



SWISS
LOGIC PUZZLE
FEDERATION

INSTRUCTION BOOKLET

Swiss Qualification Tournament
for the
16th World Sudoku Championship

April 21 – 24, 2023



Tournament Details

The tournament will take place on the website of Logic Masters Germany:

<https://logic-masters.de/Wettbewerbe/CE/wettbewerb.php?id=219>

The tournament will be open from **Friday, April 21, 12:00 CEST** to **Monday, April 24, 23:59 CEST**.

To start the tournament, follow the indications on the website. There are two PDF documents involved:

- one is the instruction booklet that you are reading now which contains the rules and examples of the different variants of puzzles appearing in the tournament.
- the second document is an encrypted PDF file of 10 pages containing the actual tournament puzzles. This document will be available for download just before the tournament. Starting the tournament will give the player the password to decrypt the PDF file.

Answer codes:

- Once you start the tournament, you will be given **120 minutes** to submit the answer codes. It is therefore recommended to start not later than on Monday April 24 at 21:59 CEST to make it before the end of the tournament time window.
- Answer codes differ between the puzzle types. They are explained next to each puzzle type. It is recommended to study the answer codes carefully before starting the competition.
- If several rows or columns of a puzzle are marked for the answer code, first enter the answer codes of the rows from top to bottom, followed by the answer codes of the columns from left to right.
- The answer codes can be changed and/or entered multiple times without penalty during these 120 minutes.

For each correctly solved puzzle you will be awarded the marked points.

The answers are only stored when clicking the submit button. They are **not** submitted automatically when the time is over. You can submit as often as wished in the time limit.

No solving programs or calculators are allowed.

The tournament is destined to evaluate the admission of Swiss players to the World Sudoku Championship 2023. Players from all nations are kindly welcome to compete, too.

The puzzles in this tournament have been created by Roger Kohler. For **questions**, feel free to ask on the Discord server of the World Puzzle Federation (<https://discord.gg/NM9xn6Rm9k>, under events) or contact Roger Kohler directly (email: ropeko@yahoo.de, phone: +41798134273).

International test solvers helped to make sure the puzzles are valid and to synthesize an adapted number of points per puzzle. The number of points gives an indication of the difficulty of the puzzle.

Special thanks to the website Logic-Masters.de by making the online qualification possible, to the test solvers Fatih Kamer Anda, Denis Auroux, Hatice Esra Aydemir, Silke Berendes, Ulla Elsilä, Christian König, Anne Limoges, Prasanna Seshadri, Tiit Vunk and to Swaroop Guggilam for his recent efforts in adding features to Penpa-edit to simplify digitization of logic puzzles.

List of Puzzles

Nr	Puzzle type	Points
1	Classic Sudoku (6x6)	7
2	Classic Sudoku (6x6)	6
3	Classic Sudoku	29
4	Classic Sudoku	46
5	Classic Sudoku	35
6	Classic Sudoku	59
7	Classic Sudoku	75
8	Classic Sudoku	90
9	Diagonal Sudoku	75
10	Extra Regions Sudoku	37
11	Non-Consecutive Sudoku	72
12	Antiknight Sudoku	62
13	Irregular Sudoku	64
14	Palindrome Sudoku	87
15	Thermo Sudoku	125
16	Wilhelm Tell Sudoku	163
17	Outside Sudoku	58
18	All Seen Odd Even Bridge Sudoku	110
	Total	1200

1-2 Classic Sudoku (6x6) – 7+6 Points

Place a digit from 1-6 in each empty cell in the grid such that each row, column and marked 2x3 box contains each digit exactly once.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

1	2			6	3
3	4			5	2
		4	3		
4					6
	3	2	5	4	

→

1	2	5	4	6	3
3	4	6	1	5	2
5	1	3	6	2	4
2	6	4	3	1	5
4	5	1	2	3	6
6	3	2	5	4	1

Answer code:
513624 451236

3-8 Classic Sudoku – 29+46+35+59+75+90 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

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

→

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

Answer code: 251734986 872359164

9 Diagonal Sudoku – 75 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Each marked diagonal must also contain each digit from 1-9 exactly once.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

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

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

Answer code: 213768945 921853647

10 Extra Regions Sudoku – 37 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Each of the shaded regions must also contain each digit from 1-9 exactly once.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

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

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

Answer code: 795123486 349512867

11 Non-Consecutive Sudoku – 72 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Digits placed in adjacent cells must not be consecutive.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

		4				3		
	5			9			4	
6			4		1			2
		3				8		
	1			8			9	
		5				4		
5			3		9			4
	9			4			5	
		1				9		

→

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

Answer code: 963714825 741825936

12 Antiknight Sudoku – 62 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Digits placed in cells related by a chess Knight's move must be different.

Chess Knight's move: Two squares away horizontally and one square vertically, or two squares vertically and one square horizontally.

		1		

All grey cells can not contain 1.

The chess Knight's move explanation won't be added in the competition booklet.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

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

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

Answer code: 195274368 497136528

13 Irregular Sudoku – 64 Points

Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 9-cell region contains each number exactly once.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

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

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

Answer code: 985372461 619283547

14 Palindrome Sudoku – 87 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Digits along any grey line form a palindrome i.e. they read the same in both directions.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

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

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

Answer code: 465172938 254861379

15 Thermo Sudoku – 125 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Starting at the "bulb", digits placed along each marked thermometer must form a strictly increasing sequence.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

1								9

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

Answer code: 795638124 917546283

16 Wilhelm Tell Sudoku – 163 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

The sum of the numbers on an arrow are equal to the circle in the direction of the arrow. There is exactly one circle in the direction of an arrow. Numbers on an arrow can repeat.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

The example shows a 9x9 grid with various arrows and circles. The left grid is the starting point, and the right grid is the solution. In the solution grid, the circles contain the sums of the numbers along the arrows. For example, a circle with '9' is at the top-right corner, and an arrow points from the top-left to the bottom-right of the grid, passing through the circle.

Answer code: 164293875 376521984

17 Outside Sudoku – 58 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

The digits outside the grid must appear within the first three cells in the corresponding direction.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom). Do not include any numbers outside the grid.

Example:

The example shows a 9x9 grid with numbers placed outside the grid. The left grid has numbers like '7', '4', '1', '9', '3', '6', '8', '2', '5' placed around the grid, with arrows pointing to the first three cells of the corresponding rows or columns. The right grid shows the completed grid with these numbers placed inside the first three cells of the corresponding rows or columns.

Answer code: 486279513 849736152

18 All Seen Odd Even Bridge Sudoku – 110 Points

Place a digit from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each digit exactly once.

Some circled cells are connected by a bridge. An odd digit in a circle denotes the number of odd digits on the bridge. An even digit in a circle equals the number of even digits on the bridge. The digits on the circles are not counted.

However, every cell on the bridge must be counted by at least one of the circled cells at the ends: for example, if one of the cells on the bridge contains an even digit then at least one of the two circled ends counts the even digits on the bridge.

Answer: For each designated row/column, enter its content, from left to right (or top to bottom).

Example:

1	5		○		○			
6								○
○				4				8
			5		9	○		
○				2				○
							5	
							3	4
			9		○			



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

Answer code: 329671485 541932867