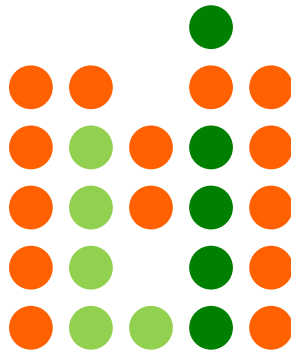




## Instructions Booklet for Finals

If you have any questions, please post at <http://logicmastersindia.com/t/?tid=894>



## Rounds Structure

There will be 3 rounds in the finals.

| Round   | Name            | Minutes | Points | Number of Sudokus |
|---------|-----------------|---------|--------|-------------------|
| Round 1 | Classics        | 40      | 400    | 6                 |
| Round 2 | Multi Classics  | 40      | 400    | 3                 |
| Round 3 | Common Variants | 50      | 500    | 7                 |

## Points and Bonus Structure

Each Sudoku will have assigned some points to it, which is based on the difficulty of the grid. There are no partial points – that means if you solve the Sudoku grid correctly, you get full points.

If you solve all sudokus correctly in a round before the allocated time, you get 10 bonus points per minute saved.

## Examples

The remaining pages in the booklet will show examples of the types that will appear in the finals. The solutions will be given at the end, but it is important to try to solve the examples on your own so that you fully understand the rules before checking the solutions.

### Round 1 – Classic Sudoku

*Place the digits 1 through 9 into the empty cells in the grid so that each digit appears exactly once in each of the rows, columns, and bold outlined 3X3 boxes.*

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 6 | 2 | 5 |   |   |   |   |
| 2 |   |   |   |   |   |   |   |   |
| 9 |   | 5 | 3 | 8 |   |   |   |   |
| 3 |   | 2 |   |   |   |   |   |   |
| 6 |   | 8 |   |   |   | 2 |   | 7 |
|   |   |   |   |   |   | 1 |   | 5 |
|   |   |   |   | 4 | 1 | 5 |   | 3 |
|   |   |   |   |   |   |   |   | 2 |
|   |   |   |   | 2 | 7 | 6 | 1 | 9 |

## Round 2 – Expanded Sudoku

Standard Sudoku rules apply to two overlapping grids, with gaps in the middle.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   |   | 8 | 5 |   |   |   |   |   |
|   | 5 |   | 3 |   |   | 7 | 8 |   |
| 4 |   | 7 |   |   | 6 |   |   | 1 |
| 6 | 7 |   |   |   | 9 |   |   | 3 |
|   |   |   |   |   | 5 |   |   | 7 |
|   |   | 5 | 8 | 7 |   |   |   | 9 |
|   | 9 |   |   |   |   | 5 | 2 | 8 |
|   | 6 |   |   |   |   | 1 |   |   |
|   |   | 3 |   |   |   | 9 |   | 5 |
|   |   |   | 4 |   |   | 8 |   | 9 |
|   |   |   |   | 9 | 8 |   |   | 3 |
|   |   |   |   |   |   | 5 | 4 |   |

## Round 2 – Overlapping Sudoku

*Standard Sudoku rules apply to 2 overlapping grids.*

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
|   |   | 5 |   |   | 7 |   |   | 9 |   |   |   |
|   | 4 |   |   | 6 |   |   | 8 |   |   |   |   |
| 3 |   |   | 5 |   |   | 7 |   |   |   |   |   |
|   |   | 4 |   |   | 6 |   |   | 2 |   |   | 4 |
|   | 3 |   |   | 5 |   |   | 4 |   |   | 3 |   |
| 2 |   |   | 4 |   |   | 3 |   |   | 2 |   |   |
|   |   | 3 |   |   | 5 |   |   | 6 |   |   | 3 |
|   | 2 |   |   | 8 |   |   | 5 |   |   | 2 |   |
| 1 |   |   | 9 |   |   | 4 |   |   | 1 |   |   |
|   |   |   |   |   | 7 |   |   | 9 |   |   | 8 |
|   |   |   |   | 1 |   |   | 8 |   |   | 7 |   |
|   |   |   |   | 2 |   |   | 7 |   |   | 5 |   |

*Partial points available in this Sudoku.*

## Round 2 – Linked Classics

Two standard Sudokus are linked to each other. The shaded cells must contain same digit in both the grids.

