

Character Tables of Multiplicity-Free Endomorphism Rings

$G = M_{12}.2$ (no. 11)

$H = M_8.(A_4 \times 2) < M_8.(S_4 \times 2)$

rank: 13

degree: 990

	O_1	O_2	O_3	O_4	O_5	O_6	O_7	O_8	O_9
$1a^+$	1	1	12	16	16	48	64	64	96
$11ab$	1	1	-6	-8	-8	12	16	16	24
$45a^-$	1	-1	0	8	-8	0	16	-16	8
$54a^+$	1	1	$4-2r_5$	$2+2r_5$	$2+2r_5$	$2-6r_5$	$6+2r_5$	$6+2r_5$	$-6+2r_5$
$54a^-$	1	1	$4+2r_5$	$2-2r_5$	$2-2r_5$	$2+6r_5$	$6-2r_5$	$6-2r_5$	$-6-2r_5$
$55a^+$	1	1	-6	4	4	12	4	4	-12
$66a^+$	1	1	6	4	4	0	-8	-8	12
$66a^-$	1	-1	0	4	-4	0	-8	8	12
$99a^-$	1	1	2	-4	-4	-12	4	4	-4
$120a^+$	1	-1	0	$-2-2r_3$	$2+2r_3$	0	$4+2r_3$	$-4-2r_3$	$-6+6r_3$
$120a^-$	1	-1	0	$-2+2r_3$	$2-2r_3$	0	$4-2r_3$	$-4+2r_3$	$-6-6r_3$
$144a^+$	1	1	-4	-1	-1	0	-8	-8	2
$144a^-$	1	-1	0	-1	1	0	-8	8	2

	O_{10}	O_{11}	O_{12}	O_{13}
$1a^+$	96	192	192	192
$11ab$	24	-24	-24	-24
$45a^-$	-8	16	0	-16
$54a^+$	$-6+2r_5$	$-14-2r_5$	16	$-14-2r_5$
$54a^-$	$-6-2r_5$	$-14+2r_5$	16	$-14+2r_5$
$55a^+$	-12	12	-24	12
$66a^+$	12	0	-24	0
$66a^-$	-12	-24	0	24
$99a^-$	-4	12	-8	12
$120a^+$	$6-6r_3$	-6	0	6
$120a^-$	$6+6r_3$	-6	0	6
$144a^+$	2	0	16	0
$144a^-$	-2	16	0	-16

$r_3 = \text{Sqrt}(3)$

$r_5 = \text{Sqrt}(5)$

References

[Höh01] I. Höhler. Vielfachheitsfreie Permutationsdarstellungen und die Invarianten zugehöriger Graphen. Examensarbeit, RWTH Aachen, 2001.