

Supplement to A Conjecture of Frobenius and the Sporadic Simple Groups. II

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Appendix

The following is the Table of $f(G, t)$ for the sporadic simple groups we study. "-" means $f(G, t)=0$.

t	M_{11}	M_{12}	M_{22}	M_{23}	M_{24}	J_1
1	1	1	1	1	1	1
2	165	891	1,155	3,795	43,263	1,463
3	440	4,400	12,320	56,672	712,448	5,852
4	990	5,940	41,580	318,780	5,100,480	-
5	1,584	9,504	88,704	680,064	4,080,384	11,704
6	1,320	23,760	36,960	850,080	20,401,920	29,260
7	-	-	126,720	1,457,280	11,658,240	25,080
8	1,980	23,760	55,440	1,275,120	15,301,440	-
10	-	9,504	-	-	12,241,152	35,112
11	1,440	17,280	80,640	1,854,720	22,256,640	15,960
12	-	-	-	-	40,803,840	-
14	-	-	-	1,457,280	34,974,720	-
15	-	-	-	1,360,128	32,643,072	23,408
19	-	-	-	-	-	27,720
21	-	-	-	-	23,316,480	-
23	-	-	-	887,040	21,288,960	-

t	HJ	HJM	HiS	McL
1	1	1	1	1
2	2,835	26,163	21,175	22,275
3	17,360	253,232	123,200	954,800
4	6,300	523,260	877,800	9,355,500
5	28,224	3,348,864	2,010,624	37,122,624
6	75,600	2,093,040	3,080,000	27,442,800
7	86,400	-	6,336,000	128,304,000
8	75,600	6,279,120	8,316,000	112,266,000
9	-	5,581,440	-	66,528,000
10	181,440	10,046,592	4,435,200	29,937,600
11	-	-	8,064,000	163,296,000
12	50,400	4,186,080	3,696,000	74,844,000
14	-	-	-	128,304,000
15	80,640	6,697,728	2,956,800	59,875,200
17	-	5,909,760	-	-
19	-	5,287,680	-	-
20	-	-	4,435,200	-
30	-	-	-	59,875,200

t	HBM	Rud	Suz	ON	t	.3	.2	.1
1	1	1	1	1	1	1	1	1
2	212,415	1,846,575	2,915,055	2,857,239	2	2,778,975	29,771,775	12,792,894,975
3	8,529,920	67,558,400	151,236,800	142,227,008	3	127,714,400	362,700,800	8,039,266,323,200
4	47,980,800	484,520,400	2,004,322,320	1,805,175,048	4	344,282,400	48,614,860,800	379,894,971,456,000
5	13,434,624	632,346,624	1,743,565,824	2,560,086,144	5	1,983,066,624	84,610,842,624	394,053,846,810,624
6	223,910,400	3,040,128,000	8,086,478,400	6,400,215,360	6	14,268,592,800	257,880,268,800	11,839,105,133,856,000
7	93,024,000	5,211,648,000	5,337,446,400	9,740,269,440	7	11,803,968,000	755,453,952,000	3,771,226,128,384,000
8	251,899,200	8,360,352,000	23,351,328,000	28,800,969,120	8	20,656,944,000	1,101,703,680,000	14,256,265,959,936,000
9	-	10,944,460,800	16,605,388,800	-	9	9,180,864,000	783,433,728,000	19,248,966,696,960,000
10	201,519,360	-	33,625,912,320	23,040,775,296	10	33,051,110,400	2,115,271,065,600	47,208,090,824,294,400
11	-	-	40,758,681,600	41,892,318,720	11	45,069,696,000	3,845,947,392,000	62,996,618,280,960,000
12	671,731,200	18,240,768,000	48,259,411,200	12,800,430,720	12	27,542,592,000	3,133,734,912,000	219,538,475,380,224,000
13	-	2,806,272,000	68,976,230,400	-	13	-	-	26,652,415,426,560,000
14	719,712,000	15,634,944,000	16,012,339,200	16,457,696,640	14	35,411,904,000	3,771,269,760,000	98,994,685,870,080,000
15	268,692,480	9,728,409,600	49,816,166,400	20,480,689,152	15	49,576,665,600	4,230,542,131,200	213,278,551,002,316,800
16	-	18,240,768,000	-	115,203,876,480	16	-	-	129,930,525,204,480,000
17	474,163,200	-	-	-	17	27,542,592,000	2,350,301,184,000	173,240,700,272,640,000
18	-	-	49,816,166,400	-	18	49,576,665,600	4,230,542,131,200	320,495,295,504,384,000
19	-	-	-	72,760,343,040	19	23,607,936,000	-	280,484,943,298,560,000
20	-	21,888,921,600	22,417,274,880	46,081,550,592	20	45,069,696,000	-	188,989,854,842,880,000
21	767,692,800	-	42,699,571,200	-	21	43,110,144,000	3,678,732,288,000	361,545,809,264,640,000
24	-	12,160,512,000	18,681,062,400	-	24	41,313,888,000	3,525,451,776,000	360,918,125,568,000,000
26	-	8,418,816,000	-	-	26	-	-	79,957,246,279,680,000
28	287,884,800	-	-	32,915,393,280	28	1,510,907,904,000	1,510,907,904,000	296,984,057,610,240,000
29	-	10,063,872,000	-	-	29	4,230,542,131,200	-	450,425,820,708,864,000
31	-	-	-	29,730,032,640	31	-	-	125,993,236,561,920,000
					33	-	-	118,793,623,044,096,000
					35	-	-	115,493,800,181,760,000
					36	-	-	213,219,323,412,480,000
					39	-	-	103,944,420,163,584,000
					40	-	-	49,497,342,935,040,000
					42	-	-	69,296,280,109,056,000
					60	-	-	-

