

Character Tables of Multiplicity-Free Endomorphism Rings

$G = 3.F_{3+}.2$ (no. 2)

$H = O_{10}^-(2).2 \rightarrow (F_{3+}.2, 3)$

rank: 30

degree: 150532080426

	O_1	O_2	O_3	O_4	O_5	O_6	O_7
$1a^+$	1	2	75735	104448	208896	1570800	3141600
$8671a^-$	1	2	-15147	-13056	-26112	157080	314160
$57477a^+$	1	2	5265	16752	33504	145740	291480
$249458a^+$	1	2	9585	5664	11328	27300	54600
$555611a^-$	1	2	-4455	8544	17088	56100	112200
$1666833a^+$	1	2	6237	-2256	-4512	26400	52800
$35873145a^+$	1	2	2457	1776	3552	10020	20040
$48893768a^-$	1	2	-567	-2688	-5376	19380	38760
$79452373a^+$	1	2	-135	3072	6144	14340	28680
$415098112a^-$	1	2	-1917	-708	-1416	2730	5460
$1264015025a^+$	1	2	513	912	1824	1596	3192
$1540153692a^+$	1	2	837	-816	-1632	3000	6000
$2346900864a^-$	1	2	-945	588	1176	1110	2220
$3208653525a^+$	1	2	1161	48	96	-780	-1560
$10169903744a^-$	1	2	-297	-276	-552	30	60
$13904165275a^+$	1	2	189	48	96	192	384
$17161712568a^+$	1	2	-135	48	96	-780	-1560
$783ab$	1	-1	0	35904	-35904	392700	-392700
$64584ab$	1	-1	0	-8160	8160	89760	-89760
$306153ab$	1	-1	0	11208	-11208	84000	-84000
$6724809ab$	1	-1	0	-3984	3984	32340	-32340
$19034730ab$	1	-1	0	4440	-4440	24240	-24240
$43779879ab$	1	-1	0	-1104	1104	7860	-7860
$195019461ab$	1	-1	0	1704	-1704	4800	-4800
$203843871ab$	1	-1	0	336	-336	4260	-4260
$1050717096ab$	1	-1	0	-1104	1104	5340	-5340
$1818548820ab$	1	-1	0	912	-912	2568	-2568
$10726070355ab$	1	-1	0	192	-192	-492	492
$15016498497ab$	1	-1	0	-240	240	-60	60
$21096751104ab$	1	-1	0	30	-30	-330	330

	O_8	O_9	O_{10}	O_{11}	O_{12}
$1a^+$	12773376	25546752	45957120	67858560	91914240
$8671a^-$	798336	1596672	2010624	-3392928	4021248
$57477a^+$	145152	290304	-145920	1955016	-291840
$249458a^+$	-266112	-532224	798720	-302400	1597440
$555611a^-$	-57024	-114048	337920	178200	675840
$1666833a^+$	-14256	-28512	489984	28512	979968
$35873145a^+$	55296	110592	26304	129816	52608
$48893768a^-$	16848	33696	-37056	-132840	-74112
$79452373a^+$	-1728	-3456	-30720	26136	-61440
$415098112a^-$	-16632	-33264	34944	15120	69888
$1264015025a^+$	-6912	-13824	-6528	-21816	-13056
$1540153692a^+$	-5616	-11232	384	4752	768
$2346900864a^-$	4752	9504	10320	-4320	20640
$3208653525a^+$	3456	6912	12480	-7560	24960
$10169903744a^-$	3456	6912	-1776	-1728	-3552
$13904165275a^+$	-432	-864	-3072	6048	-6144
$17161712568a^+$	-1728	-3456	-480	-1080	-960
$783ab$	-798336	798336	2872320	8482320	-2872320
$64584ab$	-413424	413424	933504	-1332936	-933504
$306153ab$	90720	-90720	49920	703080	-49920
$6724809ab$	0	0	14784	-299376	-14784
$19034730ab$	-23328	23328	-42240	91368	42240
$43779879ab$	67392	-67392	106944	32400	-106944
$195019461ab$	14688	-14688	49920	-57240	-49920
$203843871ab$	-23328	23328	49344	58320	-49344
$1050717096ab$	-2160	2160	-14016	-9936	14016
$1818548820ab$	864	-864	-9984	6696	9984
$10726070355ab$	-3456	3456	1536	-7344	-1536
$15016498497ab$	-864	864	3264	3024	-3264
$21096751104ab$	2376	-2376	-2676	1404	2676

