8653 \\ 0.9424 \\ 0.9797 \\ 0.9942 \\ 0.9987 \\ 0.9998 \\ 1.0000 \end{array}$	$\begin{array}{c} 0.0003 \\ 0.0025 \\ 0.0120 \\ 0.0411 \\ 0.1077 \\ 0.2258 \\ 0.3915 \\ 0.5778 \\ 0.7473 \\ 0.8720 \\ 0.9463 \\ 0.9817 \\ 0.9951 \\ 0.9999 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0001 \\ 0.0007 \\ 0.0038 \\ 0.0154 \\ 0.0481 \\ 0.1189 \\ 0.2403 \\ 0.5927 \\ 0.7597 \\ 0.8811 \\ 0.9519 \\ 0.9946 \\ 0.9962 \\ 0.9993 \\ 0.9999 \\ \end{array}$
19	17 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	0.9847 0.9991	0.9454 0.9939 0.9995	0.8900 0.9817 0.9978 0.9998	0.4604 0.8249 0.9616 0.9939 0.9999 1.0000	$\begin{array}{c} 0.7547 \\ 0.9335 \\ 0.9868 \\ 0.9980 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.6829 \\ 0.8979 \\ 0.9757 \\ 0.9956 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.6121 \\ 0.8561 \\ 0.9602 \\ 0.9915 \\ 0.9986 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.5440 \\ 0.8092 \\ 0.9398 \\ 0.9853 \\ 0.9971 \\ 0.9996 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.4798 \\ 0.7585 \\ 0.9147 \\ 0.9765 \\ 0.9949 \\ 0.9991 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.4203 \\ 0.7054 \\ 0.8850 \\ 0.9648 \end{array}$	$\begin{array}{c} 0.1985 \\ 0.4413 \\ 0.6841 \\ 0.8556 \\ 0.9463 \\ 0.9837 \\ 0.9959 \\ 0.9992 \\ 0.9999 \end{array}$	0.0829 0.2369 0.4551 0.6733 0.8369 0.9324 0.9767 0.9933 0.9984 0.9997	$\begin{array}{c} 0.0310 \\ 0.1113 \\ 0.2631 \\ 0.4654 \\ 0.6678 \\ 0.8251 \\ 0.9225 \\ 0.9713 \\ 0.9911 \\ 0.9977 \\ 0.9995 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0104 \\ 0.0462 \\ 0.1332 \\ 0.2822 \\ 0.4739 \\ 0.6655 \\ 0.8180 \\ 0.9161 \\ 0.9674 \\ 0.9895 \\ 0.9972 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0031 \\ 0.0170 \\ 0.0591 \\ 0.1500 \\ 0.2968 \\ 0.4812 \\ 0.6656 \\ 0.8145 \\ 0.9125 \\ 0.9653 \\ 0.9886 \\ 0.9969 \\ 0.9993 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0008 \\ 0.0055 \\ 0.0230 \\ 0.0696 \\ 0.1629 \\ 0.3081 \\ 0.4878 \\ 0.6675 \\ 0.8139 \\ 0.9115 \\ 0.9648 \\ 0.9884 \\ 0.9969 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0002 \\ 0.0015 \\ 0.0077 \\ 0.0280 \\ 0.0777 \\ 0.1727 \\ 0.3169 \\ 0.4940 \\ 0.6710 \\ 0.8159 \\ 0.9129 \\ 0.9658 \\ 0.9891 \\ 0.9995 \\ 0.9999 \\ 0.9999 \end{array}$	0.0000 0.0004 0.0022 0.0096 0.0318 0.1796 0.3238 0.5000 0.6762 0.8204 0.9165 0.9682 0.9904
20	0 0 1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18	0.9831 0.9990	$\begin{array}{c} 0.9401 \\ 0.9929 \\ 0.9994 \end{array}$	0.8802 0.9790 0.9973 0.9997	0.4420 0.8103 0.9561 0.9926 0.9990 1.0000	$\begin{array}{c} 0.7358 \\ 0.9245 \\ 0.9841 \\ 0.9974 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.6605 \\ 0.8850 \\ 0.9710 \\ 0.9944 \\ 0.9991 \\ 0.9999 \end{array}$	0.5869 0.8390 0.9529 0.9893 0.9981 0.9997	$\begin{array}{c} 0.5169 \\ 0.7879 \\ 0.9294 \\ 0.9817 \\ 0.9962 \\ 0.9994 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.4516 \\ 0.7334 \\ 0.9007 \\ 0.9710 \\ 0.9932 \\ 0.9987 \\ 0.9998 \end{array}$	0.3917 0.6769 0.8670 0.9568 0.9887 0.9976 0.9996 0.9999	$\begin{array}{c} 0.1756 \\ 0.4049 \\ 0.6477 \\ 0.8298 \\ 0.9327 \\ 0.9781 \\ 0.9941 \\ 0.9987 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.0692 \\ 0.2061 \\ 0.4114 \\ 0.6296 \\ 0.8042 \\ 0.9133 \\ 0.9679 \\ 0.9900 \\ 0.9974 \\ 0.9999 \end{array}$	$\begin{array}{c} 0.0243 \\ 0.0913 \\ 0.2252 \\ 0.4148 \\ 0.6172 \\ 0.7858 \\ 0.8982 \\ 0.9591 \\ 0.9861 \\ 0.9991 \\ 0.9998 \end{array}$	$\begin{array}{c} 0.0076 \\ 0.0355 \\ 0.1071 \\ 0.2375 \\ 0.4164 \\ 0.6080 \\ 0.7723 \\ 0.8867 \\ 0.9520 \\ 0.9829 \\ 0.9949 \\ 0.9987 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0021 \\ 0.0121 \\ 0.0444 \\ 0.1182 \\ 0.2454 \\ 0.4166 \\ 0.6010 \\ 0.7624 \\ 0.8782 \\ 0.9468 \\ 0.9804 \\ 0.9985 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0005 \\ 0.0036 \\ 0.0160 \\ 0.0510 \\ 0.1256 \\ 0.2500 \\ 0.4159 \\ 0.5956 \\ 0.7553 \\ 0.8725 \\ 0.9435 \\ 0.9790 \\ 0.9935 \\ 0.9984 \\ 0.9997 \end{array}$	$\begin{array}{c} 0.0001 \\ 0.0009 \\ 0.0049 \\ 0.0189 \\ 0.0553 \\ 0.1299 \\ 0.2520 \\ 0.4143 \\ 0.5914 \\ 0.7507 \\ 0.8692 \\ 0.9786 \\ 0.9985 \\ 0.9985 \\ 0.9997 \end{array}$	0.0000 0.0002 0.0013 0.0059 0.0207 0.0577 0.1316 0.2517 0.4119 0.5881 0.7483 0.8684 0.9423 0.9793