t	M(22)	F ₅	F ₃	t	I _Y S	J ₄
1	1	1	1	1	1	1
2	37,706,175	75,603,375	976,841,775	2	1,296,826,875	51,747,149,311
3	4,180,267,520	9,864,800,000	717,890,163,200	3	295,887,862,250	32,608,665,165,824
4	42,265,903,680	136,278,450,000	12,050,320,136,400	4	2,567,717,212,500	2,916,437,490,768,384
5	107,602,919,424	146,595,930,624	30,248,647,962,624	5	13,827,054,480,624	12,913,031,405,666,304
6	631,073,963,520	1,422,036,000,000	234,567,061,747,200	6	184,162,384,518,750	75,358,625,198,219,264
7	1,537,184,563,200	650,073,600,000	77,164,918,272,000	7	308,126,065,500,000	206,608,502,490,660,864
8	2,858,202,547,200	7,678,994,400,000	1,181,587,811,040,000	8	647,064,737,550,000	350,265,976,878,698,496
9	2,988,969,984,000	10,112,256,000,000	700,200,184,320,000	9	958,614,426,000,000	-
10	2,690,072,985,600	9,806,360,256,000	756,216,199,065,600	10	1,049,682,796,470,000	1,175,085,857,915,633,664
11	5,869,250,150,400	12,410,496,000,000	-	11	1,568,641,788,000,000	361,293,230,313,308,160
12	5,903,215,718,400	32,232,816,000,000	5,251,501,382,400,000	12	898,701,024,375,000	2,711,736,595,189,923,840
13	9,932,577,177,600	-	2,326,819,074,048,000	14	308,126,065,500,000	5,165,212,562,266,521,600
14	4,611,553,689,600	9,751,104,000,000	1,620,463,283,712,000	15	1,288,377,788,544,000	2,892,519,034,869,252,096
15	2,152,058,388,480	19,718,899,200,000	6,049,729,592,524,800	16	-	2,711,736,595,189,923,840
16	4,035,109,478,400	-	-	18	2,875,843,278,000,000	-
18	4,184,557,977,600	-	6,301,801,658,880,000	20	1,294,129,475,100,000	1,084,694,638,075,969,536
19	-	28,740,096,000,000	4,776,102,309,888,000	21	2,465,008,524,000,000	4,132,170,049,813,217,280
20	3,228,087,582,720	40,954,636,800,000	4,537,297,194,393,600	22	4,705,925,364,000,000	4,273,039,483,329,576,960
21	3,074,369,126,400	13,001,472,000,000	4,321,235,423,232,000	23	-	3,772,850,915,046,850,560
22	5,869,250,150,400	12,410,496,000,000	-	24	6,470,647,375,500,000	3,615,648,793,586,565,120
24	2,690,072,985,600	-	15,124,323,981,312,000	25	2,070,607,160,160,000	-
25	-	21,842,472,960,000	-	28	1,844,756,393,000,000	6,198,255,074,719,825,920
27	-	-	10,082,882,654,208,000	29	-	2,992,261,070,554,398,720
28	-	-	3,240,926,567,424,000	30	1,150,337,311,200,000	2,892,519,034,869,252,096
30	2,152,058,388,480	22,752,576,000,000	6,049,729,592,524,800	31	8,349,222,420,000,000	8,397,635,907,684,925,440
31	-	-	5,854,577,025,024,000	33	3,137,283,576,000,000	2,629,562,758,972,047,360
35	-	15,601,766,400,000	-	35	-	4,958,604,059,775,860,736
36	-	-	7,562,161,990,656,000	37	2,798,117,784,000,000	7,035,857,111,844,126,720
39	-	-	4,653,638,148,096,000	40	2,588,258,950,200,000	4,338,778,552,303,878,144
40	-	13,651,545,600,000	-	42	2,465,008,524,000,000	4,132,170,049,813,217,280
				43	-	6,054,109,607,865,876,480
				44	-	1,972,172,069,229,035,520
				66	-	2,629,562,758,972,047,360
				67	2,317,843,836,000,000	-