	O_{13}	O_{14}	O_{15}	O_{16}	O_{17}
$1a^+$	107233280	135717120	214466560	263208960	526417920
$8671a^-$	-1340416	-6785856	-2680832	-3290112	-6580224
$57477a^+$	4102784	3910032	8205568	-1983744	-3967488
$249458a^+$	546560	-604800	1093120	2419200	4838400
$555611a^-$	1168640	356400	2337280	1468800	2937600
$1666833a^+$	-256960	57024	-513920	-1237248	-2474496
$35873145a^+$	-75520	259632	-151040	262656	525312
$48893768a^-$	-65152	-265680	-130304	69120	138240
$79452373a^+$	111104	52272	222208	-100224	-200448
$415098112a^-$	-6832	30240	-13664	-30240	-60480
$1264015025a^+$	-2944	-43632	-5888	-6912	-13824
$1540153692a^+$	2240	9504	4480	24192	48384
$2346900864a^-$	-10720	-8640	-21440	8640	17280
$3208653525a^+$	7424	-15120	14848	-6912	-13824
$10169903744a^-$	7424	-3456	14848	-6912	-13824
$13904165275a^+$	-8128	12096	-16256	-6912	-13824
$17161712568a^+$	2240	-2160	4480	8640	17280
$783ab$	16755200	-8482320	-16755200	-8225280	8225280
$64584ab$	-694144	1332936	694144	4465152	-4465152
$306153ab$	1937600	-703080	-1937600	665280	-665280
$6724809ab$	-142912	299376	142912	-495936	495936
$19034730ab$	261440	-91368	-261440	1728	-1728
$43779879ab$	-53056	-32400	53056	292032	-292032
$195019461ab$	36800	57240	-36800	-95040	95040
$203843871ab$	-70336	-58320	70336	-70848	70848
$1050717096ab$	-4672	9936	4672	13824	-13824
$1818548820ab$	-16768	-6696	16768	13824	-13824
$10726070355ab$	512	7344	-512	13824	-13824
$15016498497ab$	5696	-3024	-5696	-1728	1728
$21096751104ab$	-2404	-1404	2404	-6588	6588

	O_{18}	O_{19}	O_{20}	O_{21}
$1a^+$	581644800	1085736960	1737179136	2171473920
$8671a^-$	14541120	27143424	-54286848	54286848
$57477a^+$	4918320	16284240	7112448	32568480
$249458a^+$	6933600	-393120	6483456	-786240
$555611a^-$	-5346000	1568160	-9808128	3136320
$1666833a^+$	-2138400	1012176	6956928	2024352
$35873145a^+$	537840	20304	485568	40608
$48893768a^-$	19440	456192	67392	912384
$79452373a^+$	-6480	-120960	200448	-241920
$415098112a^-$	173340	-9828	-202608	-19656
$1264015025a^+$	71280	-34128	3456	-68256
$1540153692a^+$	-64800	-54864	44928	-109728
$2346900864a^-$	-59940	-25380	-8208	-50760
$3208653525a^+$	9072	-5616	-53568	-11232
$10169903744a^-$	17820	-20196	4752	-40392
$13904165275a^+$	-2592	9936	-38016	19872
$17161712568a^+$	-6480	15120	37152	30240
$783ab$	0	101787840	0	-101787840
$64584ab$	0	10178784	0	-10178784
$306153ab$	0	5103000	0	-5103000
$6724809ab$	0	1496880	0	-1496880
$19034730ab$	0	68040	0	-68040
$43779879ab$	0	81648	0	-81648
$195019461ab$	0	-171720	0	171720
$203843871ab$	0	42768	0	-42768
$1050717096ab$	0	-45360	0	45360
$1818548820ab$	0	-27216	0	27216
$10726070355ab$	0	5184	0	-5184
$15016498497ab$	0	-14256	0	14256
$21096751104ab$	0	12474	0	-12474