|   |   |  |   |   |  |   |   |  |
|---|---|--|---|---|--|---|---|--|
| 3 | 8 |  | 4 | 6 |  | 1 | 2 |  |
| 9 | 5 |  | 1 | 3 |  | 7 | 6 |  |
|   |   |  |   |   |  |   |   |  |
| 2 | 9 |  |   |   |  | 8 | 7 |  |
| 8 | 7 |  |   |   |  | 3 | 4 |  |
|   |   |  |   |   |  |   |   |  |
| 7 | 2 |  | 9 | 8 |  | 6 | 3 |  |
| 6 | 1 |  | 7 | 5 |  | 2 | 8 |  |
|   |   |  |   |   |  |   |   |  |

|  |   |   |  |   |   |  |   |   |
|--|---|---|--|---|---|--|---|---|
|  |   |   |  |   |   |  |   |   |
|  | 9 | 8 |  | 6 | 7 |  | 2 | 3 |
|  | 6 | 5 |  | 2 | 3 |  | 7 | 9 |
|  |   |   |  |   |   |  |   |   |
|  | 4 | 7 |  |   |   |  | 3 | 8 |
|  | 5 | 9 |  |   |   |  | 4 | 6 |
|  |   |   |  |   |   |  |   |   |
|  | 8 | 6 |  | 9 | 2 |  | 1 | 4 |
|  | 7 | 3 |  | 8 | 1 |  | 5 | 2 |

Partial points available in this Sudoku.

### Round 3 – Diagonal Sudoku

Apply standard Sudoku rules. Additionally, each main diagonal (marked by a line) must contain digits from 1-9.

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 4 |   |   |   | 1 | 5 |   |   |
| 8 |   |   | 6 |   |   |   | 7 |
| 7 |   |   | 2 |   |   |   |   |
|   | 5 |   | 1 |   |   |   |   |
|   |   | 6 | 8 | 2 | 5 |   |   |
|   |   |   | 9 |   |   | 7 |   |
|   |   |   | 8 |   |   |   | 2 |
| 6 |   |   | 2 |   |   |   | 5 |
|   | 8 | 2 |   |   |   | 3 |   |

### Round 3 – Irregular Sudoku

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined region. Each outlined region is marked by thick borders.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 6 |   |   | 8 |   | 9 |   |   | 2 |
|   | 2 |   |   |   |   |   | 4 |   |
|   |   | 5 |   |   |   | 1 |   |   |
| 3 |   |   | 1 |   | 8 |   |   | 5 |
|   |   |   |   | 9 |   |   |   |   |
| 5 |   |   | 4 |   | 6 |   |   | 7 |
|   |   | 1 |   |   |   | 3 |   |   |
|   | 3 |   |   |   |   |   | 8 |   |
| 4 |   |   | 2 |   | 3 |   |   | 9 |

### Round 3 – Odd Sudoku

Apply standard Sudoku rules. Additionally, each shaded cell must contain an Odd digit (1 3 5 7 9).

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   |   | 1 | 8 | 6 | 9 | 2 |   |   |
|   |   | 2 | 3 | 1 | 5 | 6 |   |   |
| 3 | 6 |   |   |   |   |   | 1 | 5 |
| 1 | 5 |   |   |   |   |   | 4 | 2 |
| 4 | 2 |   |   |   |   |   | 7 | 8 |
| 8 | 7 |   |   |   |   |   | 9 | 6 |
| 9 | 8 |   |   |   |   |   | 6 | 3 |
|   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |

|   |   |
|---|---|
| 1 | 3 |
| 5 | 9 |
| 7 |   |

### Round 3 – Killer Sudoku

Apply Classic Sudoku rules. The sum of digits in cells inside every cage must equal the total given for the cage at the upper left cell. Digits cannot repeat within cages.

