

Character Tables of Multiplicity-Free Endomorphism Rings

$G = 2.Fi_{22}.2$ (no. 1)

$H = O_7(3) \rightarrow (Fi_{22}.2, 3)$

rank: 9

degree: 56320

	O_1	O_2	O_3	O_4	O_5	O_6	O_7	O_8
$1a^+$	1	1	728	1080	1080	3159	3159	21840
$1a^-$	1	1	-728	-1080	-1080	3159	3159	21840
$429a^+$	1	1	168	-120	-120	279	279	-560
$429a^-$	1	1	-168	120	120	279	279	-560
$13650a^+$	1	1	24	24	24	-9	-9	16
$13650a^-$	1	1	-24	-24	-24	-9	-9	16
$352a^+$	1	-1	0	$120+240z3$	$120+240z3^{**}$	351	-351	0
$352a^-$	1	-1	0	$120+240z3^{**}$	$120+240z3$	351	-351	0
$13728ab$	1	-1	0	0	0	-9	9	0

	O_9
$1a^+$	25272
$1a^-$	-25272
$429a^+$	72
$429a^-$	-72
$13650a^+$	-72
$13650a^-$	72
$352a^+$	0
$352a^-$	0
$13728ab$	0

$z3 = (-1 + \sqrt{-3})/2$

$z3^{**} = (-1 - \sqrt{-3})/2$

References

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