

# Character Tables of Multiplicity-Free Endomorphism Rings

$G = 3.ON$  (no. 4)

$H = L_3(7) \rightarrow (ON, 4)$

rank: 15

degree: 736560

|           | $O_1$ | $O_2$      | $O_3$     | $O_4$ | $O_5$     | $O_6$      | $O_7$ | $O_8$         | $O_9$         |
|-----------|-------|------------|-----------|-------|-----------|------------|-------|---------------|---------------|
| $1a$      | 1     | 1          | 1         | 1     | 1         | 1          | 11172 | 11172         | 11172         |
| $10944a$  | 1     | 1          | 1         | 1     | 1         | 1          | 392   | 392           | 392           |
| $26752a$  | 1     | 1          | 1         | 1     | 1         | 1          | -42   | -42           | -42           |
| $32395b$  | 1     | 1          | 1         | 1     | 1         | 1          | 84    | 84            | 84            |
| $37696a$  | 1     | -1         | 1         | -1    | 1         | -1         | 0     | 0             | 0             |
| $52668a$  | 1     | 1          | 1         | 1     | 1         | 1          | -112  | -112          | -112          |
| $85064a$  | 1     | -1         | 1         | -1    | 1         | -1         | 0     | 0             | 0             |
| $495a$    | 1     | $z3^{**}$  | $z3$      | 1     | $z3^{**}$ | $z3$       | 1596  | $1596z3$      | $1596z3^{**}$ |
| $495b$    | 1     | $z3$       | $z3^{**}$ | 1     | $z3$      | $z3^{**}$  | 1596  | $1596z3^{**}$ | $1596z3$      |
| $58653b$  | 1     | $z3^{**}$  | $z3$      | 1     | $z3^{**}$ | $z3$       | 108   | $108z3$       | $108z3^{**}$  |
| $58653c$  | 1     | $z3$       | $z3^{**}$ | 1     | $z3$      | $z3^{**}$  | 108   | $108z3^{**}$  | $108z3$       |
| $63612a$  | 1     | $z3^{**}$  | $z3$      | 1     | $z3^{**}$ | $z3$       | -112  | $-112z3$      | $-112z3^{**}$ |
| $63612b$  | 1     | $z3$       | $z3^{**}$ | 1     | $z3$      | $z3^{**}$  | -112  | $-112z3^{**}$ | $-112z3$      |
| $122760a$ | 1     | $-z3^{**}$ | $z3$      | -1    | $z3^{**}$ | $-z3$      | 0     | 0             | 0             |
| $122760b$ | 1     | $-z3$      | $z3^{**}$ | -1    | $z3$      | $-z3^{**}$ | 0     | 0             | 0             |

|           | $O_{10}$ | $O_{11}$ | $O_{12}$      | $O_{13}$      | $O_{14}$ | $O_{15}$ |
|-----------|----------|----------|---------------|---------------|----------|----------|
| $1a$      | 38304    | 117306   | 117306        | 117306        | 156408   | 156408   |
| $10944a$  | -636     | -504     | -504          | -504          | 483      | 483      |
| $26752a$  | 666      | -504     | -504          | -504          | 483      | 483      |
| $32395b$  | 288      | 378      | 378           | 378           | -840     | -840     |
| $37696a$  | 0        | 0        | 0             | 0             | -1029    | 1029     |
| $52668a$  | -384     | 126      | 126           | 126           | 168      | 168      |
| $85064a$  | 0        | 0        | 0             | 0             | 456      | -456     |
| $495a$    | 0        | 5586     | $5586z3$      | $5586z3^{**}$ | 0        | 0        |
| $495b$    | 0        | 5586     | $5586z3^{**}$ | $5586z3$      | 0        | 0        |
| $58653b$  | 0        | -366     | $-366z3$      | $-366z3^{**}$ | 0        | 0        |
| $58653c$  | 0        | -366     | $-366z3^{**}$ | $-366z3$      | 0        | 0        |
| $63612a$  | 0        | 294      | $294z3$       | $294z3^{**}$  | 0        | 0        |
| $63612b$  | 0        | 294      | $294z3^{**}$  | $294z3$       | 0        | 0        |
| $122760a$ | 0        | 0        | 0             | 0             | 0        | 0        |
| $122760b$ | 0        | 0        | 0             | 0             | 0        | 0        |

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

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

## References

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