# SUDOKU PRAGUE OPEN 2017 

Prague, 11 June 2017

## INSTRUCTION BOOKLET

| $10: 30-10: 50$ | ROUND 1 - CLASSICS | 20 MINUTES | 200 POINTS |
| :--- | :--- | :--- | :--- |
| 11:00-11:50 | ROUND 2 - IRREGULAR | 50 MINUTES | 500 POINTS |
| 12:00-12:40 | ROUND 3 - CAGES | 40 MINUTES | 420 POINTS |
| 12:50-13:50 | ROUND 4 - MISCELLANOUS | 60 MINUTES | 750 POINTS |
| $14: 00-14: 30$ | ROUND 5 - X-KILLER | 30 MINUTES | 288 POINTS |

TIME BONUS: 12 POINTS/MIN
PARTIAL BONUS: 9 POINTS/MIN


Competition puzzles author: Jan Zvěřina
Instruction booklet puzzles: Jan Zvěřina, Jakub Hrazdira, Rajesh Kumar, Prasanna Seshadri, WPF Sudoku GP IB, WSC 2015 IB, WSC 2016 IB

| 1) Classic Sudoku | 19 points |
| :--- | :--- |
| 2) Classic Sudoku | 19 points |
| 3) Classic Sudoku | 20 points |
| 4) Classic Sudoku | 23 points |
| 5) Classic sudoku | 24 points |
| 6) Classic sudoku | 25 points |
| 7) Classic sudoku | 30 points |
| 8) Classic sudoku | 40 points |

## 1-8) CLASSIC SUDOKU

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box.

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


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


| 1) Irregular Sudoku | 36 points |
| :--- | :---: |
| 2) Irregular Sudoku | 41 points |
| 3) Irregular Twins Sudoku | 116 points |
| 4) Irregular Antiknight | 78 points |
| 5) Irregular Untouch | 48 points |
| 6) Irregular Clones | 34 points |
| 7) Blackout Toroidal Sudoku | 71 points |
| 8) Irregular ISO Sudoku | 76 points |

## 1-2) IRREGULAR SUDOKU (36 + 41 points)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and outlined region.

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


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

## 3) IRREGULAR TWINS SUDOKU (116 points)

Place a digit from 1 to 9 ( 1 to 6 in the instruction booklet) into each of the empty squares so that each digit appears exactly once in each row, column and outlined region. Both grids have the same givens and the same solution. They only have different regions. To award points you only need to fill one grid correctly.


## 4) IRREGULAR ANTIKNIGHT SUDOKU (78 points)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Numbers placed in cells related by a chess Knight's move ( $2+1$ cells in any orthogonal direction) must be different.


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

## 5) IRREGULAR UNTOUCH SUDOKU (48 points)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Moreover, same digits can not touch diagonally.


|  |  | 34 |  |  | 8 |  |  |  | 7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9 | 5 | 5 | 3 | 3 | 1 | 7 | 4 |  |  |  |
| 6 | 7 | 1 |  | 8 | 9 | 2 | 5 |  | 3 | 4 |
| 5 |  | 3 | 2 | 2 | 7 | 4 | 1 | 19 | 9 | 6 |
|  | 2 | 2 | 4 | 4 | 6 | 3 | 8 | 5 | 5 |  |
|  | 4 | 8 |  | 7 | 5 | 9 | 6 | - | 1 | 2 |
| 8 | 6 | 5 | 9 | 9 | 2 |  | 7 | 7 | 4 | 3 |
|  | 9 | 97 | 1 | 1 | 3 | 8 | 2 |  | 6 | 5 |
|  | 1 | 12 |  | 6 | 4 |  | 3 |  | 8 |  |

## 6) IRREGULAR CLONES (34 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and outlined region. In each of the shaded regions, the numbers placed in the cells at the same positions within the regions must be the same.


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

## 7) BLACKOUT TOROIDAL SUDOKU (71 POINTS)

Place a digit from 1 to 9 ( 1 to 6 in the instruction booklet) into each of the empty white squares so that each digit appears exactly once in each row, column and outlined region. Some of the outlined regions will wrap between the top and bottom edges, and/or the left and right edges of the grid.


## 8) IRREGULAR ISO SUDOKU ( 76 POINTS)

Place a digit from 1 to 9 ( 1 to 6 in the instruction booklet) into each of the empty white squares so that no digit repeats in any of the three directions.


1) Classic + Irregular
2) Empty Killer
3) Extra Region Sudoku
4) Capsules Sudoku
5) Renban Sudoku
6) Multiplication Sudoku
7) All Even/All Odd
8) Shapes

51 points
53 points
70 points
50 points
67 points
33 points
66 points
30 points

## 1) CLASSIC + IRREGULAR (51 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Each cage contains each of numbers 1-9 exactly once.


