

Character Tables of Multiplicity-Free Endomorphism Rings

$G = 3.M_{22}.2$ (no. 4)

$H = 2^3 : L_3(2) \times 2 \rightarrow (M_{22}.2, 11)$

rank: 9

degree: 990

	O_1	O_2	O_3	O_4	O_5	O_6	O_7	O_8	O_9
$1a^+$	1	2	7	14	42	84	168	336	336
$21a^+$	1	2	-4	-8	9	18	-30	-60	72
$55a^+$	1	2	4	8	9	18	-6	-12	-24
$99a^+$	1	2	-3	-6	2	4	8	16	-24
$154a^+$	1	2	1	2	-6	-12	0	0	12
$21bc$	1	-1	5	-5	18	-18	24	-24	0
$99bc$	1	-1	0	0	-7	7	14	-14	0
$105ad$	1	-1	b33*	-b33*	2+b33	-1+b33*	-9+r33	9-r33	0
$105bc$	1	-1	b33	-b33	2+b33*	-1+b33	-9-r33	9+r33	0

$-b33 = (1 - Sqrt(33))/2$

$-b33^* = (1 + Sqrt(33))/2$

$b33 = (-1 + Sqrt(33))/2$

$b33^* = (-1 - Sqrt(33))/2$

$r33 = Sqrt(33)$

References

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