Tabela 2: Função de distribuição de Poisson $F_X(x) = \sum_{k=0}^x \frac{e^{-\lambda} \lambda^k}{k!}$

$$F_X(x) = \sum_{k=0}^{x} \frac{e^{-\lambda} \lambda^k}{k!}$$

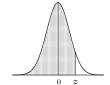
λ	x	0	1	2	3	4	5	6	7	8	9
0.01		0.9900	1.0000								
0.02		0.9802	0.9998	1.0000							
0.03		0.9704	0.9996	1.0000							
0.04		0.9608	0.9992	1.0000							
0.05		0.9512	0.9988	1.0000							
0.06		0.9418	0.9983	1.0000							
0.07		0.9324	0.9977	0.9999	1.0000						
0.08		0.9231 0.9139	$0.9970 \\ 0.9962$	0.9999 0.9999	1.0000 1.0000						
0.10		0.9048	0.9953	0.9998	1.0000						
0.15		0.8607	0.9898	0.9995	1.0000						
0.20		0.8187	0.9825	0.9989	0.9999	1.0000					
0.25		0.7788	0.9735	0.9978	0.9999	1.0000					
0.30		0.7408	0.9631	0.9964	0.9997	1.0000					
$0.35 \\ 0.40$		$0.7047 \\ 0.6703$	0.9513 0.9384	$0.9945 \\ 0.9921$	0.9995 0.9992	1.0000 0.9999	1.0000				
0.45		0.6376	0.9246	0.9891	0.9988	0.9999	1.0000				
0.50		0.6065	0.9098	0.9856	0.9982	0.9998	1.0000				
0.55		0.5769	0.8943	0.9815	0.9975	0.9997	1.0000				
0.60		0.5488	0.8781	0.9769	0.9966	0.9996	1.0000				
0.65		0.5220	0.8614	0.9717	0.9956	0.9994	0.9999	1.0000			
0.70		0.4966	0.8442	0.9659	0.9942	0.9992	0.9999	1.0000			
$0.75 \\ 0.80$		0.4724 0.4493	0.8266 0.8088	0.9595 0.9526	0.9927 0.9909	0.9989 0.9986	0.9999 0.9998	1.0000 1.0000			
0.85		0.4493 0.4274	0.7907	0.9320 0.9451	0.9889	0.9982	0.9997	1.0000			
0.90		0.4066	0.7725	0.9371	0.9865	0.9977	0.9997	1.0000			
0.95		0.3867	0.7541	0.9287	0.9839	0.9971	0.9995	0.9999	1.0000		
1.00		0.3679	0.7358	0.9197	0.9810	0.9963	0.9994	0.9999	1.0000		
1.10		0.3329	0.6990	0.9004	0.9743	0.9946	0.9990	0.9999	1.0000		
1.20		0.3012	0.6626	0.8795	0.9662	0.9923	0.9985	0.9997	1.0000	1 0000	
1.30 1.40		$0.2725 \\ 0.2466$	$0.6268 \\ 0.5918$	$0.8571 \\ 0.8335$	0.9569 0.9463	0.9893 0.9857	$0.9978 \\ 0.9968$	0.9996 0.9994	0.9999 0.9999	1.0000 1.0000	
1.50		0.2400 0.2231	0.5578	0.8088	0.9344	0.9814	0.9955	0.9991	0.9998	1.0000	
1.60		0.2019	0.5249	0.7834	0.9212	0.9763	0.9940	0.9987	0.9997	1.0000	
1.70		0.1827	0.4932	0.7572	0.9068	0.9704	0.9920	0.9981	0.9996	0.9999	1.0000
1.80		0.1653	0.4628	0.7306	0.8913	0.9636	0.9896	0.9974	0.9994	0.9999	1.0000
1.90		0.1496	0.4337	0.7037	0.8747	0.9559	0.9868	0.9966	0.9992	0.9998	1.0000
2.00	0	$0.1353 \\ 0.1108$	0.4060	0.6767	0.8571	0.9473	0.9834	0.9955	0.9989	0.9998	1.0000
2.20	0 10	1.0000	0.3546	0.6227	0.8194	0.9275	0.9751	0.9925	0.9980	0.9995	0.9999
2.40	0	0.0907	0.3084	0.5697	0.7787	0.9041	0.9643	0.9884	0.9967	0.9991	0.9998
2.60	10 0	$1.0000 \\ 0.0743$	0.2674	0.5184	0.7360	0.8774	0.9510	0.9828	0.9947	0.9985	0.9996
	10	0.9999	1.0000								
2.80	0 10	$0.0608 \\ 0.9998$	0.2311 1.0000	0.4695	0.6919	0.8477	0.9349	0.9756	0.9919	0.9976	0.9993
2.00		0.0409		0.4929	0.6479	0.8153	0.0161	0.0665	0.0001	0.0062	0.0000
3.00	0 10	0.0498 0.9997	0.1991 0.9999	0.4232 1.0000	0.6472		0.9161	0.9665	0.9881	0.9962	0.9989
3.20	0 10	$0.0408 \\ 0.9995$	$0.1712 \\ 0.9999$	$0.3799 \\ 1.0000$	0.6025	0.7806	0.8946	0.9554	0.9832	0.9943	0.9982
3.40	0	0.0334	0.1468	0.3397	0.5584	0.7442	0.8705	0.9421	0.9769	0.9917	0.9973
3.60	10 0	$0.9992 \\ 0.0273$	$0.9998 \\ 0.1257$	$0.9999 \\ 0.3027$	$1.0000 \\ 0.5152$	0.7064	0.8441	0.9267	0.9692	0.9883	0.9960
3.80	10 0	0.9987 0.0224	0.9996 0.1074	0.9999 0.2689	$1.0000 \\ 0.4735$	0.6678	0.8156	0.9091	0.9599	0.9840	0.9942
0.00	10	0.9981	0.9994	0.9998	1.0000	0.0010	0.0100	0.0001	0.0000	0.0010	0.0012
4.00	0	0.0183	0.0916	0.2381	0.4335	0.6288	0.7851	0.8893	0.9489	0.9786	0.9919
	10	0.9972	0.9991	0.9997	0.9999	1.0000					
4.20	0 10	$0.0150 \\ 0.9959$	$0.0780 \\ 0.9986$	$0.2102 \\ 0.9996$	$0.3954 \\ 0.9999$	0.5898 1.0000	0.7531	0.8675	0.9361	0.9721	0.9889
4.40	0	0.0123	0.0663	0.1851	0.3594	0.5512	0.7199	0.8436	0.9214	0.9642	0.9851
1.60	10	0.9943	0.9980	0.9993	0.9998	0.9999	1.0000	0.0100	0.0040	0.0540	0.000
4.60	0 10	$0.0101 \\ 0.9922$	$0.0563 \\ 0.9971$	$0.1626 \\ 0.9990$	0.3257 0.9997	0.5132 0.9999	0.6858 1.0000	0.8180	0.9049	0.9549	0.9805
4.80	0	0.0082	0.0477	0.1425	0.2942	0.4763	0.6510	0.7908	0.8867	0.9442	0.9749
	10	0.9896	0.9960	0.9986	0.9995	0.9999	1.0000				
5.00	0	0.0067	0.0404	0.1247	0.2650	0.4405	0.6160	0.7622	0.8666	0.9319	0.9682
5.20	10 0	$0.9863 \\ 0.0055$	$0.9945 \\ 0.0342$	$0.9980 \\ 0.1088$	0.9993 0.2381	$0.9998 \\ 0.4061$	0.9999 0.5809	$1.0000 \\ 0.7324$	0.8449	0.9181	0.9603
J.2U	10	0.0055 0.9823	0.0342 0.9927	0.1088 0.9972	0.2381 0.9990	0.4061 0.9997	0.5809 0.9999	1.0000	0.0449	0.9101	0.9003
5.40	0	0.0045	0.0289	0.0948	0.2133	0.3733	0.5461	0.7017	0.8217	0.9027	0.9512
	10	0.9775	0.9904	0.9962	0.9986	0.9995	0.9998	0.9999	1.0000		
5.60	0	0.0037	0.0244	0.0824	0.1906	0.3422	0.5119	0.6703	0.7970	0.8857	0.9409
5.00	10	0.9718	0.9875	0.9949	0.9980	0.9993	0.9998	0.9999	1.0000		
	l	0 0 0					0.4702	0.6994	0.7710	0.0070	0.0000
5.80	0 10	$0.0030 \\ 0.9651$	$0.0206 \\ 0.9841$	$0.0715 \\ 0.9932$	$0.1700 \\ 0.9973$	0.3127 0.9990	0.4783 0.9996	0.6384 0.9999	0.7710 1.0000	0.8672	0.929

