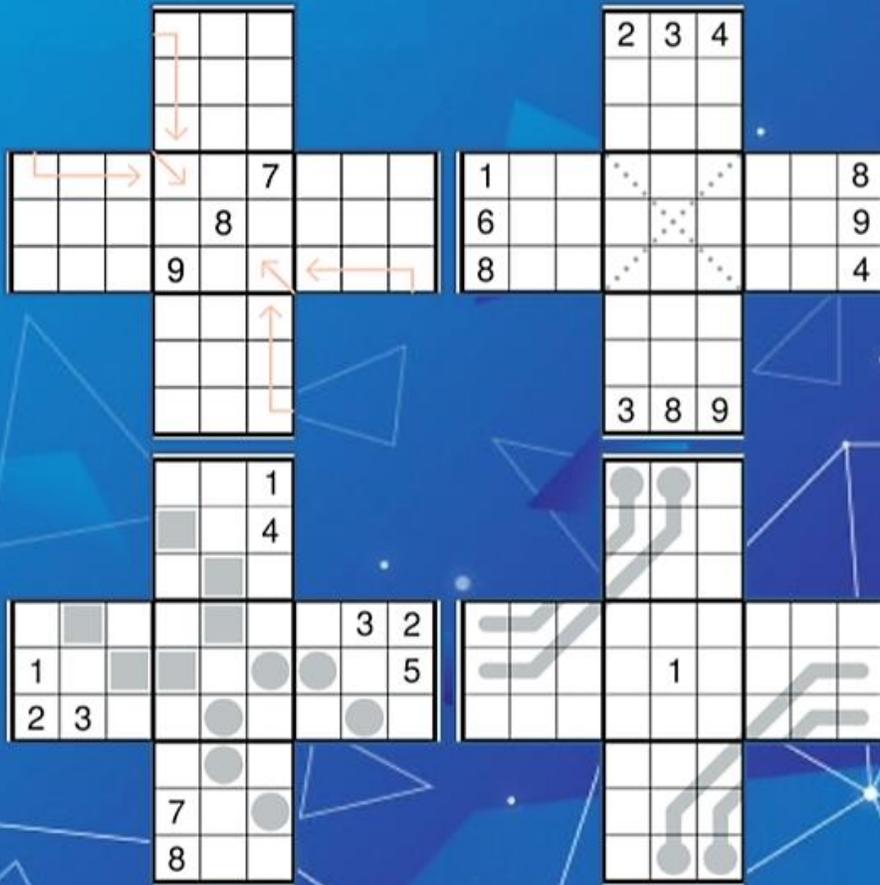


# Euphralling sudoku

Volume 1



Ashish  
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120+ Hand crafted Sudoku to challenge your brain

# Euphralling sudoku

# *Enthralling sudoku*

## **Monthly Sudoku Contest for September 2018**

**14<sup>th</sup> – 17<sup>th</sup> September  
Enthralling Sudoku  
By Ashish Kumar**

### **Important Links**

**Submission Page :** <http://logicmastersindia.com/2018/09S2>

**Discussion Thread :** <http://logicmastersindia.com/t/?tid=2146>

**F. A. Q. :** <http://logicmastersindia.com/t/?tid=381>

**Registration, if required :** <http://logicmastersindia.com/register.asp>

## What is Enthralling Sudoku?

- It is an upcoming book of Sudoku puzzles, by the author of this test.
- The book 130+ handcrafted puzzles to Sudoku lovers. The book is the first in a series of intended offerings.
- Visual aesthetics, nice logical deduction and a clean solve path had the author's utmost focus in design of each Sudoku.
- Sudoku as a puzzle type is gaining more and more popularity by the day. The book offers a variety of sudoku types.
- It starts with a collection of classics (which is the universal definition of a Sudoku) followed by a mix of variants like diagonal, odd even, killer and so on.
- Puzzles have been structured in an increasing difficulty level. A beginner can acquaint himself to a variety of puzzle types of different difficulty levels. A dedicated section titled 'tip/tricks' explains how one should approach these puzzles.
- The entire collection has been tested by Kota Morinishi, a 3-time World Sudoku champion. His testing times are available for solvers to compare with their own times.
- The book will be available during WSPC at Prague.