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

## 2) EMPTY KILLER (53 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Numbers in cages may not repeat.

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


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

## 3) EXTRA REGION SUDOKU (70 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Each cage contains each of numbers 1-9 exactly once.

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


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

## 4) CAPSULES SUDOKU (50 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Each cage contains exactly one odd and one even digit.


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

## 5) RENBAN SUDOKU (67 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Each cage contains a set of consecutive numbers, in any order.


## 6) MULTIPLICATION (33 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. There are some $2 \times 2$ cages in the grid. The two-digit number in the second line of a cage must be product of two one-digit numbers in the first line of the corresponding area.

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


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

## 7) ALL EVEN/ALL ODD (66 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Numbers in each cage have all the same parity. (Different cages can have different parity.)

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


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

## 8) SHAPES (30 POINTS)

Place a digit from 1 to 9 ( 1 to 6 in the instruction booklet) into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Cages with identical size and shape (reflection and rotation is allowed) must contain the same set of digits. Digits in cages may repeat.


| 3 | 5 | 4 | 6 | 2 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 6 | 2 | 4 | 5 | 3 |
| 6 | 3 | 1 | 2 | 4 | 5 |
| 4 | 2 | 5 | 3 | 1 | 6 |
| 5 | 4 | 6 | 1 | 3 | 2 |
| 2 | 1 | 3 | 5 | 6 | 4 |


| 1) Just One Cell Sudoku | 28 points |
| :--- | :--- |
| 2) Just One Cell Sudoku | 28 points |
| 3) XV Sudoku | 35 points |
| 4) XV Sudoku | 64 points |
| 5) Extra Region Sudoku | 51 points |
| 6) Extra Region Sudoku | 51 points |
| 7) Hashtag Sudoku | 74 points |
| 8) Palindromes Sudoku | 34 points |
| 9) Odd Queens Sudoku | 69 points |
| 10) No Point to 9 Sudoku | 72 points |
| 11) 2 Even 2 Odd Sudoku | 71 points |
| 12) Box Clone Sudoku | 31 points |
| 13) Antidiagonal Sudoku | 49 points |
| 14) Consecutive Sudoku | 25 points |
| 15) X-Sums Sudoku | 68 points |

## 1+2) JUST ONE CELL SUDOKU ( $\mathbf{2 8}+28$ POINTS)

The grid has multiple solutions. However, one digit can be placed with absolute certainty, i.e. it will be the same for all solutions. Find that digit.


## 3+4) XV SUDOKU (35 + 64 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. If a pair of orthogonally adjacent cells has $X$ between them, the sum of the numbers placed in these cells must be exactly 10 . If a pair of orthogonally adjacent cells has V between them, the sum of the numbers placed in these cells must be exactly 5 . All possible signs have been given.


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

## 5+6) EXTRAREGION SUDOKU (51 + 51 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Each shaded region contains each of numbers 1-9 exactly once.

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


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

## 7) HASHTAG (74 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Numbers placed along marked lines must not repeat.

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

## 8) PALINDROMES SUDOKU (34 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Additionally, numbers placed along marked lines must form a palindromic sequence, e.g. 12344321...

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


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

## 9) ODD QUEENS SUDOKU (69 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Two odd digits of the same value can not be placed on the same diagonal.

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


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

## 10) NO POINT TO 9 SUDOKU (72 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. No digit $N$ can be at a distance $N$ of any digit 9 , as well orthogonally as diagonally.

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


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

## 11) 2 EVEN 2 ODD SUDOKU ( 71 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Additionally there can never be 3 consecutive cells in a straight line (row or column) having all odd or all even digits.


| 5 | 4 | 3 | 6 | 2 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 6 | 1 | 2 | 5 | 3 | 4 |
| 3 | 2 | 1 | 4 | 6 | 5 |
| 4 | 5 | 6 | 3 | 1 | 2 |
| 2 | 3 | 4 | 1 | 5 | 6 |
| 1 | 6 | 5 | 2 | 4 | 3 |

## 12) BOX CLONE SUDOKU (31 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. In each of the shaded regions, the numbers placed in the cells at the same positions within the regions must be the same.

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


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

## 13) ANTIDIAGONAL SUDOKU (49 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Each of the marked diagonals contains exactly three different digits.