6.00				2	3	4	5	6	7	8	9
	0	0.0025	0.0174	0.0620	0.1512	0.2851	0.4457	0.6063	0.7440	0.8472	0.9161
	10	0.9574	0.9799	0.9912	0.9964	0.9986	0.9995	0.9998	0.9999	1.0000	
6.20	0 10	$0.0020 \\ 0.9486$	$0.0146 \\ 0.9750$	$0.0536 \\ 0.9887$	$0.1342 \\ 0.9952$	0.2592 0.9981	0.4141 0.9993	$0.5742 \\ 0.9997$	$0.7160 \\ 0.9999$	0.8259 1.0000	0.9016
6.40	0	0.0017	0.0123	0.0463	0.1189	0.2351	0.3837	0.5423	0.6873	0.8033	0.8858
	10	0.9386	0.9693	0.9857	0.9937	0.9974	0.9990	0.9996	0.9999	1.0000	
6.60	0 10	0.0014 0.9274	$0.0103 \\ 0.9627$	$0.0400 \\ 0.9821$	$0.1052 \\ 0.9920$	0.2127 0.9966	0.3547 0.9986	$0.5108 \\ 0.9995$	$0.6581 \\ 0.9998$	$0.7796 \\ 0.9999$	0.8686 1.0000
6.80	0	0.0011	0.0087	0.0344	0.0928	0.1920	0.3270	0.4799	0.6285	0.7548	0.8502
	10	0.9151	0.9552	0.9779	0.9898	0.9956	0.9982	0.9993	0.9997	0.9999	1.0000
7.00	0	0.0009	0.0073	0.0296	0.0818	0.1730	0.3007	0.4497	0.5987	0.7291	0.8305
7.00	10	0.9015	0.9467	0.9730	0.9872	0.9943	0.9976	0.9990	0.9996	0.9999	1.0000
7.20	0 10	$0.0007 \\ 0.8867$	$0.0061 \\ 0.9371$	$0.0255 \\ 0.9673$	0.0719 0.9841	$0.1555 \\ 0.9927$	$0.2759 \\ 0.9969$	$0.4204 \\ 0.9987$	$0.5689 \\ 0.9995$	0.7027 0.9998	$0.8096 \\ 0.9999$
	20	1.0000									
7.40	0 10	$0.0006 \\ 0.8707$	$0.0051 \\ 0.9265$	0.0219 0.9609	$0.0632 \\ 0.9805$	$0.1395 \\ 0.9908$	$0.2526 \\ 0.9959$	$0.3920 \\ 0.9983$	0.5393 0.9993	0.6757 0.9997	0.7877 0.9999
	20	1.0000	0.9200	0.5005	0.3603	0.9900	0.5555	0.9909	0.5555	0.5551	0.5555
7.60	0	0.0005	0.0043	0.0188	0.0554	0.1249	0.2307	0.3646	0.5100	0.6482	0.7649
	10 20	0.8535 1.0000	0.9148	0.9536	0.9762	0.9886	0.9948	0.9978	0.9991	0.9996	0.9999
7.80	0	0.0004	0.0036	0.0161	0.0485	0.1117	0.2103	0.3384	0.4812	0.6204	0.7411
	10	0.8352	0.9020	0.9454	0.9714	0.9859	0.9934	0.9971	0.9988	0.9995	0.9998
	20	0.9999	1.0000								
8.00	0	0.0003	0.0030	0.0138	0.0424	0.0996	0.1912	0.3134	0.4530	0.5925	0.7166
	10 20	0.8159 0.9999	0.8881 1.0000	0.9362	0.9658	0.9827	0.9918	0.9963	0.9984	0.9993	0.9997
8.20	0	0.0003	0.0025	0.0118	0.0370	0.0887	0.1736	0.2896	0.4254	0.5647	0.6915
	10	0.7955	0.8731	0.9261	0.9595	0.9791	0.9898	0.9953	0.9979	0.9991	0.9997
8.40	20 0	0.9999 0.0002	$1.0000 \\ 0.0021$	0.0100	0.0323	0.0789	0.1573	0.2670	0.3987	0.5369	0.6659
0.10	10	0.7743	0.8571	0.9150	0.9524	0.9749	0.9875	0.9941	0.9973	0.9989	0.9995
0.00	20	0.9998	0.9999	1.0000	0.0001	0.0501	0.1.400	0.0455	0.0500	0.5004	0.0400
8.60	0 10	$0.0002 \\ 0.7522$	0.0018 0.8400	$0.0086 \\ 0.9029$	$0.0281 \\ 0.9445$	$0.0701 \\ 0.9701$	0.1422 0.9848	0.2457 0.9926	$0.3728 \\ 0.9966$	$0.5094 \\ 0.9985$	$0.6400 \\ 0.9994$
	20	0.9998	0.9999	1.0000							
8.80	0	0.0002	0.0015 0.8220	0.0073	0.0244	0.0621	0.1284	0.2256 0.9909	0.3478	0.4823	0.6137
	10 20	$0.7294 \\ 0.9997$	0.8220 0.9999	0.8898 1.0000	0.9358	0.9647	0.9816	0.9909	0.9957	0.9981	0.9992
0.00	0	0.0001	0.0019	0.0069	0.0010	0.0550	0.1157	0.2069	0.3239	0.4557	0 5074
9.00	0 10	0.0001 0.7060	0.0012 0.8030	$0.0062 \\ 0.8758$	0.0212 0.9261	$0.0550 \\ 0.9585$	0.1157 0.9780	$0.2068 \\ 0.9889$	0.3239 0.9947	0.4557 0.9976	0.5874 0.9989
	20	0.9996	0.9998	0.9999	1.0000						
9.20	0 10	$0.0001 \\ 0.6820$	$0.0010 \\ 0.7832$	0.0053 0.8607	0.0184 0.9156	0.0486 0.9517	$0.1041 \\ 0.9738$	$0.1892 \\ 0.9865$	0.3010 0.9934	0.4296 0.9969	0.5611 0.9986
	20	0.0820 0.9994	0.7832	0.9999	1.0000	0.5517	0.9130	0.9609	0.5554	0.5505	0.5500
9.40	0	0.0001	0.0009	0.0045	0.0160	0.0429	0.0935	0.1727	0.2792	0.4042	0.5349
	10 20	0.6576 0.9992	$0.7626 \\ 0.9997$	0.8448 0.9999	0.9042 1.0000	0.9441	0.9691	0.9838	0.9919	0.9962	0.9983
9.60	0	0.0001	0.0007	0.0038	0.0138	0.0378	0.0838	0.1574	0.2584	0.3796	0.5089
	10 20	0.6329 0.9990	0.7412 0.9996	0.8279 0.9998	0.8919 0.9999	0.9357	0.9638	0.9806	0.9902	0.9952	0.9978
9.80	0	0.9990 0.0001	0.0006	0.9998	0.9999 0.0120	1.0000 0.0333	0.0750	0.1433	0.2388	0.3558	0.4832
	10	0.6080	0.7193	0.8101	0.8786	0.9265	0.9579	0.9770	0.9881	0.9941	0.9972
	20	0.9987	0.9995	0.9998	0.9999	1.0000					
10.00	0	0.0000	0.0005	0.0028	0.0103	0.0293	0.0671	0.1301	0.2202	0.3328	0.4579
	10	0.5830	0.6968	0.7916	0.8645	0.9165	0.9513	0.9730	0.9857	0.9928	0.9965
10.50	20 0	0.9984 0.0000	0.9993 0.0003	0.9997 0.0018	0.9999 0.0071	$1.0000 \\ 0.0211$	0.0504	0.1016	0.1785	0.2794	0.3971
	10	0.5207	0.6387	0.7420	0.8253	0.8879	0.9317	0.9604	0.9781	0.9885	0.9942
11.00	20 0	0.9972	0.9987 0.0002	0.9994	0.9998 0.0049	0.9999	1.0000	0.0796	0.1422	0 2220	0.9405
11.00	10	$0.0000 \\ 0.4599$	0.0002 0.5793	0.0012 0.6887	0.0049 0.7813	$0.0151 \\ 0.8540$	0.0375 0.9074	0.0786 0.9441	$0.1432 \\ 0.9678$	0.2320 0.9823	$0.3405 \\ 0.9907$
	20	0.9953	0.9977	0.9990	0.9995	0.9998	0.9999	1.0000			
11.50	0 10	$0.0000 \\ 0.4017$	$0.0001 \\ 0.5198$	$0.0008 \\ 0.6329$	$0.0034 \\ 0.7330$	$0.0107 \\ 0.8153$	0.0277 0.8783	$0.0603 \\ 0.9236$	0.1137 0.9542	$0.1906 \\ 0.9738$	$0.2888 \\ 0.9857$
	20	0.4017 0.9925	0.9962	0.0329 0.9982	0.7330 0.9992	0.9996	0.9998	0.9999	1.0000	0.0100	0.0001
12.00	0	0.0000	0.0001	0.0005	0.0023	0.0076	0.0203	0.0458	0.0895	0.1550	0.2424
	10	0.3472	0.4616	0.5760	0.6815	0.7720	0.8444	0.8987	0.9370	0.9626	0.9787
12.50	20 0	0.9884 0.0000	0.9939 0.0001	$0.9970 \\ 0.0003$	$0.9985 \\ 0.0016$	0.9993 0.0053	0.9997 0.0148	0.9999 0.0346	0.9999 0.0698	$1.0000 \\ 0.1249$	0.2014
12.00	10	0.2971	0.4058	0.5190	0.6278	0.7250	0.0148 0.8060	0.8693	0.0098 0.9158	0.1249 0.9481	0.2014 0.9694
10.00	20	0.9827	0.9906	0.9951	0.9975	0.9988	0.9994	0.9997	0.9999	1.0000	0.1050
13.00	0 10	$0.0000 \\ 0.2517$	$0.0000 \\ 0.3532$	$0.0002 \\ 0.4631$	$0.0011 \\ 0.5730$	$0.0037 \\ 0.6751$	$0.0107 \\ 0.7636$	$0.0259 \\ 0.8355$	$0.0540 \\ 0.8905$	$0.0998 \\ 0.9302$	$0.1658 \\ 0.9573$
	20	0.9750	0.9859	0.9924	0.9960	0.9980	0.9990	0.9995	0.9998	0.9999	1.0000
13.50	0	0.0000	0.0000	0.0001	0.0007	0.0026	0.0077	0.0193	0.0415	0.0790	0.1353
	10 20	0.2112 0.9649	$0.3045 \\ 0.9796$	$0.4093 \\ 0.9885$	$0.5182 \\ 0.9938$	0.6233 0.9968	$0.7178 \\ 0.9984$	$0.7975 \\ 0.9992$	$0.8609 \\ 0.9996$	0.9084 0.9998	0.9421 0.9999
	30	1.0000									