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 12 | 3  | 11 | 14 | 15 | 12 | 5  | 17 |
|    |    |    |    | 17 |    |    |    |
| 11 |    | 20 |    |    | 11 |    |    |
| 13 |    |    | 5  | 24 | 10 |    | 15 |
|    | 9  |    |    | 11 | 16 |    |    |
|    | 11 |    | 12 |    | 8  |    |    |
| 14 |    |    | 32 |    | 13 |    |    |
| 11 | 15 | 5  |    | 5  | 11 | 14 | 3  |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |

### Round 3 – Non Consecutive Sudoku

Apply standard Sudoku rules. Additionally, adjacent cells (i.e. cells sharing an edge) cannot contain digits which are consecutive to each other.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 6 | 1 | 5 |   |   |   |   |   |   |
|   |   |   | 5 | 1 | 7 |   |   |   |
|   |   |   |   |   |   | 5 | 1 | 9 |
|   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |
| 7 | 4 | 2 |   |   |   |   |   |   |
|   |   |   | 4 | 9 | 5 |   |   |   |
|   |   |   |   |   |   | 8 | 4 | 6 |

### Round 3 – Anti Knight Sudoku

Apply Classic Sudoku rules. Additionally, No cell that is a knight-step away can contain the same digit.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 9 |   |   |   | 4 |   | 6 |   | 7 |
|   | 8 |   |   | 3 |   |   | 4 |   |
| 6 |   |   |   |   |   |   |   |   |
|   |   |   | 8 |   | 5 |   |   |   |
| 1 | 5 |   |   |   |   |   | 7 | 8 |
|   |   |   | 9 |   | 4 |   |   |   |
|   |   |   |   |   |   |   |   | 4 |
|   | 9 |   |   | 6 |   |   | 1 |   |
| 2 |   | 8 |   | 9 |   |   |   | 5 |

|  |   |   |   |   |  |   |
|--|---|---|---|---|--|---|
|  |   |   |   |   |  |   |
|  |   | X |   | X |  |   |
|  | X |   |   |   |  | X |
|  |   |   | ♞ |   |  |   |
|  | X |   |   |   |  | X |
|  |   | X |   | X |  |   |
|  |   |   |   |   |  |   |



## Round 3 – Outside Sudoku

Apply standard Sudoku rules. The digits outside the grid must appear in one of the first three cells seen from that edge of the grid.

|     |   |   |   |   |   |   |   |   |     |
|-----|---|---|---|---|---|---|---|---|-----|
| 6   | 2 | 7 | 7 | 4 | 5 | 2 | 1 | 8 |     |
| 4   | 1 | 5 | 3 | 6 | 8 | 4 | 7 | 6 |     |
| 4 5 |   |   |   |   |   |   |   |   | 2 8 |
| 2 3 |   |   |   |   |   |   |   |   | 9 6 |
| 6 9 |   |   |   |   |   |   |   |   | 4 5 |
| 7 2 |   |   |   |   |   |   |   |   | 8 6 |
| 9 8 |   |   |   |   |   |   |   |   | 1 2 |
| 4 6 |   |   |   |   |   |   |   |   | 5 9 |
| 3 4 |   |   |   |   |   |   |   |   | 2 5 |
| 1 7 |   |   |   |   |   |   |   |   | 4 8 |
| 2 8 |   |   |   |   |   |   |   |   | 3 1 |
| 9   | 3 | 1 | 5 | 2 | 3 | 7 | 2 | 1 |     |
| 5   | 8 | 2 | 1 | 9 | 7 | 8 | 6 | 9 |     |

## Round 2 – Expanded Sudoku

Standard Sudoku rules apply to two overlapping grids, with gaps in the middle.

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 8 | 5 | 4 | 7 | 3 | 6 | 9 |   |   |   |
| 9 | 5 | 6 | 3 | 2 | 1 | 7 | 8 | 4 |   |   |   |
| 4 | 3 | 7 | 9 | 8 | 6 | 5 | 2 | 1 |   |   |   |
| 6 | 7 | 4 | 2 | 1 | 9 |   | 3 | 8 | 5 |   |   |
| 2 | 8 | 9 | 6 | 3 | 5 |   | 1 | 7 | 4 |   |   |
| 3 | 1 | 5 | 8 | 7 | 4 |   | 6 | 9 | 2 |   |   |
| 7 | 9 | 1 |   |   |   | 4 | 5 | 2 | 8 | 6 | 3 |
| 5 | 6 | 2 |   |   |   | 1 | 3 | 8 | 7 | 4 | 9 |
| 8 | 4 | 3 |   |   |   | 9 | 7 | 6 | 2 | 5 | 1 |
|   |   |   | 4 | 5 | 2 | 8 | 1 | 7 | 9 | 3 | 6 |
|   |   |   | 1 | 9 | 8 | 6 | 4 | 3 | 5 | 2 | 7 |
|   |   |   | 7 | 6 | 3 | 2 | 9 | 5 | 4 | 1 | 8 |

## Round 2 – Overlapping Sudoku

Standard Sudoku rules apply to 2 overlapping grids.

