

## Playoff Format

The Sudoku Grand Prix playoffs will consist of eight puzzles, to be solved in a fixed order. The puzzles contain a selection of puzzles representative of the Sudoku GP series. Each host nation has contributed puzzles to the playoffs; one from each host nation is selected by the tournament director.

The competitors will begin with a staggered start based on the total number of points earned in the qualifying rounds. The 10th-place finisher in the GP will start two minutes after the 1st-place finisher. Other finishers will start at different times proportional to the number of points they are behind the 1st-place finisher.

<b>Competitor (country)</b>	<b>Position</b>	<b>Points</b>	<b>Start Time (m:ss)</b>
Tiit Vunk (Estonia)	1st	5216.8	0:00
Tantan Dai (China)	2nd	5049.6	0:21
Kota Morinishi (Japan)	3rd	4840.2	0:47
Jakub Ondroušek (Czech Republic)	4th	4718.4	1:02
Takuya Sugimoto (Japan)	5th	4579.6	1:19
Seungjae Kwak (South Korea)	6th	4470.9	1:32
Jan Mrozowski (Poland)	7th	4420.8	1:39
Sinchai Rungsangrattanakul (Thailand)	8th	4358.1	1:46
Michael Ley (Germany)	9th	4332.7	1:49
Cheran Sun (China)	12th	4051.3	2:24

When a competitor completes a puzzle, he can raise his hand to indicate to a proctor that he is done. The entire grid will then be judged over the next minute. After one minute, if the puzzle is correct, the proctor will indicate the competitor can begin the next puzzle. If the puzzle is incorrect, the proctor will return the incorrect puzzle to the competitor but will make no indication of where any mistake is in that grid. The competitor can resubmit a returned puzzle at any time, but another full one minute grading process will follow.

The playoffs will continue until 3 solvers have completed all puzzles correctly. These solvers, in order of finish, will be the top 3 winners for this year's Sudoku Grand Prix.

## Puzzles

1	Odd/Even Sudoku	(Zoltán Horváth, Hungary)	Round 8
2	Classic Sudoku	(Rauno Pärnits, Estonia)	Round 2
3	Double Kropki Sudoku	(Zoran Tanasić, Serbia)	Round 4
4	Arrow Sudoku	(Henning Kalsgaard Poulsen, Denmark)	Round 3
5	Classic Sudoku	(Salih Alan, Turkey)	Round 5
6	Spiral Sudoku	(Prasanna Venkatesh Seshadri, India)	Round 7
7	No Knight Step Sudoku	(Arvid Baars, Netherlands)	Round 1
8	Classic Sudoku	(Matúš Demiger, Slovakia)	Round 6

### 1 Odd/Even Sudoku

Apply classic sudoku rules. Digits in circles must be odd and digits in squares must be even.

Example

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

Solution

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

### 2, 5, 8 Classic Sudoku

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.

Example

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

Solution

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

### 3 Double Kropki Sudoku

Apply classic sudoku rules. Adjacent cells containing digits whose difference is 2 are marked with a white rhombus. Adjacent cells containing digits whose whose ratio is 4 are marked with a black rhombus. Adjacent cells with no marking must not contain digits either whose difference is 2 or whose ratio is 4.

Example

				◇				
	◇				◇		◇	◇
◇			◇	6	◇		1	◇
	◇	◇		◇			◆	
		◇			◇		◆	
			◇		◇			◇
		◇						
		◇	3	◇	6	◇		
			◇					◇
◇							◆	

Solution

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

### 4 Arrow Sudoku

Apply classic sudoku rules. Each digit placed in a cell with a circle must be the sum of the digits placed in the cells that the adjoining arrow passes through. Digits may repeat on arrows.

Example

○	→	4	5			2	
↓		○	3			7	○
	8		9	6	↘		
	6	5		↙			
5		↖	6	↘		7	
			4		5		
	↗	4	9		7		↑
○	7		5	○			
1		2	7	←	○		

Solution

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

### 6 Spiral Sudoku

Apply classic sudoku rules. Additionally, exactly three of the nine 3x3 boxes have the property that their eight perimeter cells are in a strictly increasing order with starting cell and direction unspecified. The 3 spiral boxes, and the starting cell/direction in these boxes need to be identified as part of solving.

Example

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

Solution

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

### 7 No Knight Step Sudoku

Apply classic sudoku rules. Digits placed in cells connected by a chess Knight's move must be different.

Example

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

Solution

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