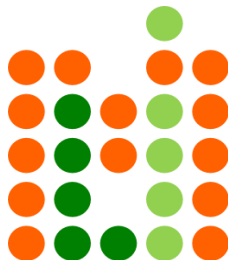


January 21st 2020

Session 1				
Classical Welcome	9:00 - 9:45	45 mins	450 Points	Individual
Basic Variants	9:55 – 10:55	60 mins	600 Points	Individual
Math & Converse	11:10 – 12:10	60 mins	600 Points	Individual
Lunch Break				
Session 2				
Non-Basic Variants	13:30 – 14:30	60 mins	600 Points	Individual
50 – 50	14:40 – 15:40	60 mins	600 Points	Individual
Team Round 1	16:15 – 16:35	20 mins	800 Points	Team
Team Round 2	17:10 – 17:30	20 mins	800 Points	Team



Competition Hall Rules

Each competitor has to sit at any of the pre-allocated desks of their respective teams in individual rounds. Teams have to work at their pre-allocated desks for team rounds.

Prior to the start of each round, competitors must ensure they are at their desks ready for the start of the round. Late arrivals may not be permitted to enter the competition hall to take part in a round at the discretion of the organizers.

Prior to the start of each round, competitors must clearly write their name, team and registration number on the front page of their competition booklet into the allocated space. If this information is not complete, then the organizers reserve the right not to award any points to that competitor for that round.

Competitors must not open their booklets before the official start of the round. When the signal for the start of the round has been given, competitors may open their booklets and begin solving the puzzles. During each individual round, competitors have to remain silent, unless declaring completion of a round.

During team rounds, team members may talk to each other, unless it is stated otherwise in the round's note, but should do this with respect to other teams.

To declare a round complete, a competitor must close the competition booklet, clearly state 'finished' and raise an arm with the booklet. The competitor's arm must be raised until the booklet is collected. The same rules apply for the team rounds.

Competitors or teams who complete a round more than five minutes in advance, are allowed to leave the competition hall quietly. Competitors or teams who complete a round with five minutes or less left are not allowed to leave their desks to not cause unnecessary disruption to fellow competitors. Competitors who leave the competition hall for any reason will be not allowed to continue in that round.

When the signal to finish a round is given, competitors have to stop solving immediately, close their booklets, put their pens/pencils down and their hands up with their booklets for collecting. At the end of a round, competitors have to remain seated until all booklets have been collected.

Mobile phones and electronic devices are not permitted to be used in the competition hall during the rounds. The devices have to be turned off and must not be placed on the competitor's desk.

Only team captains and official observers equipped with a name tag are allowed to enter the competition hall while either individual or team rounds are taking place. Other non-competing participants may enter the competition hall at the discretion of the organizers.

Competitors may not use cameras or other recording devices during rounds. Only observers may do so, at the discretion of the organizers. They have to respect the competitors and not use flash photography or cameras with excessive sounds.

When a competitor believes that there is a problem with a puzzle, they must clearly state that puzzle is wrong by writing 'Wrong puzzle' next to it. The competitor must not notify the organizers during the round. This will be investigated upon completion of the round.

Puzzles can be completed in any order within a round, unless it is stated otherwise in the round's note. The points' value of a puzzle is an indication of its expected difficulty, although individual solving experience may differ. The difficulty of an example puzzle does not necessarily reflect the difficulty of the corresponding competition puzzle.

The boxes above each puzzle are reserved for markers' notes. Competitors must not write in the boxes.

Permitted items which can be used in the competition hall, unless stated otherwise, are: pens, pencils, pencil sharpeners, erasers, rulers, scales, blank papers and instruction booklets annotated with notes regarding puzzle instructions and preparation notes.

Drinks and snacks are permitted as long as they do not disturb other competitors with a strong smell or rustling packet.

It is strictly forbidden to use electronic devices such as music players or headphones or any type of calculator. Use of such equipment may lead to the disqualification of the competitor.