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 1 | 5 | 2 | 4 | 7 | 6 | 3 | 9 |   |   |   |
| 7 | 4 | 2 | 3 | 6 | 9 | 5 | 8 | 1 |   |   |   |
| 3 | 6 | 9 | 5 | 1 | 8 | 7 | 2 | 4 |   |   |   |
| 5 | 9 | 4 | 7 | 3 | 6 | 8 | 1 | 2 | 9 | 5 | 4 |
| 6 | 3 | 1 | 8 | 5 | 2 | 9 | 4 | 7 | 6 | 3 | 1 |
| 2 | 7 | 8 | 4 | 9 | 1 | 3 | 6 | 5 | 2 | 8 | 7 |
| 4 | 8 | 3 | 1 | 7 | 5 | 2 | 9 | 6 | 8 | 4 | 3 |
| 9 | 2 | 7 | 6 | 8 | 4 | 1 | 5 | 3 | 7 | 2 | 9 |
| 1 | 5 | 6 | 9 | 2 | 3 | 4 | 7 | 8 | 1 | 6 | 5 |
|   |   |   | 3 | 6 | 7 | 5 | 2 | 9 | 4 | 1 | 8 |
|   |   |   | 5 | 1 | 9 | 6 | 8 | 4 | 3 | 7 | 2 |
|   |   |   | 2 | 4 | 8 | 7 | 3 | 1 | 5 | 9 | 6 |

## Round 2 – Linked Classics

Two standard Sudokus are linked to each other. The shaded cells must contain same digit in both the grids.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 3 | 8 | 7 | 4 | 6 | 5 | 1 | 2 | 9 |
| 9 | 5 | 4 | 1 | 3 | 2 | 7 | 6 | 8 |
| 1 | 6 | 2 | 8 | 9 | 7 | 4 | 5 | 3 |
| 2 | 9 | 1 | 3 | 4 | 6 | 8 | 7 | 5 |
| 8 | 7 | 6 | 5 | 1 | 9 | 3 | 4 | 2 |
| 5 | 4 | 3 | 2 | 7 | 8 | 9 | 1 | 6 |
| 7 | 2 | 5 | 9 | 8 | 4 | 6 | 3 | 1 |
| 6 | 1 | 9 | 7 | 5 | 3 | 2 | 8 | 4 |
| 4 | 3 | 8 | 6 | 2 | 1 | 5 | 9 | 7 |

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 7 | 3 | 2 | 9 | 5 | 4 | 8 | 6 | 1 |
| 4 | 9 | 8 | 1 | 6 | 7 | 5 | 2 | 3 |
| 1 | 6 | 5 | 8 | 2 | 3 | 4 | 7 | 9 |
| 8 | 2 | 1 | 3 | 4 | 6 | 7 | 9 | 5 |
| 6 | 4 | 7 | 5 | 1 | 9 | 2 | 3 | 8 |
| 3 | 5 | 9 | 2 | 7 | 8 | 1 | 4 | 6 |
| 2 | 1 | 4 | 6 | 3 | 5 | 9 | 8 | 7 |
| 5 | 8 | 6 | 7 | 9 | 2 | 3 | 1 | 4 |
| 9 | 7 | 3 | 4 | 8 | 1 | 6 | 5 | 2 |

### Round 3 – Diagonal Sudoku

Apply standard Sudoku rules. Additionally, each main diagonal (marked by a line) must contain digits from 1-9.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 2 | 4 | 3 | 9 | 7 | 8 | 1 | 5 | 6 |
| 8 | 9 | 1 | 4 | 5 | 6 | 3 | 2 | 7 |
| 7 | 6 | 5 | 3 | 2 | 1 | 8 | 9 | 4 |
| 3 | 5 | 9 | 6 | 1 | 7 | 2 | 4 | 8 |
| 4 | 7 | 6 | 8 | 3 | 2 | 5 | 1 | 9 |
| 1 | 2 | 8 | 5 | 9 | 4 | 6 | 7 | 3 |
| 5 | 3 | 4 | 1 | 8 | 9 | 7 | 6 | 2 |
| 6 | 1 | 7 | 2 | 4 | 3 | 9 | 8 | 5 |
| 9 | 8 | 2 | 7 | 6 | 5 | 4 | 3 | 1 |