λ	x	0	1	2	3	4	5	6	7	8	9
14.00	0	0.0000	0.0000	0.0001	0.0005	0.0018	0.0055	0.0142	0.0316	0.0621	0.1094
14.00	10	0.1757	0.2600	0.3585	0.4644	0.5704	0.6694	0.0142 0.7559	0.8272	0.8826	0.1094 0.9235
	20 30	0.9521	0.9712 1.0000	0.9833	0.9907	0.9950	0.9974	0.9987	0.9994	0.9997	0.9999
14.50	0	0.9999 0.0000	0.0000	0.0001	0.0003	0.0012	0.0039	0.0105	0.0239	0.0484	0.0878
	10	0.1449	0.2201	0.3111	0.4125	0.5176	0.6192	0.7112	0.7897	0.8530	0.9012
	20	0.9362	0.9604	0.9763	0.9863	0.9924	0.9959	0.9979	0.9989	0.9995	0.9998
15.00	30	0.9999 0.0000	0.0000	0.0000	0.0002	0.0009	0.0028	0.0076	0.0180	0.0374	0.0699
10.00	10	0.1185	0.1848	0.2676	0.3632	0.4657	0.5681	0.6641	0.7489	0.8195	0.8752
	20 30	0.9170 0.9998	0.9469 0.9999	0.9673 1.0000	0.9805	0.9888	0.9938	0.9967	0.9983	0.9991	0.9996
16.00	0	0.0000	0.0000	0.0000	0.0001	0.0004	0.0014	0.0040	0.0100	0.0220	0.0433
10.00	10	0.0000 0.0774	0.0000 0.1270	0.1931	0.0001 0.2745	0.3675	0.4667	0.5660	0.6593	0.0220 0.7423	0.0433 0.8122
	20	0.8682	0.9108	0.9418	0.9633	0.9777	0.9869	0.9925	0.9959	0.9978	0.9989
17.00	30	0.9994 0.0000	0.9997 0.0000	0.9999 0.0000	0.9999 0.0000	$\frac{1.0000}{0.0002}$	0.0007	0.0021	0.0054	0.0126	0.0261
11.00	10	0.0491	0.0847	0.1350	0.2009	0.2808	0.3715	0.4677	0.5640	0.6550	0.7363
	20	0.8055	0.8615	0.9047	0.9367	0.9594	0.9748	0.9848	0.9912	0.9950	0.9973
10.00	30	0.9986	0.9993	0.9996	0.9998	0.9999	1.0000	0.0010	0.0000	0.0071	0.0154
18.00	0 10	$0.0000 \\ 0.0304$	$0.0000 \\ 0.0549$	$0.0000 \\ 0.0917$	$0.0000 \\ 0.1426$	$0.0001 \\ 0.2081$	$0.0003 \\ 0.2867$	$0.0010 \\ 0.3751$	$0.0029 \\ 0.4686$	$0.0071 \\ 0.5622$	0.0154 0.6509
	20	0.7307	0.7991	0.8551	0.8989	0.9317	0.9554	0.9718	0.9827	0.9897	0.9941
	30	0.9967	0.9982	0.9990	0.9995	0.9998	0.9999	0.9999	1.0000		
19.00	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0005	0.0015	0.0039	0.0089
	10	0.0183	0.0347	0.0606	0.0984	0.1497	0.2148	0.2920	0.3784	0.4695	0.5606
	20 30	$0.6472 \\ 0.9930$	0.7255 0.9960	0.7931 0.9978	$0.8490 \\ 0.9988$	0.8933 0.9994	$0.9269 \\ 0.9997$	0.9514 0.9998	0.9687 0.9999	0.9805 1.0000	0.9882
20.00	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0003	0.0008	0.0021	0.0050
	10	0.0108	0.0214	0.0390	0.0661	0.1049	0.1565	0.2211	0.2970	0.3814	0.4703
	20	0.5591	0.6437	0.7206	0.7875	0.8432	0.8878	0.9221	0.9475	0.9657	0.9782
	30 40	0.9865 1.0000	0.9919	0.9953	0.9973	0.9985	0.9992	0.9996	0.9998	0.9999	0.9999
21.00	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0004	0.0011	0.0028
	10	0.0063	0.0129	0.0245	0.0434	0.0716	0.1111	0.1629	0.2270	0.3017	0.3843
	20	0.4710	0.5577	0.6405	0.7160	0.7822	0.8377	0.8826	0.9175	0.9436	0.9626
	30 40	0.9758 0.9999	0.9848 1.0000	0.9907	0.9945	0.9968	0.9982	0.9990	0.9995	0.9997	0.9999
22.00	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0006	0.0015
	10	0.0035	0.0076	0.0151	0.0278	0.0477	0.0769	0.1170	0.1690	0.2325	0.3060
	20	0.3869	0.4716	0.5564	0.6374	0.7117	0.7771	0.8324	0.8775	0.9129	0.9398
	30 40	$0.9595 \\ 0.9998$	$0.9735 \\ 0.9999$	0.9831 1.0000	0.9895	0.9936	0.9962	0.9978	0.9988	0.9993	0.9996
23.00	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0003	0.0008
	10	0.0020	0.0044	0.0091	0.0174	0.0311	0.0520	0.0821	0.1228	0.1748	0.2377
	20	0.3101	0.3894	0.4723	0.5551	0.6346	0.7077	0.7723	0.8274	0.8726	0.9085
	30	0.9360	0.9564	0.9711	0.9813	0.9882	0.9927	0.9956	0.9974	0.9985	0.9992
24.00	40 0	0.9996 0.0000	0.9998 0.0000	0.9999 0.0000	0.9999 0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0004
24.00	10	0.0000	0.0025	0.0054	0.0107	0.0000	0.0344	0.0563	0.0871	0.0002 0.1283	0.1803
	20	0.2426	0.3139	0.3917	0.4728	0.5540	0.6319	0.7038	0.7677	0.8225	0.8679
	30	0.9042	0.9322	0.9533	0.9686	0.9794	0.9868	0.9918	0.9950	0.9970	0.9983
25.00	40	0.9990 0.0000	0.9995 0.0000	0.9997 0.0000	0.9998 0.0000	0.9999 0.0000	0.0000	0.0000	0.0000	0.0001	0.0002
25.00	10	0.0006	0.0000 0.0014	0.0000	0.0065	0.0000 0.0124	0.0223	0.0377	0.0605	0.0001 0.0920	0.1336
	20	0.1855	0.2473	0.3175	0.3939	0.4734	0.5529	0.6294	0.7002	0.7634	0.8179
	30 40	0.8633 0.9980	0.8999 0.9988	0.9285 0.9993	$0.9502 \\ 0.9996$	0.9662 0.9998	0.9775 0.9999	0.9854 0.9999	0.9908 1.0000	0.9943	0.9966
20.00										0.0000	0.0000
30.00	0 10	0.0000 0.0000	$0.0000 \\ 0.0001$	$0.0000 \\ 0.0002$	$0.0000 \\ 0.0004$	$0.0000 \\ 0.0009$	$0.0000 \\ 0.0019$	$0.0000 \\ 0.0039$	$0.0000 \\ 0.0073$	$0.0000 \\ 0.0129$	$0.0000 \\ 0.0219$
	20	0.0000	0.0544	0.0002	0.0004 0.1146	0.0009 0.1572	0.0019 0.2084	0.0039 0.2673	0.0073 0.3329	0.0129 0.4031	0.0219 0.4757
	30	0.5484	0.6186	0.6845	0.7444	0.7973	0.8426	0.8804	0.9110	0.9352	0.9537
	40	0.9677	0.9779	0.9852	0.9903	0.9937	0.9960	0.9975	0.9985	0.9991	0.9995
25.00	50	0.9997	0.9998	0.9999	0.9999	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35.00	0 10	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	$0.0000 \\ 0.0001$	$0.0000 \\ 0.0003$	0.0000 0.0006	$0.0000 \\ 0.0012$	$0.0000 \\ 0.0023$
	20	0.0043	0.0076	0.0128	0.0208	0.0324	0.0486	0.0705	0.0000	0.1343	0.0023 0.1770
	30	0.2269	0.2833	0.3449	0.4102	0.4775	0.5448	0.6102	0.6721	0.7291	0.7802
	40 50 60	0.8249 0.9935 1.0000	$0.8631 \\ 0.9957$	$0.8950 \\ 0.9973$	0.9209 0.9983	0.9415 0.9989	0.9575 0.9993	0.9697 0.9996	0.9788 0.9998	0.9854 0.9999	0.9902 0.9999
40.00			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40.00	0 10	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	$0.0000 \\ 0.0001$	$0.0000 \\ 0.0002$
	20	0.0000	0.0007	0.0000 0.0014	0.0006	0.0000 0.0045	0.0006	0.0000 0.0123	0.0000	0.0001 0.0294	0.0002 0.0432
	30	0.0617	0.0855	0.1153	0.1514	0.1939	0.2424	0.2963	0.3547	0.4160	0.4790
	40	0.5419	0.6033	0.6618	0.7162	0.7657	0.8097	0.8479	0.8804	0.9075	0.9297
	50 60	0.9474 0.9988	0.9613 0.9992	0.9719 0.9995	$0.9800 \\ 0.9997$	0.9860	0.9903	0.9934 0.9999	0.9956 1.0000	0.9971	0.9981
		0.3300	0.9992	0.9990	0.9991	0.9998	0.9999	0.9999	1.0000		

