

# Character Tables of Multiplicity-Free Endomorphism Rings

$G = 2.M_{12}$  (no. 8)  
 $H = 3^2.2.S_4 \rightarrow (M_{12}, 13)$   
rank: 9  
degree: 440

|        | $O_1$ | $O_2$ | $O_3$ | $O_4$ | $O_5$ | $O_6$ | $O_7$ | $O_8$ | $O_9$ |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $1a$   | 1     | 1     | 12    | 12    | 54    | 72    | 72    | 108   | 108   |
| $11b$  | 1     | 1     | -4    | -4    | 30    | -24   | -24   | 12    | 12    |
| $54a$  | 1     | 1     | 1     | 1     | 10    | 6     | 6     | -13   | -13   |
| $55a$  | 1     | 1     | 5     | 5     | -6    | -6    | -6    | 3     | 3     |
| $99a$  | 1     | 1     | -3    | -3    | -6    | 2     | 2     | 3     | 3     |
| $12a$  | 1     | -1    | 8     | -8    | 0     | 0     | 0     | -36   | 36    |
| $44a$  | 1     | -1    | 3     | -3    | 0     | -6i5  | 6i5   | 9     | -9    |
| $44b$  | 1     | -1    | 3     | -3    | 0     | 6i5   | -6i5  | 9     | -9    |
| $120b$ | 1     | -1    | -3    | 3     | 0     | 0     | 0     | -3    | 3     |

$i5 = Sqrt(-5)$

## References

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