

Character Tables of Multiplicity-Free Endomorphism Rings

$G = (2.Fi_{22}.2)^*$ (no. 5)

$H = O_8^+(2) : 2 \rightarrow (Fi_{22}.2, 11)$

rank: 19

degree: 741312

	O_1	O_2	O_3	O_4	O_5	O_6	O_7	O_8	O_9	O_{10}	O_{11}	O_{12}
$1a^+$	1	1	2	2	2	2	2	3150	3150	6300	6300	22400
$429a^+$	1	1	-1	-1	-1	-1	2	630	630	-630	-630	2240
$429a^-$	1	1	1	1	-1	-1	-2	630	-630	630	-630	2240
$1001a^+$	1	1	-2	-2	2	2	-2	-450	450	900	-900	800
$3080a^+$	1	1	2	2	2	2	2	342	342	684	684	-64
$10725a^-$	1	1	-2	-2	2	2	-2	126	-126	-252	252	224
$13650a^+$	1	1	2	2	2	2	2	-18	-18	-36	-36	224
$45045a^+$	1	1	2	2	2	2	2	-18	-18	-36	-36	-64
$48048a^+$	1	1	-1	-1	-1	-1	2	-90	-90	90	90	80
$48048a^-$	1	1	1	1	-1	-1	-2	-90	90	-90	90	80
$50050a^-$	1	1	-2	-2	2	2	-2	-18	18	36	-36	-64
$75075a^+$	1	1	-1	-1	-1	-1	2	54	54	-54	-54	-64
$75075a^-$	1	1	1	1	-1	-1	-2	54	-54	54	-54	-64
$352a^+$	1	-1	r3	-r3	-1	1	0	0	0	0	0	2800
$352a^-$	1	-1	-r3	r3	-1	1	0	0	0	0	0	2800
$13728ab$	1	-1	0	0	2	-2	0	0	0	0	0	280
$48048bc$	1	-1	0	0	2	-2	0	0	0	0	0	-80
$123200a^+$	1	-1	r3	-r3	-1	1	0	0	0	0	0	-8
$123200a^-$	1	-1	-r3	r3	-1	1	0	0	0	0	0	-8

	O_{13}	O_{14}	O_{15}	O_{16}	O_{17}	O_{18}	O_{19}
$1a^+$	22400	44800	44800	44800	44800	44800	453600
$429a^+$	2240	4480	-2240	-2240	-2240	-2240	0
$429a^-$	2240	-4480	-2240	-2240	2240	2240	0
$1001a^+$	800	-1600	1600	1600	-1600	-1600	0
$3080a^+$	-64	-128	-128	-128	-128	-128	-1296
$10725a^-$	224	-448	448	448	-448	-448	0
$13650a^+$	224	448	448	448	448	448	-2592
$45045a^+$	-64	-128	-128	-128	-128	-128	864
$48048a^+$	80	160	-80	-80	-80	-80	0
$48048a^-$	80	-160	-80	-80	80	80	0
$50050a^-$	-64	128	-128	-128	128	128	0
$75075a^+$	-64	-128	64	64	64	64	0
$75075a^-$	-64	128	64	64	-64	-64	0
$352a^+$	-2800	0	2800	-2800	2800r3	-2800r3	0
$352a^-$	-2800	0	2800	-2800	-2800r3	2800r3	0
$13728ab$	-280	0	-560	560	0	0	0
$48048bc$	80	0	160	-160	0	0	0
$123200a^+$	8	0	-8	8	-8r3	8r3	0
$123200a^-$	8	0	-8	8	8r3	-8r3	0

$r3 = \text{Sqrt}(3)$

References

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