Tabela 3: Função de distribuição Normal reduzida: $Z \sim N(0,1)$

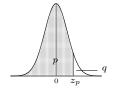
$$\Phi(z) = \int_{-\infty}^{z} \frac{1}{\sqrt{2 \pi}} e^{-\frac{1}{2}t^2} dt$$



z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
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	0.998650	0.998694	0.998736	0.998777	0.998817	0.998856	0.998893	0.998930	0.998965	0.998999
3.1	0.999032	0.999064	0.999096	0.999126	0.999155	0.999184	0.999211	0.999238	0.999264	0.999289
3.2	0.999313	0.999336	0.999359	0.999381	0.999402	0.999423	0.999443	0.999462	0.999481	0.999499
3.3	0.999517	0.999533	0.999550	0.999566	0.999581	0.999596	0.999610	0.999624	0.999638	0.999650
3.4	0.999663	0.999675	0.999687	0.999698	0.999709	0.999720	0.999730	0.999740	0.999749	0.999758
3.5	0.999767	0.999776	0.999784	0.999792	0.999800	0.999807	0.999815	0.999821	0.999828	0.999835
3.6	0.999841	0.999847	0.999853	0.999858	0.999864	0.999869	0.999874	0.999879	0.999883	0.999888
3.7	0.999892	0.999896	0.999900	0.999904	0.999908	0.999912	0.999915	0.999918	0.999922	0.999925
3.8	0.999928	0.999930	0.999933	0.999936	0.999938	0.999941	0.999943	0.999946	0.999948	0.999950
3.9	0.999952	0.999954	0.999956	0.999958	0.999959	0.999961	0.999963	0.999964	0.999966	0.999967
4.0	0.999968	0.999970	0.999971	0.999972	0.999973	0.999974	0.999975	0.999976	0.999977	0.999978

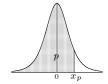
Tabela 4: Quantis da função de distribuição $Z \sim N(0,1)$

$$z_p = \Phi^{-1}(p) = \Phi^{-1}(1-q)$$



q	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.010	
0.00	∞	3.0902	2.8782	2.7478	2.6521	2.5758	2.5121	2.4573	2.4089	2.3656	2.3263	0.99
0.01	2.3263	2.2904	2.2571	2.2262	2.1973	2.1701	2.1444	2.1201	2.0969	2.0748	2.0537	0.98
0.02	2.0537	2.0335	2.0141	1.9954	1.9774	1.9600	1.9431	1.9268	1.9110	1.8957	1.8808	0.97
0.03	1.8808	1.8663	1.8522	1.8384	1.8250	1.8119	1.7991	1.7866	1.7744	1.7624	1.7507	0.96
0.04	1.7507	1.7392	1.7279	1.7169	1.7060	1.6954	1.6849	1.6747	1.6646	1.6546	1.6449	0.95
0.05	1.6449	1.6352	1.6258	1.6164	1.6072	1.5982	1.5893	1.5805	1.5718	1.5632	1.5548	0.94
0.06	1.5548	1.5464	1.5382 1.4611	1.5301	1.5220 1.4466	1.5141	1.5063 1.4325	1.4985	1.4909	1.4833 1.4118	1.4758	0.93 0.92
$0.07 \\ 0.08$	1.4758 1.4051	1.4684 1.3984	1.4011 1.3917	1.4538 1.3852	1.4400 1.3787	1.4395 1.3722	1.4525 1.3658	1.4255 1.3595	1.4187 1.3532	1.3469	1.4051 1.3408	0.92
0.08	1.4031 1.3408	1.3346	1.3285	1.3225	1.3165	1.3106	1.3038 1.3047	1.3993 1.2988	1.3932 1.2930	1.3409 1.2873	1.2816	0.91
0.10	1.2816	1.2759	1.2702	1.2646	1.2591	1.2536	1.2481	1.2426	1.2372	1.2319	1.2265	0.89
0.11	1.2265	1.2212	1.2160	1.2107	1.2055	1.2004	1.1952	1.1901	1.1850	1.1800	1.1750	0.88
0.12	1.1750	1.1700	1.1650	1.1601	1.1552	1.1503	1.1455	1.1407	1.1359	1.1311	1.1264	0.87
$0.13 \\ 0.14$	1.1264 1.0803	$1.1217 \\ 1.0758$	1.1170 1.0714	1.1123 1.0669	1.1077 1.0625	1.1031 1.0581	1.0985 1.0537	1.0939 1.0494	1.0893 1.0451	1.0848 1.0407	1.0803 1.0364	$0.86 \\ 0.85$
0.14 0.15	1.0364	1.0758 1.0322	1.0714 1.0279	1.0009 1.0237	1.0025 1.0194	1.0361 1.0152	1.0337 1.0110	1.0494 1.0069	1.0431 1.0027	0.9986	0.9945	0.83
0.16	0.9945	0.9904	0.9863	0.9822	0.9782	0.9741	0.9701	0.9661	0.9621	0.9581	0.9542	0.83
0.17	0.9542	0.9502	0.9463	0.9424	0.9385	0.9346	0.9307	0.9269	0.9230	0.9192	0.9154	0.82
