More on Latin Square of order 6

Here are the results for checking Mann’s rejectable structures for Latin Square of order 6 from the book ‘Latin Squares and their applications’ by Keedwell.

Latin square is the Latin square ID as indicated in the book. The hidden columns and rows are the columns and rows that contains Mann’s reject-able structures. There could be more but only one of them are recorded. The sum is the sum of top three frequency values of the hidden Mann’s structures, always 8 or 9

|  |  |  |  |
| --- | --- | --- | --- |
| **Latin square** | **Hidden columns** | **Hidden rows** | **Sum** |
| 1.1.1 | 1-3-5 | 1-3-5 | (did not record) |
| 2.1.1 | 1-5-6 | 1-5-6 | (did not record) |
| 3.1.1 | 1-2-3 | 1-2-3 | (did not record) |
| 4.1.1 | 1-3-5 | 1-3-5 | (did not record) |
| 4.1.2 | 1-5-6 | 1-5-6 | 8 |
| 5.1.1 | 1-3-5 | 1-3-6 | 8 |
| 5.1.2 | 1-5-6 | 1-5-6 | 8 |
| 5.1.3 | 1-4-5 | 1-4-5 | 8 |
| 5.1.4 | 1-4-5 | 1-4-6 | 8 |
| 5.1.5 | 1-4-6 | 1-4-5 | 8 |
| 9.1.1\* | 1-2-3 | 1-2-3 | 9 |
| 12.1.1 | 134 | 134 | 8 |
| 12.1.2 | 156 | 156 | 8 |
| 12.1.3 | 145 | 145 | 8 |
| 12.1.4 | 136 | 136 | 8 |
| 12.1.5 | 145 | 145 | 8 |
| 12.1.6 | 126 | 126 | 8 |
| 12.1.7 | 135 | 136 | 8 |
| 12.1.8 | 136 | 135 | 8 |
| 12.1.9 | 123 | 124 | 8 |
| 12.1.10 | 124 | 123 | 8 |
| 12.2.1 | 156 | 156 | 8 |
| 12.2.2 | 134 | 134 | 8 |
| 12.2.3 | 145 | 156 | 8 |
| 12.2.4 | 136 | 136 | 8 |
| 12.2.5 | 145 | 156 | 8 |
| 12.2.6 | 126 | 126 | 8 |
| 12.2.7 | 135 | 135 | 8 |
| 12.2.8 | 135 | 136 | 8 |
| 12.2.9 | 123 | 123 | 8 |
| 12.2.10 | 123 | 124 | 8 |

All Latin square order 6 of classes 1, 2, 3, 4, and 5 contain some Mann’s reject-able structures.

All Latin square of order 6 of class 6 does not contain any Mann’s reject-able structures.

No hidden Mann’s can be found for class 7, 8, 10 and 11.

\*All LS in class 9 has distribution [6 6 6 0 0 0] in sub-square I