

Character Tables of Multiplicity-Free Endomorphism Rings

$G = (2.M_{22}.2)^*$ (no. 1)

$H = A_7 \rightarrow (M_{22}.2, 7)$

rank: 10

degree: 704

	O_1	O_2	O_3	O_4	O_5	O_6	O_7	O_8	O_9	O_{10}
$1a^+$	1	1	15	15	35	35	105	105	140	252
$1a^-$	1	1	-15	-15	-35	-35	105	105	140	-252
$21a^+$	1	1	-7	-7	13	13	17	17	-36	-12
$21a^-$	1	1	7	7	-13	-13	17	17	-36	12
$154a^+$	1	1	3	3	3	3	-3	-3	4	-12
$154a^-$	1	1	-3	-3	-3	-3	-3	-3	4	12
$56a^+$	1	-1	$3i5$	$-3i5$	$i5$	$-i5$	-15	15	0	0
$56a^-$	1	-1	$-3i5$	$3i5$	$-i5$	$i5$	-15	15	0	0
$120a^+$	1	-1	i	$-i$	$-7i$	$7i$	7	-7	0	0
$120a^-$	1	-1	$-i$	i	$7i$	$-7i$	7	-7	0	0

$i = \text{Sqrt}(-1)$

$i5 = \text{Sqrt}(-5)$

References

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