0.18	0.9154	0.9116	0.9078	0.9040	0.9002	0.8965	0.8927	0.8890	0.8853	0.8816	0.8779	0.81
0.19	0.8779	0.8742	0.8706	0.8669	0.8632	0.8596	0.8560	0.8524	0.8488	0.8452	0.8416	0.80
0.20	0.8416	0.8381	0.8345	0.8310	0.8274	0.8239	0.8204	0.8169	0.8134	0.8099	0.8064	0.79
0.21	0.8064	0.8030	0.7995	0.7961	0.7926	0.7892	0.7858	0.7824	0.7790	0.7756	0.7722	0.78
0.22	0.7722	0.7688	0.7655	0.7621	0.7588	0.7554	0.7521	0.7488	0.7454	0.7421	0.7388	0.77
0.23	0.7388	0.7356	0.7323	0.7290	0.7257	0.7225	0.7192	0.7160	0.7128	0.7095	0.7063	0.76
0.24	0.7063	0.7031	0.6999	0.6967	0.6935	0.6903	0.6871	0.6840	0.6808	0.6776	0.6745	0.75
0.25	0.6745	0.6713	0.6682	0.6651	0.6620	0.6588	0.6557	0.6526	0.6495	0.6464	0.6433	0.74
0.26	0.6433	0.6403	0.6372	0.6341	0.6311	0.6280	0.6250	0.6219	0.6189	0.6158	0.6128	0.73
0.27	0.6128	0.6098	0.6068	0.6038	0.6008	0.5978	0.5948	0.5918	0.5888	0.5858	0.5828	0.72
0.28	0.5828	0.5799	0.5769	0.5740	0.5710	0.5681	0.5651	0.5622	0.5592	0.5563	0.5534	0.71
0.29	0.5534	0.5505	0.5476	0.5446	0.5417	0.5388	0.5359	0.5330	0.5302	0.5273	0.5244	0.70
0.30	0.5244	0.5215	0.5187	0.5158	0.5129	0.5101	0.5072	0.5044	0.5015	0.4987	0.4958	0.69
0.31	0.4958	0.4930	0.4902	0.4874	0.4845	0.4817	0.4789	0.4761	0.4733	0.4705	0.4677	0.68
0.32	0.4677	0.4649	0.4621	0.4593	0.4565	0.4538	0.4510	0.4482	0.4454	0.4427	0.4399	0.67
0.33	0.4399	0.4372	0.4344	0.4316	0.4289	0.4261	0.4234	0.4207	0.4179	0.4152	0.4125	0.66
0.34	0.4125	0.4097	0.4070	0.4043	0.4016	0.3989	0.3961	0.3934	0.3907	0.3880	0.3853	0.65
0.35	0.3853	0.3826	0.3799	0.3772	0.3745	0.3719	0.3692	0.3665	0.3638	0.3611	0.3585	0.64
0.36	0.3585 0.3319	$0.3558 \\ 0.3292$	0.3531 0.3266	$0.3505 \\ 0.3239$	0.3478 0.3213	0.3451 0.3186	0.3425 0.3160	0.3398 0.3134	0.3372 0.3107	0.3345 0.3081	0.3319 0.3055	0.63 0.62
$0.37 \\ 0.38$	0.3055	0.3292 0.3029	0.3200 0.3002	0.3239 0.2976	0.3213 0.2950	0.3180 0.2924	0.3100 0.2898	0.3134 0.2871	0.3107 0.2845	0.3081 0.2819	0.3055 0.2793	0.62
0.39	0.3033 0.2793	0.3029 0.2767	0.3002 0.2741	0.2976 0.2715	0.2689	0.2924 0.2663	0.2698 0.2637	0.2611	0.2545 0.2585	0.2519 0.2559	0.2793 0.2533	0.60
												i i
0.40	0.2533	0.2508	0.2482	0.2456	0.2430	0.2404	0.2378	0.2353	0.2327	0.2301	0.2275	0.59
0.41	0.2275	0.2250	0.2224	0.2198	0.2173	0.2147	0.2121	0.2096	0.2070	0.2045	0.2019	0.58
$0.42 \\ 0.43$	$0.2019 \\ 0.1764$	0.1993 0.1738	$0.1968 \\ 0.1713$	0.1942 0.1687	0.1917 0.1662	$0.1891 \\ 0.1637$	0.1866 0.1611	$0.1840 \\ 0.1586$	0.1815 0.1560	0.1789 0.1535	$0.1764 \\ 0.1510$	$0.57 \\ 0.56$
$0.43 \\ 0.44$	$0.1764 \\ 0.1510$	0.1738 0.1484	0.1713 0.1459	0.1687 0.1434	0.1662 0.1408	0.1637 0.1383	0.1611 0.1358	0.1380 0.1332	0.1300 0.1307	0.1535 0.1282	0.1510 0.1257	0.55
0.44 0.45	0.1310 0.1257	0.1484 0.1231	0.1459 0.1206	0.1434 0.1181	0.1408 0.1156	0.1363 0.1130	0.1358 0.1105	0.1332 0.1080	0.1307 0.1055	0.1282 0.1030	0.1257 0.1004	0.53 0.54
0.46	0.1004	0.0979	0.0954	0.0929	0.0904	0.0878	0.0853	0.0828	0.0803	0.0778	0.0753	0.53
0.47	0.0753	0.0728	0.0702	0.0677	0.0652	0.0627	0.0602	0.0525	0.0552	0.0527	0.0502	0.52
0.48	0.0502	0.0476	0.0451	0.0426	0.0401	0.0376	0.0351	0.0326	0.0301	0.0276	0.0251	0.51
0.49	0.0251	0.0226	0.0201	0.0175	0.0150	0.0125	0.0100	0.0075	0.0050	0.0025	0.0000	0.50
	0.010	0.009	0.008	0.007	0.006	0.005	0.004	0.003	0.002	0.001	0.000	p