t	M(23)	M(24)
1	1	1
2	12,895,196,031	7,824,165,773,823
3	4,439,485,318,400	41,138,526,264,109,568
4	168,337,922,163,840	4,503,919,846,345,920,000
5	162,280,574,337,024	1,383,604,176,797,466,624
6	6,010,524,974,488,320	355,413,767,746,439,001,600
7	4,868,417,230,110,720	681,072,096,823,569,285,120
8	31,948,988,072,601,600	2,996,367,795,377,013,657,600
9	29,684,656,499,097,600	1,421,695,995,492,014,161,920
10	37,486,812,671,852,544	1,830,508,325,903,048,343,552
11	92,942,510,756,659,200	9,509,134,160,535,316,070,400
12	166,923,601,880,555,520	19,132,363,256,407,302,021,120
13	104,858,217,263,923,200	5,364,126,962,353,255,219,200
14	121,710,430,752,768,000	37,337,312,773,531,598,848,000
15	56,798,201,017,958,400	7,980,628,891,767,787,487,232
16	255,591,904,580,812,800	39,225,178,412,208,178,790,400
17	240,557,086,664,294,400	73,835,629,952,391,865,928,400
18	246,125,537,744,486,400	47,941,884,726,032,218,521,600
20	136,315,682,443,100,160	26,150,118,941,472,119,193,600
21	97,368,344,602,214,400	84,676,575,620,004,957,388,800
22	278,827,532,269,977,600	28,527,402,481,605,948,211,200
23	355,606,128,112,435,200	109,148,322,538,318,410,547,200
24	255,591,904,580,812,800	122,033,888,393,536,556,236,800
26	314,574,651,791,769,600	48,277,142,661,179,296,972,800
27	151,461,869,381,222,400	46,489,100,340,394,878,566,400
28	146,052,516,903,321,600	44,828,775,328,237,918,617,600
29	-	86,565,910,978,666,325,606,400
30	238,552,444,275,425,280	52,300,237,882,944,238,387,200
33	-	76,073,073,284,282,528,563,200
35	116,842,013,522,657,280	35,863,020,262,590,334,894,080
36	227,192,804,071,833,600	52,300,237,882,944,238,387,200
39	209,716,434,527,846,400	42,913,015,698,826,041,753,600
42	97,368,344,602,214,400	74,714,625,547,063,197,696,000
45	-	55,786,920,408,473,854,279,680
60	68,157,841,221,550,080	20,920,095,153,177,695,354,880