**Report of AI Task-04  
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**ID:** 201514044

**Problem’s Characteristics:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Book No | Problem No | No of total Clues | No of total Horizontal Sums | No of total Vertical Sums | Max no of cells for Horizontal sums | Max no of cells for Vertical sums |
| Book-1 | Problem-1 (4) | 12 | 6 | 6 | 4 | 4 |
| Book-1 | Problem-2 (8) | 12 | 6 | 6 | 4 | 5 |
| Book-2 | Problem-1 (4) | 32 | 16 | 16 | 4 | 5 |

**For the First Formulation:**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Book No | Problem No | No of Variables | No of Constraints | No of nodes | No of backtrack | No of Fail | Resolution Time |  |  |  |  |
| Book-1 | Problem-1 (4) | 81 | 96 | 5 (299.2 n/s) | 0 | 0 | 0.017s |  |  |  |  |
| Book-1 | Problem-2 (8) | 81 | 94 | 5 (314.1 n/s) | 0 | 0 | 0.016s |  |  |  |  |
| Book-2 | Problem-1 (4) | 179 | 202 | 14 (637.6 n/s) | 2 | 2 | 0.022s |  |  |  |  |

**For the Second Formulation:**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Book No | Problem No | No of Variables | No of Constraints | No of nodes | No of backtrack | No of Fail | Resolution Time |  |  |  |  |
| Book-1 | Problem-1 (4) | 81 | 125 | 3 (135.6 n/s) | 1 | 1 | 0.022s |  |  |  |  |
| Book-1 | Problem-2 (8) | 81 | 114 | 5 (309.4 n/s) | 0 | 0 | 0.016s |  |  |  |  |
| Book-2 | Problem-1 (4) | 179 | 257 | 12 (627.5 n/s) | 1 | 1 | 0.019s |  |  |  |  |