### Round 3 – Irregular Sudoku

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined region. Each outlined region is marked by thick borders.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 6 | 7 | 3 | 8 | 1 | 9 | 4 | 5 | 2 |
| 1 | 2 | 9 | 7 | 6 | 5 | 8 | 4 | 3 |
| 9 | 8 | 5 | 3 | 2 | 7 | 1 | 6 | 4 |
| 3 | 6 | 4 | 1 | 7 | 8 | 9 | 2 | 5 |
| 8 | 4 | 7 | 5 | 9 | 2 | 6 | 3 | 1 |
| 5 | 1 | 8 | 4 | 3 | 6 | 2 | 9 | 7 |
| 2 | 9 | 1 | 6 | 5 | 4 | 3 | 7 | 8 |
| 7 | 3 | 2 | 9 | 4 | 1 | 5 | 8 | 6 |
| 4 | 5 | 6 | 2 | 8 | 3 | 7 | 1 | 9 |

### Round 3 – Odd Sudoku

Apply standard Sudoku rules. Additionally, each shaded cell must contain an Odd digit (1 3 5 7 9).

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 1 | 8 | 6 | 9 | 2 | 3 | 7 |
| 7 | 9 | 2 | 3 | 1 | 5 | 6 | 8 | 4 |
| 3 | 6 | 8 | 2 | 4 | 7 | 9 | 1 | 5 |
| 1 | 5 | 9 | 6 | 7 | 8 | 3 | 4 | 2 |
| 4 | 2 | 6 | 1 | 9 | 3 | 5 | 7 | 8 |
| 8 | 7 | 3 | 4 | 5 | 2 | 1 | 9 | 6 |
| 9 | 8 | 7 | 5 | 2 | 1 | 4 | 6 | 3 |
| 2 | 1 | 4 | 7 | 3 | 6 | 8 | 5 | 9 |
| 6 | 3 | 5 | 9 | 8 | 4 | 7 | 2 | 1 |

|   |   |
|---|---|
| 1 | 3 |
| 5 | 7 |
| 9 | 7 |

### Round 3 – Killer Sudoku

Apply Classic Sudoku rules. The sum of digits in cells inside every cage must equal the total given for the cage at the upper left cell. Digits cannot repeat within cages.

|                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <sup>12</sup> 9 | <sup>3</sup> 2  | <sup>11</sup> 5 | <sup>14</sup> 6 | <sup>15</sup> 3 | 4               | <sup>12</sup> 7 | <sup>5</sup> 1  | <sup>17</sup> 8 |
| 3               | 1               | 6               | 8               | 2               | <sup>17</sup> 7 | 5               | 4               | 9               |
| <sup>11</sup> 7 | 4               | <sup>20</sup> 8 | 5               | 1               | 9               | <sup>11</sup> 6 | 2               | 3               |
| <sup>13</sup> 4 | 5               | 7               | <sup>5</sup> 3  | <sup>24</sup> 9 | 1               | <sup>10</sup> 2 | 8               | <sup>15</sup> 6 |
| 1               | <sup>9</sup> 6  | 3               | 2               | 8               | <sup>11</sup> 5 | <sup>16</sup> 9 | 7               | 4               |
| 8               | <sup>11</sup> 9 | 2               | <sup>12</sup> 4 | 7               | 6               | <sup>8</sup> 1  | 3               | 5               |
| <sup>14</sup> 2 | 3               | 9               | 1               | <sup>32</sup> 5 | 8               | 4               | <sup>13</sup> 6 | 7               |
| <sup>11</sup> 5 | <sup>15</sup> 8 | <sup>5</sup> 4  | 7               | 6               | <sup>5</sup> 2  | <sup>11</sup> 3 | <sup>14</sup> 9 | <sup>3</sup> 1  |
| 6               | 7               | 1               | 9               | 4               | 3               | 8               | 5               | 2               |