Tabela 5: Quantis da função de distribuição t-Student $X \sim t_{(n)}: x_p = F_X^{-1}(p)$



$n \setminus p$	0.6	0.7	0.75	0.8	0.85	0.9	0.925	0.95	0.975	0.99	0.995	0.999	0.9995
1	0.325	0.727	1.000	1.376	1.963	3.078	4.165	6.314	12.706	31.821	63.656	318.289	636.578
2	0.289	0.617	0.816	1.061	1.386	1.886	2.282	2.920	4.303	6.965	9.925	22.328	31.600
3	0.277	0.584	0.765	0.978	1.250	1.638	1.924	2.353	3.182	4.541	5.841	10.214	12.924
4	0.271	0.569	0.741	0.941	1.190	1.533	1.778	2.132	2.776	3.747	4.604	7.173	8.610
5	0.267	0.559	0.727	0.920	1.156	1.476	1.699	2.015	2.571	3.365	4.032	5.894	6.869
6	0.265	0.553	0.718	0.906	1.134	1.440	1.650	1.943	2.447	3.143	3.707	5.208	5.959
7	0.263	0.549	0.711	0.896	1.119	1.415	1.617	1.895	2.365	2.998	3.499	4.785	5.408
8	0.262	0.546	0.706	0.889	1.108	1.397	1.592	1.860	2.306	2.896	3.355	4.501	5.041
9	0.261	0.543	0.703	0.883	1.100	1.383	1.574	1.833	2.262	2.821	3.250	4.297	4.781
10	0.260	0.542	0.700	0.879	1.093	1.372	1.559	1.812	2.228	2.764	3.169	4.144	4.587
11	0.260	0.540	0.697	0.876	1.088	1.363	1.548	1.796	2.201	2.718	3.106	4.025	4.437
12	0.259	0.539	0.695	0.873	1.083	1.356	1.538	1.782	2.179	2.681	3.055	3.930	4.318
13	0.259	0.538	0.694	0.870	1.079	1.350	1.530	1.771	2.160	2.650	3.012	3.852	4.221
14	0.258	0.537	0.692	0.868	1.076	1.345	1.523	1.761	2.145	2.624	2.977	3.787	4.140
15	0.258	0.536	0.691	0.866	1.074	1.341	1.517	1.753	2.131	2.602	2.947	3.733	4.073
16	0.258	0.535	0.690	0.865	1.071	1.337	1.512	1.746	2.120	2.583	2.921	3.686	4.015
17	0.257	0.534	0.689	0.863	1.069	1.333	1.508	1.740	2.110	2.567	2.898	3.646	3.965
18	0.257	0.534	0.688	0.862	1.067	1.330	1.504	1.734	2.101	2.552	2.878	3.610	3.922
19	0.257	0.533	0.688	0.861	1.066	1.328	1.500	1.729	2.093	2.539	2.861	3.579	3.883
20	0.257	0.533	0.687	0.860	1.064	1.325	1.497	1.725	2.086	2.528	2.845	3.552	3.850
21	0.257	0.532	0.686	0.859	1.063	1.323	1.494	1.721	2.080	2.518	2.831	3.527	3.819
22	0.256	0.532	0.686	0.858	1.061	1.321	1.492	1.717	2.074	2.508	2.819	3.505	3.792
23	0.256	0.532	0.685	0.858	1.060	1.319	1.489	1.714	2.069	2.500	2.807	3.485	3.768
24	0.256	0.531	0.685	0.857	1.059	1.318	1.487	1.711	2.064	2.492	2.797	3.467	3.745
25	0.256	0.531	0.684	0.856	1.058	1.316	1.485	1.708	2.060	2.485	2.787	3.450	3.725
26	0.256	0.531	0.684	0.856	1.058	1.315	1.483	1.706	2.056	2.479	2.779	3.435	3.707
27	0.256	0.531	0.684	0.855	1.057	1.314	1.482	1.703	2.052	2.473	2.771	3.421	3.689
28	0.256	0.530	0.683	0.855	1.056	1.313	1.480	1.701	2.048	2.467	2.763	3.408	3.674
29	0.256	0.530	0.683	0.854	1.055	1.311	1.479	1.699	2.045	2.462	2.756	3.396	3.660
30	0.256	0.530	0.683	0.854	1.055	1.310	1.477	1.697	2.042	2.457	2.750	3.385	3.646
40	0.255	0.529	0.681	0.851	1.050	1.303	1.468	1.684	2.021	2.423	2.704	3.307	3.551
45	0.255	0.528	0.680	0.850	1.049	1.301	1.465	1.679	2.014	2.412	2.690	3.281	3.520
50	0.255	0.528	0.679	0.849	1.047	1.299	1.462	1.676	2.009	2.403	2.678	3.261	3.496
60	0.254	0.527	0.679	0.848	1.045	1.296	1.458	1.671	2.000	2.390	2.660	3.232	3.460
70	0.254	0.527	0.678	0.847	1.044	1.294	1.456	1.667	1.994	2.381	2.648	3.211	3.435
80	0.254	0.526	0.678	0.846	1.043	1.292	1.453	1.664	1.990	2.374	2.639	3.195	3.416
90	0.254	0.526	0.677	0.846	1.042	1.291	1.452	1.662	1.987	2.368	2.632	3.183	3.402
100	0.254	0.526	0.677	0.845	1.042	1.290	1.451	1.660	1.984	2.364	2.626	3.174	3.390
120	0.254	0.526	0.677	0.845	1.041	1.289	1.449	1.658	1.980	2.358	2.617	3.160	3.373
150	0.254	0.526	0.676	0.844	1.040	1.287	1.447	1.655	1.976	2.351	2.609	3.145	3.357
∞	0.253	0.524	0.675	0.842	1.036	1.282	1.440	1.645	1.960	2.327	2.576	3.091	3.291

