

# Character Tables of Multiplicity-Free Endomorphism Rings

$G = HN$  (no. 1)

$H = A_{12}$

rank: 12

degree: 1140000

|           | $O_1$ | $O_2$ | $O_3$  | $O_4$  | $O_5$ | $O_6$ | $O_7$ | $O_8$ |
|-----------|-------|-------|--------|--------|-------|-------|-------|-------|
| $1a$      | 1     | 462   | 2520   | 2520   | 10395 | 16632 | 30800 | 69300 |
| $133a$    | 1     | -198  | 360r5  | -360r5 | 2475  | 792   | 4400  | -9900 |
| $133b$    | 1     | -198  | -360r5 | 360r5  | 2475  | 792   | 4400  | -9900 |
| $760a$    | 1     | 132   | -540   | -540   | 1485  | -1188 | 1100  | 4950  |
| $3344a$   | 1     | 12    | 120    | 120    | 495   | 1332  | -2200 | 300   |
| $8910a$   | 1     | 82    | 240    | 240    | 515   | -88   | 400   | 900   |
| $16929a$  | 1     | 62    | -120   | -120   | 155   | 632   | 400   | -300  |
| $35112a$  | 1     | -48   | 60r5   | -60r5  | 225   | -108  | -100  | -150  |
| $35112b$  | 1     | -48   | -60r5  | 60r5   | 225   | -108  | -100  | -150  |
| $267520a$ | 1     | 12    | 30     | 30     | -45   | -18   | 50    | -150  |
| $365750a$ | 1     | -18   | 0      | 0      | -45   | 72    | 80    | 180   |
| $406296a$ | 1     | 12    | -20    | -20    | 5     | -68   | -100  | -50   |

|           | $O_9$   | $O_{10}$ | $O_{11}$ | $O_{12}$ |
|-----------|---------|----------|----------|----------|
| $1a$      | 166320  | 166320   | 311850   | 362880   |
| $133a$    | -7920r5 | 7920r5   | -14850   | 17280    |
| $133b$    | 7920r5  | -7920r5  | -14850   | 17280    |
| $760a$    | -5940   | -5940    | 0        | 6480     |
| $3344a$   | -1080   | -1080    | -900     | 2880     |
| $8910a$   | 640     | 640      | -1650    | -1920    |
| $16929a$  | 80      | 80       | 1050     | -1920    |
| $35112a$  | 180r5   | -180r5   | 900      | -720     |
| $35112b$  | -180r5  | 180r5    | 900      | -720     |
| $267520a$ | -270    | -270     | 450      | 180      |
| $365750a$ | 0       | 0        | -270     | 0        |
| $406296a$ | 180     | 180      | -200     | 80       |

$r5 = Sqrt(5)$

## References

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