Any other items brought into the hall must be kept in a bag on the floor and placed under the competitor's desk, so as not to block the aisles.

When a round has been evaluated, fully marked booklets are returned to a team member of the respective country.

In case of any query after a booklet has been returned to a competitor, the query must be raised within the specified time. The booklet should be left with the organizers for investigation.

Puzzles may be photographed during the marking phase in order to prevent subsequent interventions.

Team captains are responsible for ensuring that any information given to them related to the competition is effectively relayed to their team.

In case of a major mistake in one of the rounds, organisers reserve the right to cancel the round, either by removing it from the schedule, or by not rewarding any points for it to any of the competitors.

The official competition booklets will not contain examples given in the instruction booklet. Therefore, we recommend bringing the Instruction Booklet, which contains an example of every Sudoku that will be part of the championship.

In the team rounds, the official competition booklets may not contain the instructions of Sudokus, only the names. It is advised to bring at least one Instruction Booklet for a team for these rounds.

In any case of inconsistency between the instruction booklet and the official competition booklets, e.g. instructions or points, the information in the final version of the instruction booklet will be considered valid.

In the competition hall, a timer counting down to the end of the round will be visible for all the competitors.

Scoring and Bonus

Points will be awarded only for fully and correctly solved puzzles. In general, there are no partial points unless it is stated otherwise in the round's note.

In individual rounds, the bonus points for a round for each full remaining minute will be awarded to any competitor who correctly solves all the Sudokus in the round.

In team rounds, the bonus points for a round for each full remaining minute will be awarded to any team who correctly solves all the Sudokus in the round.

At the judge's discretion, 0.8 x bonus, rounded to the closest integer, will be awarded in the case of a single minor mistake in no more than one Sudoku. A minor mistake is considered as at most two incorrectly filled cells in at most one of the Sudokus.

All the examples in the instruction booklet were made by the organizing team. They cannot be commercially used. All rights have been reserved.

Any breach of these rules may lead to a competitor or team being disqualified from the round or competition. The decision of the tournament officials is final.

Glossary

Odd and Even

Odd digits are 1, 3, 5, 7, 9.

Even digits are 2, 4, 6, 8.

Parity

Even and odd are different parities. Two digits have the same parity if they are both even or both odd.

Adjacent and Neighbouring

Cells sharing an edge are adjacent. A cell can have a maximum of four adjacent cells.

Cells sharing an edge or a corner are neighboring. A cell can have a maximum of eight neighbouring cells.

mxn box

A mxn box is a box with 'm' rows and 'n' columns.

Touching

Digits that share an edge or a corner touch each other.

Knight

A knight, as in chess, moves two steps in one direction and one step in a perpendicular direction.

	X		X	
X				X
		•		
X				X
	X		X	

Identical digits

Identical digits are digits that are exactly the same.

Cage

Cages are areas marked with a dashed line within a grid.

Consecutive

Two digits are consecutive if their difference is 1.

Arithmetic progression

A sequence of digits is in arithmetic progression if every consecutive pair of digits in the sequence have the same difference.

The difference cannot be 0.

Checkerboard

A checkerboard pattern is a 2x2 area of cells where the top-left and bottom-right cells are of one type and the top-right and bottom-left cells are of another type.

Magic Square.

Magic square is a 3x3 box where the sum of every row, column and 2 diagonals in that box add upto 15.

2	7	6
9	5	1
4	3	8

Partial Points

For Sudokus with partial points, the points will be awarded only if it is part of the overall solution.

1 CLASSICAL WELCOME

450 Points

45 Minutes

10x Bonus

Individual

Round Note: This round has 15 classic Sudokus.

1. Classic Sudoku

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box.

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

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

2 Basic Variants

600 Points

60 Minutes

10x Bonus

Individual

Round Note: This round has 2 classic Sudokus and 10 Basic Variants.

1,2. Classic Sudoku

20,20Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box.

