

Table 9.8 MODIFIED BESSEL FUNCTIONS—AUXILIARY TABLE FOR LARGE ARGUMENTS

x^{-1}	$x^{\frac{1}{2}}e^{-x}I_0(x)$	$x^{\frac{1}{2}}e^{-x}I_1(x)$	$x^{\frac{1}{2}}e^{-x}I_2(x)$	$\pi^{-1}x^{\frac{1}{2}}e^xK_0(x)$	$\pi^{-1}x^{\frac{1}{2}}e^xK_1(x)$	$\pi^{-1}x^{\frac{1}{2}}e^xK_2(x)$	$\langle x \rangle$
0.050	0.40150 9761	0.39133 9722	0.36237 579	0.39651 5620	0.40631 0355	0.43714 666	20
0.048	0.40140 4058	0.39164 8743	0.36380 578	0.39661 0241	0.40601 9771	0.43558 814	21
0.046	0.40129 8619	0.39195 7336	0.36523 854	0.39670 5057	0.40572 8854	0.43403 211	22
0.044	0.40119 3443	0.39226 5502	0.36667 408	0.39680 0069	0.40543 7604	0.43247 858	23
0.042	0.40108 8526	0.39257 3245	0.36811 237	0.39689 5278	0.40514 6017	0.43092 754	24
0.040	0.40098 3868	0.39288 0567	0.36955 342	0.39699 0686	0.40485 4094	0.42937 901	25
0.038	0.40087 9466	0.39318 7470	0.37099 722	0.39708 6293	0.40456 1832	0.42783 299	26
0.036	0.40077 5319	0.39349 3958	0.37244 375	0.39718 2101	0.40426 9230	0.42628 949	28
0.034	0.40067 1424	0.39380 0032	0.37389 302	0.39727 8110	0.40397 6286	0.42474 850	29
0.032	0.40056 7781	0.39410 5695	0.37534 502	0.39737 4322	0.40368 2998	0.42321 003	31
0.030	0.40046 4387	0.39441 0950	0.37679 973	0.39747 0738	0.40338 9365	0.42167 410	33
0.028	0.40036 1241	0.39471 5798	0.37825 716	0.39756 7359	0.40309 5386	0.42014 070	36
0.026	0.40025 8340	0.39502 0243	0.37971 729	0.39766 4186	0.40280 1058	0.41860 984	38
0.024	0.40015 5684	0.39532 4286	0.38118 012	0.39776 1221	0.40250 6380	0.41708 153	42
0.022	0.40005 3270	0.39562 7929	0.38264 564	0.39785 8465	0.40221 1349	0.41555 576	45
0.020	0.39995 1098	0.39593 1176	0.38411 385	0.39795 5918	0.40191 5965	0.41403 256	50
0.018	0.39984 9164	0.39623 4028	0.38558 474	0.39805 3583	0.40162 0226	0.41251 191	56
0.016	0.39974 7469	0.39653 6487	0.38705 830	0.39815 1460	0.40132 4130	0.41099 383	63
0.014	0.39964 6009	0.39683 8556	0.38853 453	0.39824 9551	0.40102 7674	0.40947 833	71
0.012	0.39954 4785	0.39714 0236	0.39001 342	0.39834 7857	0.40073 0858	0.40796 540	83
0.010	0.39944 3793	0.39744 1530	0.39149 496	0.39844 6379	0.40043 3679	0.40645 505	100
0.008	0.39934 3033	0.39774 2440	0.39297 915	0.39854 5119	0.40013 6136	0.40494 730	125
0.006	0.39924 2503	0.39804 2968	0.39446 599	0.39864 4077	0.39983 8226	0.40344 214	167
0.004	0.39914 2202	0.39834 3116	0.39595 546	0.39874 3256	0.39953 9949	0.40193 958	250
0.002	0.39904 2128	0.39864 2886	0.39744 756	0.39884 2657	0.39924 1300	0.40043 962	500
0.000	0.39894 2280	0.39894 2280	0.39894 228	0.39894 2280	0.39894 2280	0.39894 228	∞
	$\left[\begin{smallmatrix} (-8)3 \\ 3 \end{smallmatrix} \right]$	$\left[\begin{smallmatrix} (-8)5 \\ 3 \end{smallmatrix} \right]$	$\left[\begin{smallmatrix} (-7)3 \\ 3 \end{smallmatrix} \right]$	$\left[\begin{smallmatrix} (-8)3 \\ 3 \end{smallmatrix} \right]$	$\left[\begin{smallmatrix} (-8)5 \\ 3 \end{smallmatrix} \right]$	$\left[\begin{smallmatrix} (-7)3 \\ 3 \end{smallmatrix} \right]$	

For interpolating near $x^{-1}=0$ note that if $f_n(x^{-1})=x^{\frac{1}{2}}e^{-x}I_n(x)$ then $f_n(-x^{-1})=\pi^{-1}x^{\frac{1}{2}}e^xK_n(x)$.

$\langle x \rangle$ = nearest integer to x .

Compiled from L. Fox, A short table for Bessel functions of integer orders and large arguments. Royal Society Shorter Mathematical Tables No. 3 (Cambridge Univ. Press, Cambridge, England, 1954) (with permission).

MODIFIED BESSEL FUNCTIONS—AUXILIARY TABLE FOR SMALL ARGUMENTS

x	$K_0(x)+I_0(x) \ln x$	$x[K_1(x)-I_1(x) \ln x]$	x	$K_0(x)+I_0(x) \ln x$	$x[K_1(x)-I_1(x) \ln x]$
0.0	0.11593 152	1.00000 000	1.0	0.42102 444	0.60190 723
0.1	0.11872 387	0.99691 180	1.1	0.49199 896	0.49390 093
0.2	0.12713 128	0.98754 448	1.2	0.57261 444	0.36514 944
0.3	0.14124 511	0.97158 819	1.3	0.66373 364	0.21236 381
0.4	0.16121 862	0.94852 090	1.4	0.76632 938	+0.03176 677
0.5	0.18726 857	0.91759 992	1.5	0.88149 436	-0.18096 553
0.6	0.21967 734	0.87784 980	1.6	1.01045 200	-0.43076 964
0.7	0.25879 579	0.82804 659	1.7	1.15456 879	-0.72326 976
0.8	0.30504 682	0.76669 810	1.8	1.31536 786	-1.06486 242
0.9	0.35892 957	0.69201 997	1.9	1.49454 429	-1.46281 214
1.0	0.42102 444	0.60190 723	2.0	1.69398 200	-1.92535 914
	$\left[\begin{smallmatrix} (-3)1 \\ 6 \end{smallmatrix} \right]$	$\left[\begin{smallmatrix} (-3)2 \\ 7 \end{smallmatrix} \right]$		$\left[\begin{smallmatrix} (-3)3 \\ 7 \end{smallmatrix} \right]$	$\left[\begin{smallmatrix} (-3)8 \\ 7 \end{smallmatrix} \right]$