

MATHIEU FUNCTIONS

Table 20.2

COEFFICIENTS A_m AND B_m

A_m

$q=5$

$m \setminus r$	0	2	10	$m \setminus r$	1	5	15
0	+0.54061 2446	+0.43873 7166	+0.00000 1679	1	+0.76246 3686	+0.07768 5798	0.00000 0000
2	-0.62711 5414	+0.65364 0260	+0.00003 3619	3	-0.63159 6319	+0.30375 1030	+0.00000 0002
4	+0.14792 7090	-0.42657 8935	+0.00064 2987	5	+0.13968 4806	+0.92772 8396	+0.00000 0106
6	-0.01784 8061	+0.07588 5673	+0.01078 4807	7	-0.01491 5596	-0.20170 6148	+0.00000 4227
8	+0.00128 2863	-0.00674 1769	+0.13767 5121	9	+0.00094 4842	+0.01827 4579	+0.00014 8749
10	-0.00006 0723	+0.00036 4942	+0.98395 5640	11	-0.00003 9702	-0.00095 9038	+0.00428 1393
12	+0.00000 2028	-0.00001 3376	-0.11280 6780	13	+0.00000 1189	+0.00003 3457	+0.08895 2014
14	-0.00000 0050	+0.00000 0355	+0.00589 2962	15	-0.00000 0027	-0.00000 0839	+0.99297 4092
16	+0.00000 0001	-0.00000 0007	-0.00018 9166	17	+0.00000 0001	+0.00000 0016	-0.07786 7946
18			+0.00000 4226	19			+0.00286 6409
20			-0.00000 0071	21			-0.00006 6394
22			+0.00000 0001	23			+0.00000 1092
				25			-0.00000 0014

$q=25$

$m \setminus r$	0	2	10	$m \setminus r$	1	5	15
0	+0.42974 1038	+0.33086 5777	+0.00502 6361	1	+0.39125 2265	+0.65659 0398	+0.00000 4658
2	-0.69199 9610	-0.04661 4551	+0.02075 4891	3	-0.74048 2467	+0.36900 8820	+0.00003 7337
4	+0.36554 4890	-0.64770 5862	+0.07232 7761	5	+0.50665 3803	-0.19827 8625	+0.00032 0026
6	-0.13057 5523	+0.55239 9372	+0.23161 1726	7	-0.19814 2336	-0.48837 4067	+0.00254 0806
8	+0.03274 5863	-0.22557 4897	+0.55052 4391	9	+0.05064 0536	+0.37311 2810	+0.01770 9603
10	-0.00598 3606	+0.05685 2843	+0.63227 5658	11	-0.00910 8920	-0.12278 1866	+0.10045 8755
12	+0.00082 3792	-0.00984 6277	-0.46882 9197	13	+0.00121 2864	+0.02445 3933	+0.40582 7402
14	-0.00008 7961	+0.00124 8919	+0.13228 7155	15	-0.00012 4121	-0.00335 1335	+0.83133 2650
16	+0.00000 7466	-0.00012 1205	-0.02206 0893	17	+0.00001 0053	+0.00033 9214	-0.35924 8831
18	-0.00000 0514	+0.00000 9296	+0.00252 2374	19	-0.00000 0660	-0.00002 6552	+0.06821 6074
20	+0.00000 0029	-0.00000 0578	-0.00021 3672	21	+0.00000 0036	+0.00000 1661	-0.00802 4550
22	-0.00000 0001	+0.00000 0030	+0.00001 4078	23	-0.00000 0002	-0.00000 0085	+0.00066 6432
24		-0.00000 0001	-0.00000 0746	25		+0.00000 0004	-0.00004 1930
26			+0.00000 0032	27			+0.00000 2090
28			-0.00000 0001	29			-0.00000 0085
				31			+0.00000 0003

B_m

$q=5$

$m \setminus r$	2	10	$m \setminus r$	1	5	15
2	+0.93342 9442	+0.00003 3444	1	+0.94001 9024	+0.05038 2462	0.00000 0000
4	-0.35480 3915	+0.00064 2976	3	-0.33654 1963	+0.29736 5513	+0.00000 0002
6	+0.05296 3730	+0.01078 4807	5	+0.05547 7529	+0.93156 6997	+0.00000 0106
8	-0.00429 5885	+0.13767 5120	7	-0.00508 9553	-0.20219 3638	+0.00000 4227
10	+0.00021 9797	+0.98395 5640	9	+0.00029 3879	+0.01830 5721	+0.00014 8749
12	-0.00000 7752	-0.11280 6780	11	-0.00001 1602	-0.00096 0277	+0.00428 1392
14	+0.00000 0200	+0.00589 2962	13	+0.00000 0332	+0.00003 3493	+0.08895 2014
16	-0.00000 0004	-0.00018 9166	15	-0.00000 0007	-0.00000 0842	+0.99297 4092
18		+0.00000 4227	17		+0.00000 0017	-0.07786 7946
20		-0.00000 0070	19			+0.00286 6409
22		+0.00000 0001	21			-0.00006 6394
			23			+0.00000 1093
			25			-0.00000 0013

$q=25$

$m \setminus r$	2	10	$m \setminus r$	1	5	15
2	+0.65743 9912	+0.01800 3596	1	+0.81398 3846	+0.30117 4196	+0.00000 3717
4	-0.66571 9990	+0.07145 6762	3	-0.52931 0219	+0.62719 8468	+0.00003 7227
6	+0.33621 0033	+0.23131 0990	5	+0.22890 0813	+0.17707 1306	+0.00032 0013
8	-0.10507 3258	+0.55054 4783	7	-0.06818 2972	-0.60550 5349	+0.00254 0804
10	+0.02236 2380	+0.63250 8750	9	+0.01453 0886	+0.33003 2984	+0.01770 9603
12	-0.00344 2304	-0.46893 3949	11	-0.00229 5765	-0.09333 5984	+0.10045 8755
14	+0.00040 0182	+0.13230 9765	13	+0.00027 7422	+0.01694 2545	+0.40582 7403
16	-0.00003 6315	-0.02206 3990	15	-0.00002 6336	-0.00217 7430	+0.83133 2650
18	+0.00000 2640	+0.00252 2676	17	+0.00000 2009	+0.00021 0135	-0.35924 8830
20	-0.00000 0157	-0.00021 3694	19	-0.00000 0126	-0.00001 5851	+0.06821 6074
22	+0.00000 0008	+0.00001 4079	21	+0.00000 0007	+0.00000 0962	-0.00802 4551
24		-0.00000 0746	23		-0.00000 0048	+0.00066 6432
26		+0.00000 0033	25		+0.00000 0002	-0.00004 1930
			27			+0.00000 2090
			29			-0.00000 0086
			31			+0.00000 0003

For A_m and B_m see 20.2.3-20.2.11

Compiled from National Bureau of Standards, Tables relating to Mathieu functions, Columbia Univ. Press, New York, N.Y., 1951 (with permission).