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

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

3. Diagonal Sudoku

55 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Each main diagonal contains each digit from 1 to 9.

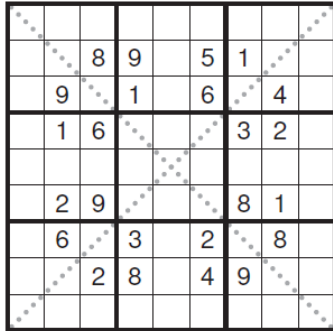
		2				4	8	
4			8					
9			4					2
				1		2	7	
			5		3			
	9	6		4				
5					9			1
					1			5
	2	1				7		

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

4. Anti-Diagonal Sudoku

20 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Each main diagonal contains exactly three digits.

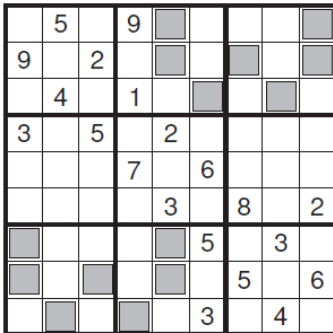


4	5	1	7	2	3	6	9	8
6	7	8	9	4	5	1	3	2
2	9	3	1	8	6	5	4	7
7	1	6	4	9	8	3	2	5
5	8	4	2	3	1	7	6	9
3	2	9	5	6	7	8	1	4
9	6	5	3	7	2	4	8	1
1	3	2	8	5	4	9	7	6
8	4	7	6	1	9	2	5	3

5. Clone Sudoku

50 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Digits in each corresponding cell in both shaded figures are identical.

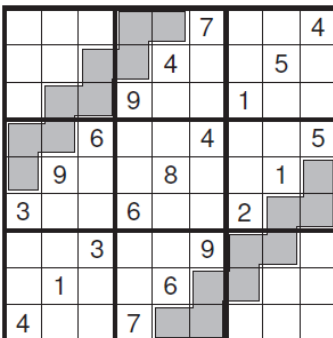


1	5	3	9	6	7	4	2	8
9	6	2	3	4	8	1	5	7
8	4	7	1	5	2	9	6	3
3	9	5	8	2	1	6	7	4
2	8	4	7	9	6	3	1	5
7	1	6	5	3	4	8	9	2
6	7	9	4	8	5	2	3	1
4	3	1	2	7	9	5	8	6
5	2	8	6	1	3	7	4	9

6. Extra Region Sudoku

40 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. The connected shaded cells contain each digit from 1 to 9.



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

7. Anti- Knight Sudoku

75 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. 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

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

8. Irregular Sudoku

25 Points

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

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

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

9 Odd Even Sudoku

110 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Cells with shaded squares contain even digits. Cells with shaded circles contain odd digits.

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

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

10. Windoku Sudoku

50 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Each of the four shaded 3x3 boxes contains each digit from 1 to 9.

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

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

11. Non-Consecutive Sudoku

105 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Digits in adjacent cells cannot be consecutive.

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

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

12. Thermo Sudoku

30 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Some thermometer shapes are placed in the grid. Digits are strictly increasing from the round bulb of the thermometer to each flat end.

4								2
9		2	5					4

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

3 Math & Converse

600 Points

60 Minutes

10x Bonus

Individual

Round Note: This round has 2 classic Sudokus and 10 Variants.

1.2. Classic Sudoku

20,20 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box.

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

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

3. 2 Odd 2 Even Sudoku

30 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. There can never be more than 2 consecutive digits of the same parity in a row or column.

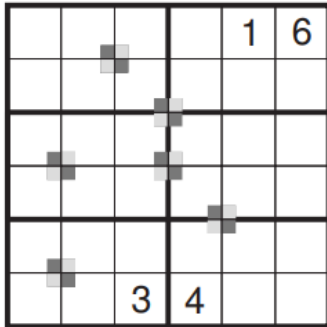
4	6		1		3		7	
				5			1	
			3	9		5		
9	4						8	3
		7		1	5			
	2			7				
	8		5		1		4	6

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

4. Battenburg Sudoku

50 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Everywhere 2 odd and 2 even digits form a 2x2 checkerboard pattern, a Battenburg marking is given. Puzzle in competition will be 9x9.

