

Character Tables of Multiplicity-Free Endomorphism Rings

$G = J_1$ (no. 2)

$H = 2^3.7.3$

rank: 11

degree: 1045

	O_1	O_2	O_3	O_4
$1a$	1	8	28	56
$56a$	1	-2-r5	1+3r5	1+4r5
$56b$	1	-2+r5	1-3r5	1-4r5
$76a$	1	2	11	-4
$77b$	1	-2-r5	-7	1+4r5
$77c$	1	-2+r5	-7	1-4r5
$120a$	1	-c19-2c19*2-2c19*4	2c19*4	4c19-c19*2
$120b$	1	-2c19-2c19*2-c19*4	2c19*2	-c19+4c19*4
$120c$	1	-2c19-c19*2-2c19*4	2c19	4c19*2-c19*4
$133a$	1	3	1	1
$209a$	1	-3	1	1

	O_5	O_6	O_7
$1a$	56	56	168
$56a$	-11-r5	15+7b5*	6r5
$56b$	-11+r5	15+7b5	-6r5
$76a$	4	-2	-24
$77b$	-4+4r5	-4-r5	3
$77c$	-4-4r5	-4+r5	3
$120a$	-c19+2c19*2-2c19*4	7c19+7c19*2+6c19*4	-6c19-2c19*2-c19*4
$120b$	2c19-2c19*2-c19*4	7c19+6c19*2+7c19*4	-2c19-c19*2-6c19*4
$120c$	-2c19-c19*2+2c19*4	6c19+7c19*2+7c19*4	-c19-6c19*2-2c19*4
$133a$	4	9	15
$209a$	4	3	-9

	O_8	O_9	O_{10}
$1a$	168	168	168
$56a$	$-15+3b_5$	$18+9b_5$	$-6-6r_5$
$56b$	$-15+3b_5^*$	$18+9b_5^*$	$-6+6r_5$
$76a$	-6	12	18
$77b$	$3-9r_5$	$3-3r_5$	$18+3r_5$
$77c$	$3+9r_5$	$3+3r_5$	$18-3r_5$
$120a$	$3c_{19}+c_{19}^2+2c_{19}^4$	$-c_{19}+2c_{19}^2-5c_{19}^4$	$5c_{19}+4c_{19}^2+8c_{19}^4$
$120b$	$c_{19}+2c_{19}^2+3c_{19}^4$	$2c_{19}-5c_{19}^2-c_{19}^4$	$4c_{19}+8c_{19}^2+5c_{19}^4$
$120c$	$2c_{19}+3c_{19}^2+c_{19}^4$	$-5c_{19}-c_{19}^2+2c_{19}^4$	$8c_{19}+5c_{19}^2+4c_{19}^4$
$133a$	-4	-14	-1
$209a$	14	-8	-7

	O_{11}
$1a$	168
$56a$	$-15b_5$
$56b$	$-15b_5^*$
$76a$	-12
$77b$	$-12+3r_5$
$77c$	$-12-3r_5$
$120a$	$-9c_{19}-10c_{19}^2-7c_{19}^4$
$120b$	$-10c_{19}-7c_{19}^2-9c_{19}^4$
$120c$	$-7c_{19}-9c_{19}^2-10c_{19}^4$
$133a$	-15
$209a$	3

$$-15b_5 = (15 - 15 * \text{Sqrt}(5))/2$$

$$-15b_5^* = (15 + 15 * \text{Sqrt}(5))/2$$

$$b_5 = (-1 + \text{Sqrt}(5))/2$$

$$b_5^* = (-1 - \text{Sqrt}(5))/2$$

$$c_{19} = z_{19} + z_{19}^7 + z_{19}^8 + z_{19}^{11} + z_{19}^{12} + z_{19}^{18}$$

$$r_5 = \text{Sqrt}(5)$$

References

- [Höh01] I. Höhler. Vielfachheitsfreie Permutationsdarstellungen und die Invarianten zugehöriger Graphen. Examensarbeit, RWTH Aachen, 2001.