### Round 3 – Non Consecutive Sudoku

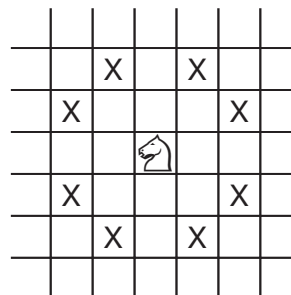
Apply standard Sudoku rules. Additionally, adjacent cells (i.e. cells sharing an edge) cannot contain digits which are consecutive to each other.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 6 | 1 | 5 | 2 | 4 | 9 | 7 | 3 | 8 |
| 8 | 3 | 9 | 5 | 1 | 7 | 2 | 6 | 4 |
| 2 | 7 | 4 | 8 | 6 | 3 | 5 | 1 | 9 |
| 4 | 2 | 7 | 3 | 8 | 6 | 9 | 5 | 1 |
| 9 | 5 | 1 | 7 | 2 | 4 | 6 | 8 | 3 |
| 3 | 8 | 6 | 9 | 5 | 1 | 4 | 2 | 7 |
| 7 | 4 | 2 | 6 | 3 | 8 | 1 | 9 | 5 |
| 1 | 6 | 8 | 4 | 9 | 5 | 3 | 7 | 2 |
| 5 | 9 | 3 | 1 | 7 | 2 | 8 | 4 | 6 |

### Round 3 – Anti Knight Sudoku

Apply Classic Sudoku rules. Additionally, No cell that is a knight-step away can contain the same digit.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 9 | 3 | 1 | 5 | 4 | 2 | 6 | 8 | 7 |
| 7 | 8 | 5 | 6 | 3 | 9 | 2 | 4 | 1 |
| 6 | 4 | 2 | 7 | 8 | 1 | 5 | 3 | 9 |
| 4 | 2 | 3 | 8 | 7 | 5 | 1 | 9 | 6 |
| 1 | 5 | 9 | 3 | 2 | 6 | 4 | 7 | 8 |
| 8 | 7 | 6 | 9 | 1 | 4 | 3 | 5 | 2 |
| 3 | 6 | 7 | 1 | 5 | 8 | 9 | 2 | 4 |
| 5 | 9 | 4 | 2 | 6 | 7 | 8 | 1 | 3 |
| 2 | 1 | 8 | 4 | 9 | 3 | 7 | 6 | 5 |



## Round 3 – Outside Sudoku

Apply standard Sudoku rules. The digits outside the grid must appear in one of the first three cells seen from that edge of the grid.

|     |   |   |   |   |   |   |   |   |   |     |
|-----|---|---|---|---|---|---|---|---|---|-----|
|     | 6 | 2 | 7 | 7 | 4 | 5 | 2 | 1 | 8 |     |
|     | 4 | 1 | 5 | 3 | 6 | 8 | 4 | 7 | 6 |     |
| 4 5 | 4 | 1 | 5 | 3 | 6 | 9 | 2 | 7 | 8 | 2 8 |
| 2 3 | 3 | 2 | 8 | 7 | 4 | 5 | 9 | 1 | 6 | 9 6 |
| 6 9 | 6 | 9 | 7 | 2 | 1 | 8 | 4 | 5 | 3 | 4 5 |
| 7 2 | 2 | 7 | 3 | 9 | 5 | 1 | 6 | 8 | 4 | 8 6 |
| 9 8 | 8 | 5 | 9 | 6 | 7 | 4 | 1 | 3 | 2 | 1 2 |
| 4 6 | 1 | 4 | 6 | 8 | 3 | 2 | 5 | 9 | 7 | 5 9 |
| 3 4 | 9 | 3 | 4 | 1 | 8 | 6 | 7 | 2 | 5 | 2 5 |
| 1 7 | 7 | 6 | 1 | 5 | 2 | 3 | 8 | 4 | 9 | 4 8 |
| 2 8 | 5 | 8 | 2 | 4 | 9 | 7 | 3 | 6 | 1 | 3 1 |
|     | 9 | 3 | 1 | 5 | 2 | 3 | 7 | 2 | 1 |     |
|     | 5 | 8 | 2 | 1 | 9 | 7 | 8 | 6 | 9 |     |