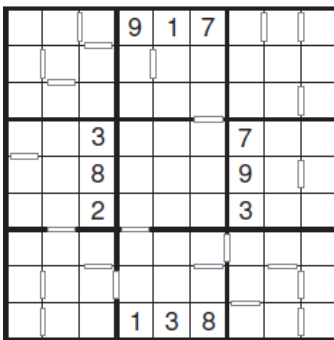


2	4	5	3	1	6
1	3	6	5	2	4
4	5	1	2	6	3
3	6	2	1	4	5
5	2	4	6	3	1
6	1	3	4	5	2

5. Consecutive Sudoku

25 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. There are some dots between cells. The numbers on each side of a dot must always be consecutive.

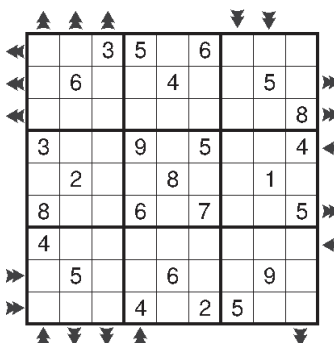


8	5	6	9	1	7	4	3	2
2	3	7	5	6	4	8	1	9
9	4	1	3	8	2	5	7	6
5	9	3	6	4	1	7	2	8
6	1	8	2	7	3	9	4	5
4	7	2	8	5	9	3	6	1
1	8	4	7	2	5	6	9	3
3	2	5	4	9	6	1	8	7
7	6	9	1	3	8	2	5	4

6. Rossini Sudoku

35 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. The arrows indicate that the nearest three digits in the row (column) are in ascending or descending order (increasing towards the direction the arrow is pointing towards). If there is no arrow outside a row/column, the nearest 3 digits therein cannot be in either ascending or descending order.

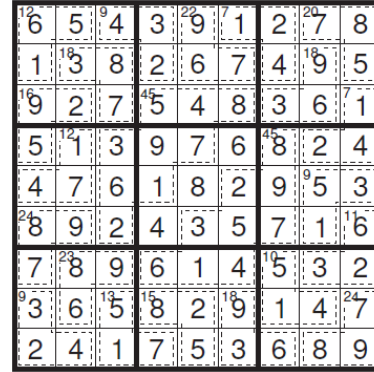
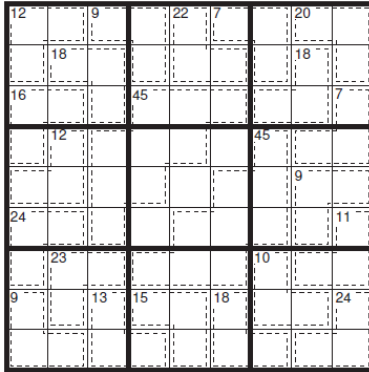


9	8	3	5	7	6	1	4	2
7	6	2	1	4	8	3	5	9
5	4	1	2	9	3	6	7	8
3	1	7	9	2	5	8	6	4
6	2	5	3	8	4	9	1	7
8	9	4	6	1	7	2	3	5
4	3	6	8	5	9	7	2	1
2	5	8	7	6	1	4	9	3
1	7	9	4	3	2	5	8	6