Tabela 6: Quantis da função de distribuição Qui-quadrado $X \sim \chi^2_{(n)} : x_p = F_X^{-1}(p)$

35	70 x 0 1 0 1 0 1 0 1 1 1 1 1 1 1 1 1 1 1	4
0.9995	12.12 17.73 20.00 20.00 20.00 22.11 24.10 26.10 26.10 26.10 26.10 26.10 26.10 26.10 26.10 33.14 33.14 33.14 33.14 33.14 33.14 47.50 47.50 47.50 47.50 47.50 47.50 66.40 66.40 66.40 66.40 66.40 67.80 66.40 66.40 66.40 67.80 66.40 67.80	272.
0.999	10.83 10.83 110.83 110.83 110.83 120.51 120.51 120.83 120.51 120.83 130.51 130.64 10.83 10	267.5
0.995	7.879 10.60 112.84 14.86 16.75 16.75 16.75 16.75 16.75 16.75 17.87	255.3
0.990	6.635 6.637 6.	249.4
0.975	7.024 7.378	241.1
0.950	3.841 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.07 11.01	234.0
0.925	3.170 8.496 10.01 112.88 14.27 115.63 116.97 117.63 118.29 118.29 119.60 11	2.29.5
06.0	2.706 6.251 12.0236 112.0236 112.0236 115.29 115.29 117.29 118.55 119.81 118.55 119.81 118.55 119.81 118.55 119.81	0.922
0.85	2. 072 2. 072 5. 317 6. 745 6. 745 6. 745 10. 75 11. 2. 03 11. 2. 03 12. 03 13. 03 14. 03 15. 03 16. 03 17. 03 18. 03 18. 03 19. 03 19	7.7022
0.80	1. 642 3. 6219 3. 6	216.6
0.70	1.074 1.074 1.074 1.074 1.066 1.	210.0
09.0	0.708 2.946 4.045 5.132 6.211 6.211 11.53 11.53 12.58 13.64 14.69 17.82 11.53 11.53 12.58 13.64 14.69 17.82 17.83 17.83 17.83 18.87 17.82 17.83 17.83 17.83 17.83 18.87 17.82 17.83 17	204.4
0.50	0.455 0.455 0.455 0.346 0.346 0.346 0.347 0.	199.3
0.40	0.275 1.869 2.753 3.656 6.423 3.656 6.423 3.655 11.13	194.3
0.30	0.148 0.148 3.828 3.828 3.8000 3.8000 3.8000 3.8000 3.8000 3.828 3.828 3.828 3.828 3.83	189.0
0.20	0.0642 0.06442 1.649 1.649 2.343 3.822 4.594 4.594 6.179 6.179 6.179 6.179 6.179 6.179 11.13 11.	183.0
0.15	0.0358 0.0358 0.0325 0.0325 1.366 1.994 4.078 4.078 4.078 4.078 4.073 11.95 11.12 11.13 11	179.4
0.10	0.0158 0.0158 1.064 1.064 1.064 1.610 2.232 3.490 6.304 1.7791 10.09 11.65 11.	174.8
0.075	0.0089 0.0089 0.0089 1.394 1.394 1.394 1.394 1.394 1.394 1.242 1.2	172.0
0.05	0.0039 0.0039 0.0103 0.	168.3
0.025	0.0010 0.0506 0.216 0.484 0.218 0.831 1.690 2.700 3.247 3.816 4.404 4.404 6.505 6.505 10.098 11.69 11.	162.7
0.01	0.0002 0.0201 0.115 0.297 0.297 0.554 0.554 1.647 1.643 1.640 1.636 1.63	156.4
0.005	3.9E-05 0.0100 0.00100 0.0717 0.207 0.676 0.989 1.344 1.735 2.603 3.074 3.565 4.075 4.075 4.075 4.075 1.124 1.1.81 1.1.81 1.1.81 1.1.81 1.1.81 1.1.81 1.1.81 1.1.81 1.1.81 1.1.82 1.1.83 1.83	152.2
0.001	1.6E-06 0.0020 0.0020 0.0020 0.0020 0.0020 0.0031 0.599 0.857 1.152 1.479 1.479 1.479 1.479 1.20 1.20 1.20 1.20 1.20 1.20 1.20 1.20	143.8
0.0005	3.9E-07 3.9E-07 0.0153 0.0639 0.158 0.158 0.158 0.710 0.972 1.265 1.265 1.265 1.987 1.988 1.98 1.98 1.1.98	140.7
$d \setminus u$	1000 1100 1100 1100 1100 1100 1100	200