

Character Tables of Multiplicity-Free Endomorphism Rings

$G = 6.Fi_{22}$ (no. 5)

$H = O_8^+(2) : 2 \rightarrow (2.Fi_{22}, 6), (3.Fi_{22}, 4)$

rank: 25

degree: 1111968

	O_1	O_2	O_3	O_4	O_5	O_6	O_7	O_8	O_9	O_{10}
$1a$	1	1	1	1	1	1	2	2	2	2
$429a$	1	1	1	1	1	1	-1	-1	-1	-1
$3080a$	1	1	1	1	1	1	2	2	2	2
$13650a$	1	1	1	1	1	1	2	2	2	2
$45045a$	1	1	1	1	1	1	2	2	2	2
$48048a$	1	1	1	1	1	1	-1	-1	-1	-1
$75075a$	1	1	1	1	1	1	-1	-1	-1	-1
$352a$	1	-1	1	-1	1	-1	-1	1	-1	1
$13728a$	1	-1	1	-1	1	-1	2	-2	2	-2
$48048b$	1	-1	1	-1	1	-1	2	-2	2	-2
$123200a$	1	-1	1	-1	1	-1	-1	1	-1	1
$351a$	1	$z3$	$z3^{**}$	1	$z3$	$z3^{**}$	2	$2z3$	$2z3^{**}$	2
$351b$	1	$z3^{**}$	$z3$	1	$z3^{**}$	$z3$	2	$2z3^{**}$	$2z3$	2
$19305a$	1	$z3$	$z3^{**}$	1	$z3$	$z3^{**}$	2	$2z3$	$2z3^{**}$	2
$19305b$	1	$z3^{**}$	$z3$	1	$z3^{**}$	$z3$	2	$2z3^{**}$	$2z3$	2
$27027a$	1	$z3$	$z3^{**}$	1	$z3$	$z3^{**}$	-1	$-z3$	$-z3^{**}$	-1
$27027b$	1	$z3^{**}$	$z3$	1	$z3^{**}$	$z3$	-1	$-z3^{**}$	$-z3$	-1
$42120a$	1	$z3$	$z3^{**}$	1	$z3$	$z3^{**}$	2	$2z3$	$2z3^{**}$	2
$42120b$	1	$z3^{**}$	$z3$	1	$z3^{**}$	$z3$	2	$2z3^{**}$	$2z3$	2
$96525a$	1	$z3$	$z3^{**}$	1	$z3$	$z3^{**}$	-1	$-z3$	$-z3^{**}$	-1
$96525b$	1	$z3^{**}$	$z3$	1	$z3^{**}$	$z3$	-1	$-z3^{**}$	$-z3$	-1
$61776a$	1	$-z3$	$z3^{**}$	-1	$z3$	$-z3^{**}$	2	$-2z3$	$2z3^{**}$	-2
$61776b$	1	$-z3^{**}$	$z3$	-1	$z3^{**}$	$-z3$	2	$-2z3^{**}$	$2z3$	-2
$123552c$	1	$-z3$	$z3^{**}$	-1	$z3$	$-z3^{**}$	-1	$z3$	$-z3^{**}$	1
$123552d$	1	$-z3^{**}$	$z3$	-1	$z3^{**}$	$-z3$	-1	$z3^{**}$	$-z3$	1

	O_{11}	O_{12}	O_{13}	O_{14}	O_{15}	O_{16}	O_{17}
$1a$	2	2	3150	3150	3150	6300	6300
$429a$	-1	-1	630	630	630	-630	-630
$3080a$	2	2	342	342	342	684	684
$13650a$	2	2	-18	-18	-18	-36	-36
$45045a$	2	2	-18	-18	-18	-36	-36
$48048a$	-1	-1	-90	-90	-90	90	90
$75075a$	-1	-1	54	54	54	-54	-54
$352a$	-1	1	0	0	0	0	0
$13728a$	2	-2	0	0	0	0	0
$48048b$	2	-2	0	0	0	0	0
$123200a$	-1	1	0	0	0	0	0
$351a$	2z3	2z3**	750	750z3	750z3**	1500	1500z3**
$351b$	2z3**	2z3	750	750z3**	750z3	1500	1500z3
$19305a$	2z3	2z3**	78	78z3	78z3**	156	156z3**
$19305b$	2z3**	2z3	78	78z3**	78z3	156	156z3
$27027a$	-z3	-z3**	150	150z3	150z3**	-150	-150z3**
$27027b$	-z3**	-z3	150	150z3**	150z3	-150	-150z3
$42120a$	2z3	2z3**	-42	-42z3	-42z3**	-84	-84z3**
$42120b$	2z3**	2z3	-42	-42z3**	-42z3	-84	-84z3
$96525a$	-z3	-z3**	-42	-42z3	-42z3**	42	42z3**
$96525b$	-z3**	-z3	-42	-42z3**	-42z3	42	42z3
$61776a$	2z3	-2z3**	0	0	0	0	0
$61776b$	2z3**	-2z3	0	0	0	0	0
$123552c$	-z3	z3**	0	0	0	0	0
$123552d$	-z3**	z3	0	0	0	0	0

	O_{18}	O_{19}	O_{20}	O_{21}	O_{22}	O_{23}	O_{24}
$1a$	6300	67200	67200	134400	134400	226800	226800
$429a$	-630	6720	6720	-6720	-6720	0	0
$3080a$	684	-192	-192	-384	-384	-648	-648
$13650a$	-36	672	672	1344	1344	-1296	-1296
$45045a$	-36	-192	-192	-384	-384	432	432
$48048a$	90	240	240	-240	-240	0	0
$75075a$	-54	-192	-192	192	192	0	0
$352a$	0	8400	-8400	-8400	8400	0	0
$13728a$	0	840	-840	1680	-1680	0	0
$48048b$	0	-240	240	-480	480	0	0
$123200a$	0	-24	24	24	-24	0	0
$351a$	1500z3	0	0	0	0	10800	10800z3
$351b$	1500z3**	0	0	0	0	10800	10800z3**
$19305a$	156z3	0	0	0	0	-1296	-1296z3
$19305b$	156z3**	0	0	0	0	-1296	-1296z3**
$27027a$	-150z3	0	0	0	0	0	0
$27027b$	-150z3**	0	0	0	0	0	0
$42120a$	-84z3	0	0	0	0	504	504z3
$42120b$	-84z3**	0	0	0	0	504	504z3**
$96525a$	42z3	0	0	0	0	0	0
$96525b$	42z3**	0	0	0	0	0	0
$61776a$	0	0	0	0	0	0	0
$61776b$	0	0	0	0	0	0	0
$123552c$	0	0	0	0	0	0	0
$123552d$	0	0	0	0	0	0	0

	O_{25}
$1a$	226800
$429a$	0
$3080a$	-648
$13650a$	-1296
$45045a$	432
$48048a$	0
$75075a$	0
$352a$	0
$13728a$	0
$48048b$	0
$123200a$	0
$351a$	$10800z3^{**}$
$351b$	$10800z3$
$19305a$	$-1296z3^{**}$
$19305b$	$-1296z3$
$27027a$	0
$27027b$	0
$42120a$	$504z3^{**}$
$42120b$	$504z3$
$96525a$	0
$96525b$	0
$61776a$	0
$61776b$	0
$123552c$	0
$123552d$	0

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

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

References

[Lin] S. A. Linton. private communication.