7..Killer Sudoku

55 Points

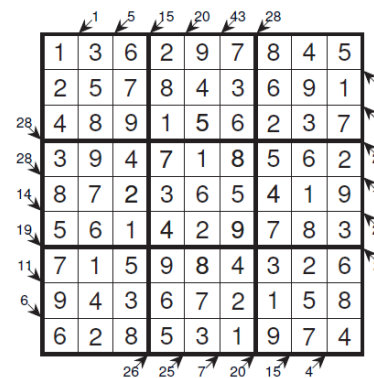
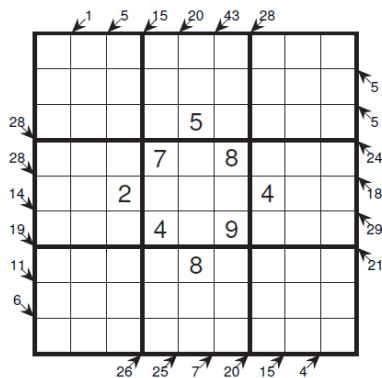
Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. The number at the top-left corner of each cage equals the sum of digits inside the cage. Digits do not repeat inside a cage.



8. Little Killer Sudoku

95 Points

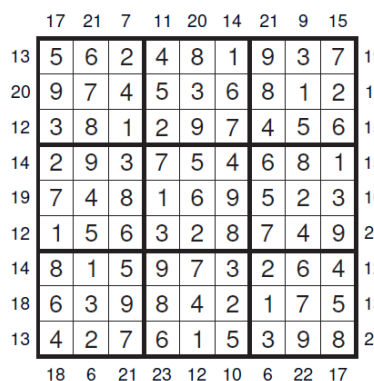
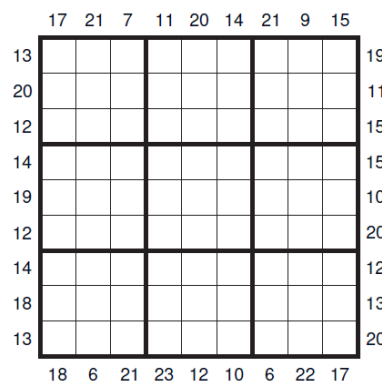
Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Numbers with arrows outside the grid is the sum of the digits in the direction pointed by the arrow.



9. Sum Frame Sudoku

60 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Digits outside the grid indicate the sum of the first 3 digits in the corresponding direction.



4 Non Basic Sudokus

600 Points

60 Minutes

10x Bonus

Individual

Round Note: This round has 2 classic Sudokus and 10 Variants.

1.2. Classic Sudoku

25,25 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box.

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

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

3.X Anti-Windoku Sudoku

80 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Each 3x3 shaded cells contains 5 digits, of which 4 numbers will appear twice and 1 number which is called X will appear in all the 4 shaded boxes.

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

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

4.Sum 10 Sudoku

60 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. 2 clone areas are shaded. Digits in the same position in each clone area will always add up to 10.

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

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

5.Creasing Sudoku

90 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Digits along each line are monotonically increasing or decreasing.

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

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

6.Pencil Mark Sudoku

105 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Some cells have markings of possible digits that can be in them.

12		$\begin{smallmatrix} 12 \\ 3 \end{smallmatrix}$	58	23	58	89		78
	45						12	
$\begin{smallmatrix} 78 \\ 9 \end{smallmatrix}$			15		69			$\begin{smallmatrix} 12 \\ 3 \end{smallmatrix}$
89	35		$\begin{smallmatrix} 2 \\ 78 \end{smallmatrix}$		36		12	
			$\begin{smallmatrix} 2 \\ 35 \end{smallmatrix}$	$\begin{smallmatrix} 27 \\ 57 \end{smallmatrix}$				
89	35		$\begin{smallmatrix} 2 \\ 57 \end{smallmatrix}$		36		45	
$\begin{smallmatrix} 5 \\ 78 \end{smallmatrix}$			18		69			$\begin{smallmatrix} 23 \\ 4 \end{smallmatrix}$
	67						79	
34		79	12	46	79	12		$\begin{smallmatrix} 12 \\ 3 \end{smallmatrix}$

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

7..Outside Renban Sudoku

65 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. The numbers outside indicates number of cells from the start where digits are consecutive, but not necessarily in order.

