

Character Tables of Multiplicity-Free Endomorphism Rings

$G = 3.M_{22}.2$ (no. 2)

$H = 2^5 : S_5 \rightarrow (M_{22}.2, 8)$

rank: 7

degree: 693

	O_1	O_2	O_3	O_4	O_5	O_6	O_7
$1a^+$	1	2	30	60	120	160	320
$21a^+$	1	2	-3	-6	54	-16	-32
$55a^+$	1	2	9	18	-6	-8	-16
$154a^+$	1	2	-3	-6	-6	4	8
$21bc$	1	-1	15	-15	0	20	-20
$105ad$	1	-1	$-1+b_{33}^*$	$2+b_{33}$	0	$-2+2r_{33}$	$2-2r_{33}$
$105bc$	1	-1	$-1+b_{33}$	$2+b_{33}^*$	0	$-2-2r_{33}$	$2+2r_{33}$

$b_{33} = (-1 + \text{Sqrt}(33))/2$

$b_{33}^* = (-1 - \text{Sqrt}(33))/2$

$r_{33} = \text{Sqrt}(33)$

References

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