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

## 14) CONSECUTIVE SUDOKU (25 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. Some bars are in the grid; any two adjacent digits separated by a bar must be consecutive (ie differ by 1). All adjacent digits not separated by a bar cannot be consecutive.


| 8 | 2 | 1 | 9 | 3 | 6 | 5 | 4 | $\frac{7}{\mid}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 9 | $\frac{5}{3}$ | 3 | 4 | 7 | 1 | 2 | 8 | 6 |
| 7 | 6 | 4 | 8 | 2 | 5 | 9 | 1 | 3 |
| 5 | 3 | 7 | 2 | 6 | 4 | 8 | 9 | 1 |
| 4 | 8 | 9 | 3 | 1 | 7 | 6 | 2 | $\frac{5}{4}$ |
| 2 | 1 | 6 | 5 | 9 | 8 | 7 | 3 | 4 |
| 1 | 4 | 8 | 7 | 5 | 2 | 3 | 6 | 9 |
| 6 | 9 | 5 | 1 | 8 | 3 | 4 | 7 | 2 |
| 3 | 7 | 2 | 6 | 4 | 9 | 1 | 5 | 8 |

## 15) X-SUMS SUDOKU (68 POINTS)

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each row, column and $3 \times 3$ box. The clues outside the grid indicate the sum of the first $X$ numbers placed in the corresponding direction, where X is equal to the first number placed in that direction.


| 1 |  |  |  |  |  |  | 9 | 12 | 26 | 39 | 41 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 21 | 45 | 19 |  |  |  |  |  |  |  |  |
| 1 | 1 | 2 | 3 | 6 | 7 | 8 | 5 | 9 | 4 | 26 |  |
| 42 | 8 | 7 | 4 | 1 | 9 | 5 | 2 | 6 | 3 | 11 |  |
| 29 | 6 | 9 | 5 | 2 | 4 | 3 | 1 | 8 | 7 | 30 |  |
| 37 | 7 | 6 | 1 | 8 | 2 | 9 | 4 | 3 | 5 | 23 |  |
| 20 | 5 | 3 | 2 | 4 | 6 | 7 | 9 | 1 | 8 | 40 |  |
| 45 | 9 | 4 | 8 | 5 | 3 | 1 | 6 | 7 | 2 | 9 |  |
| 17 | 4 | 1 | 9 | 3 | 8 | 2 | 7 | 5 | 6 | 31 |  |
| 10 | 2 | 8 | 7 | 9 | 5 | 6 | 3 | 4 | 1 | 1 |  |
| 14 | 3 | 5 | 6 | 7 | 1 | 4 | 8 | 2 | 9 | 45 |  |
|  | 9 | 21 | 33 | 38 | 1 | 13 | 40 | 6 | 45 |  |  |

Scoring: 8 points for each $3 \times 3$ box
Rules: There will be four classic Sudokus*. Each of them will have some clues, but not enough to solve the Sudoku. Some cells will be marked with letters. Same letter may appear on 2, 3, or 4 different grids. Digits marked with the same letter must be different and sum up to the provided total. Although every separate grid may have many solutions, there's only one solution where all grids are solved and sum up to the clues. Only solved grids that are a part of the overall solution will be scored, each one XX points. The example from the WSC IB is pasted in the next page, for those who have not seen it earlier.
*Rules of Classic Sudoku: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked $3 \times 3$ box contains each number exactly once.

Example from WSC Instructions Booklet using 6X6 Sudokus


| 1 | 5 | 6 | 4 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 3 | 2 | 4 | 5 | 1 | 6 |
| 6 | 3 | 5 | 2 | 4 | 1 |
| 2 | 4 | 1 | 3 | 6 | 5 |
| 4 | 6 | 2 | 1 | 5 | 3 |
| 5 | 1 | 3 | 6 | 2 | 4 |


| 2 | 3 | 5 | 1 | 6 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 6 | 4 | 1 | 3 | 2 | 5 |
| 5 | 1 | 6 | 2 | 4 | 3 |
| 4 | 2 | 3 | 6 | 5 | 1 |
| 3 | 6 | 4 | 5 | 1 | 2 |
| 1 | 5 | 2 | 4 | 3 | 6 |


| 3 | 5 | 4 | 1 | 2 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 6 | 1 | 2 | 5 | 4 | 3 |
| 2 | 4 | 6 | 3 | 5 | 1 |
| 1 | 3 | 5 | 2 | 6 | 4 |
| 4 | 2 | 1 | 6 | 3 | 5 |
| 5 | 6 | 3 | 4 | 1 | 2 |


| 4 | 2 | 3 | 1 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 6 | 5 | 1 | 2 | 3 | 4 |
| 1 | 3 | 5 | 4 | 6 | 2 |
| 2 | 6 | 4 | 5 | 1 | 3 |
| 5 | 4 | 6 | 3 | 2 | 1 |
| 3 | 1 | 2 | 6 | 4 | 5 |