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

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

8. Magic Square Sudoku

30 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. In exactly 3 boxes the digits form a magic square.

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

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

9. Subset Sudoku

75 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. For every pair of connected cages, the set of digit in the smaller cage must be a subset of the set of digits in the larger cage. Digits on the corresponding connecting line must be in the larger cage but not in the connecting smaller cage.

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

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

10. Online Sudoku

45 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. The digits given on the line will appear on the line. They may or may not be in the correct position in the given puzzle.

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

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

5 50 - 50

600 Points

60 Minutes

10x Bonus

Individual

Round Note: This round has 2 classic Sudokus and 10 Variants.

1,2. Classic Sudoku

15,20 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box.

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

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

3. 2 Odd Even 50 - 50

60 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. In each 3x3 region where circles are marked, there is an equal distribution of odd and even digits in the circles.

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

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

4.Odd Even 50-50 Parity

50 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box . Of the 4 lines given, exactly 2 lines have odd parity and 2 have even parity.

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

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

5.Diagonal/Anti-Diagonal Sudoku

40 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box . 1 of the diagonals contains digits 1 to 9 and the other contains only 3 digits.

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

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

6.Cloned Windoku

80 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column, 3x3 outlined box and the 4 shaded windows.. In the 4 windoku regions, exactly 2 regions are clone of each other.

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

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

7..Equal Parity Line Sudoku

40 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. On each line the count of odd and even digits is the same.

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

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

8. Ordered/Unordered Sequence Sudoku

70 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. On two of the lines the sequences are ordered and two are unordered.

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

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

9. Renbam/Palindrome Sudoku

65 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Of the 4 lines, two are palindromes and two are renban regions.

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

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

10. Arrow/Thermo Sudoku

70 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Of the four images, two are governed by Thermo sudoku rules and two are governed by Arrow Sudoku rules. For Arrow sudoku, the bulb of the thermometer is treated as the sum circle opposite the arrow head.

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

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

11. Odd Even Sum Sudoku

30 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. In each 3x3 region, two cages are marked. In each box sum of digits in 1 cage is even and the other is odd.

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

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

12.9/10 Killer Sudoku

60 Points

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Half of the unnumbered cages have a sum of 9 and the other half have a sum of 10.

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

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

6 How does it add up?

800 Points

20 Minutes

40x Bonus

Team

There will be 4 sudokus to be solved. There will be a fifth grid given which has numbers given inside it. The numbers in the fifth grid are the sum of digits in all the four other grids at the respective positions. Digits cannot repeat in such positions. Puzzles in the competition will be 9x9 grids. For 1 correct grid a team gets 150 points, 2 correct grid, 350 points, for 3 grids it will be 550 points.

					6
		3			
4					

Arrow Sudoku

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

					5
3					

Non-Consecutive Sudoku

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

					4
		3			
1					

Sequence Sudoku

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

					2
		1			
4					

Thermo Sudoku

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

18					
	18	10			
		10			15
14			10		
			16	18	
					18

Sum Grid

7 Bridged Skyscrapers

800 Points

20 Minutes

40x Bonus

Team

There will be 4 sudokus to be solved on an A3 sheet. The puzzles will be arranged in a 2x2 matrix. There will be circles marked between adjacent grids. The circles will act as skyscraper rules in both directions. The skyscraper value is to be determined as part of solving. Puzzles in the competition will be 9x9 grids. For 1 correct grid a team gets 150 points, 2 correct grid, 350 points, for 3 grids it will be 550 points.

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

○ ○ ○ ○ ○ ○ ○

		9						
	○			1				
		○		3				
9			○		1			
	1			○		9		
		2			○		6	
			8		○			9
				6		○		
					7		○	

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

○ ○ ○ ○ ○ ○ ○

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

The four puzzles in the competition will be in the order presented below.

Sequence Sudoku	Anti-Knight Sudoku
Thermo Sudoku	Consecutive Sudoku