	O_{22}	O_{23}	O_{24}	O_{25}
$1a^+$	5147197440	5428684800	7238246400	10294394880
$8671a^-$	80424960	-67858560	-90478080	160849920
$57477a^+$	-10730496	30119040	-7197120	-21460992
$249458a^+$	-5376000	5443200	-22377600	-10752000
$555611a^-$	5913600	1425600	1900800	11827200
$1666833a^+$	3480576	-498960	-665280	6961152
$35873145a^+$	561408	-544320	665280	1122816
$48893768a^-$	-652800	-149040	501120	-1305600
$79452373a^+$	-316416	-855360	17280	-632832
$415098112a^-$	-84000	-68040	279720	-168000
$1264015025a^+$	167424	124416	63936	334848
$1540153692a^+$	36096	19440	-60480	72192
$2346900864a^-$	-58080	77760	-50760	-116160
$3208653525a^+$	-74496	-15552	63936	-148992
$10169903744a^-$	36960	19440	-11880	73920
$13904165275a^+$	-12288	19440	-29376	-24576
$17161712568a^+$	-1920	-38880	17280	-3840
$783ab$	-160849920	339292800	-226195200	160849920
$64584ab$	-36765696	-20599920	35544960	36765696
$306153ab$	13009920	5896800	18295200	-13009920
$6724809ab$	2188032	-1995840	-1663200	-2188032
$19034730ab$	-1026048	-1412640	-1740960	1026048
$43779879ab$	215808	-51840	-833760	-215808
$195019461ab$	-168960	194400	237600	168960
$203843871ab$	-37632	142560	73440	37632
$1050717096ab$	-58368	174960	43200	58368
$1818548820ab$	70656	-33696	43200	-70656
$10726070355ab$	24576	31104	-34560	-24576
$15016498497ab$	17664	-38880	4320	-17664
$21096751104ab$	-26616	4860	9180	26616

	O_{26}	O_{27}	O_{28}	O_{29}
$1a^+$	10857369600	14476492800	17371791360	34743582720
$8671a^-$	-135717120	-180956160	108573696	217147392
$57477a^+$	60238080	-14394240	7983360	15966720
$249458a^+$	10886400	-44755200	-6289920	-12579840
$555611a^-$	2851200	3801600	-15966720	-31933440
$1666833a^+$	-997920	-1330560	-6044544	-12089088
$35873145a^+$	-1088640	1330560	-867456	-1734912
$48893768a^-$	-298080	1002240	-508032	-1016064
$79452373a^+$	-1710720	34560	552960	1105920
$415098112a^-$	-136080	559440	-39312	-78624
$1264015025a^+$	248832	127872	-152064	-304128
$1540153692a^+$	38880	-120960	210816	421632
$2346900864a^-$	155520	-101520	151200	302400
$3208653525a^+$	-31104	127872	44928	89856
$10169903744a^-$	38880	-23760	-48384	-96768
$13904165275a^+$	38880	-58752	-17280	-34560
$17161712568a^+$	-77760	34560	8640	17280
$783ab$	-339292800	226195200	542868480	-542868480
$64584ab$	20599920	-35544960	19388160	-19388160
$306153ab$	-5896800	-18295200	-8346240	8346240
$6724809ab$	1995840	1663200	1197504	-1197504
$19034730ab$	1412640	1740960	-2021760	2021760
$43779879ab$	51840	833760	-461376	461376
$195019461ab$	-194400	-237600	17280	-17280
$203843871ab$	-142560	-73440	-513216	513216
$1050717096ab$	-174960	-43200	-158976	158976
$1818548820ab$	33696	-43200	324864	-324864
$10726070355ab$	-31104	34560	-55296	55296
$15016498497ab$	38880	-4320	95040	-95040
$21096751104ab$	-4860	-9180	-52380	52380

	O_{30}
$1a^+$	37902090240
$8671a^-$	-118444032
$57477a^+$	-134120448
$249458a^+$	63866880
$555611a^-$	21150720
$1666833a^+$	6220800
$35873145a^+$	-1762560
$48893768a^-$	1368576
$79452373a^+$	1907712
$415098112a^-$	-199584
$1264015025a^+$	-456192
$1540153692a^+$	-518400
$2346900864a^-$	-246240
$3208653525a^+$	-20736
$10169903744a^-$	49248
$13904165275a^+$	165888
$17161712568a^+$	-51840
$783ab$	0
$64584ab$	0
$306153ab$	0
$6724809ab$	0
$19034730ab$	0
$43779879ab$	0
$195019461ab$	0
$203843871ab$	0
$1050717096ab$	0
$1818548820ab$	0
$10726070355ab$	0
$15016498497ab$	0
$21096751104ab$	0

References

- [Mül08] J. Müller. On the multiplicity-free actions of the sporadic simple groups. *J. Algebra*, 320:910–926, 2008.