## About this Test

This test presents a collection of sudokus from the book. The following Sudoku types are covered:

- Arrow Sudoku
- Classic Sudoku
- Diagonal Sudoku
- Disjoint Sudoku
- Irregular Sudoku
- Killer Sudoku
- Odd Even Sudoku
- Outside Sudoku
- Thermo Sudoku
- Windoku

## Prizes

**Four copies of the book will be awarded as prizes to the below solvers:**

- **Top International Solver in the test**
- **Top Indian Solver in the test**
- **Top 2 Indian solvers who have not taken part in any WSC**

## Testers

- Kota Morinishi
- Rakesh Rai

## How to participate?

- Understand the rules of different Sudokus that will appear in this episode. This Instruction Booklet has rules for each Sudoku.
- Download the password protected Sudoku booklet (will be uploaded before the test starts). The Sudoku booklet contains the actual Sudokus to be solved. It is password protected, so you won't be able to open it.
- Any time after 14<sup>th</sup> September (but before 17<sup>th</sup> September), login at the submission page using your LMI userid and password.
- Please check the submission page for exact timing.
- Click on "Start". At this time, password for pdf will be shown and timer will start.
- You can print the pdf and solve on paper.

- Each Sudoku will be marked with two arrows for answer key.
- For entering answer key
  - Fill the answer form with digits along the marked arrow(s)
  - Digits outside the grid SHOULD NOT be included in the answer key
  - Click Submit button

If you are participating at LMI for first time, you must check the F.A.Q. at <http://logicmastersindia.com/t/?tid=381>.

### Points Table and Scoring

Points typically indicate difficulty of the Sudokus and time required to solve them. While the organizers have made best efforts to match them, your personal experience and preference may differ.

Classic	5, 6, 12
Odd Even	5
Arrow	5
Diagonal	7
Windoku	8
Disjoint	9
Outside	9
Irregular	10
Killer	10
Thermo	14

This test uses instant grading where a solver can submit any individual Sudoku and receive confirmation that the solution is correct or not. Each incorrect submission reduces the sudoku's

potential score. The first, second, third, and fourth incorrect submissions reduce the potential score to 90%, 70%, 40%, and 0% respectively.

### Bonus

If you submitted all Sudokus correctly, you can have bonus points 1 point per minute saved, computed up to seconds.

### General Rules

To make the rules less repetitive, you will see following line “Apply Classic Sudoku rules” in most Sudoku rules. This means “Place a digit from 1 to N, where N is the size of the grid, in each empty cell so that each digit appears exactly once in each row, column and outlined region.” These outlined regions could be 3X3 boxes, or other shapes.

Each Sudoku will be marked with, at max, 2 lettered arrows. If you are solving on paper, you need to submit the digits in these arrows, in order, including the givens. For example, the answer key for the Sudoku at the right is 162897453, 517698432.

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

### About the Sudoku Booklet

The password protected Sudoku booklet will have 6 pages. If you are planning to solve on paper, we advise you to have a printer accessible with enough paper.

The Sudoku booklet will look similar to the next 5 pages in this instruction booklet. The font sizes, cell sizes, colors, borders, shading, margin will be similar. We recommend you to print few pages of this instruction booklet. You can avoid any last minute surprise during the test.

**01-03  
Classic  
Sudoku**

5, 6, 12 points

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and 3X3 box.

<b>A</b>								
	3	7		1	6		9	5
	1			8			6	
<b>B</b>								
	9	2		3	1		7	6
	8			7			1	
	7	3		5	4		8	9
	5			9			3	

**04  
Odd Even  
Sudoku**

5 points

Apply Classic Sudoku rules.

Additionally, each cell marked with a square must contain an even digit (2/4/6/8), and each cell marked with a circle must contain an odd digit (1/3/5/7/9).

			4	6	7			1	2
									8
<b>A</b>	1						5		
	8					1			3
	4				5				1
<b>B</b>				9		4			
			1				2		
	2							3	
	3	4		2	8				9

**05**  
**Arrow**  
**Sudoku**

5 points

Apply Classic Sudoku rules.

Additionally, the sum of the digits along the path of each arrow must equal the digit in the circled cell. Digits can repeat within an arrow shape.

**A**

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

**B**

**06**  
**Diagonal**  
**Sudoku**

7 points

Apply Classic Sudoku rules.

Additionally, each main diagonal (marked by dotted lines) must contain digits from 1-9.

**B**

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

**C**

## 07 Windoku

8 points

Apply Classic  
Sudoku rules.

Each of the four  
shaded 3x3 boxes  
must also contain  
the numbers 1 to 9.

<b>A</b>								
		5						
	7	8	9			1		
		4	2					3
	6							7
	8					4	5	
			4			8	9	6
							1	
<b>B</b>								

## 08 Disjoint Sudoku

9 points

Apply Classic  
Sudoku rules.

Additionally, no  
digit can appear in  
the same position in  
different 3X3 boxes.

	2	3		9	6			1
	1	4		8	7			
<b>A</b>	6	7						
	5	8			2	3		
					1	4		
<b>B</b>								
							3	4
	3						5	6

### 09 Outside Sudoku

9 points

Apply Classic  
Sudoku rules.

Additionally, clues  
outside the grid  
represent digits to  
be filled in the first  
three cells in the  
corresponding  
direction, without  
any order.

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

3  
4  
5

8  
9

1  
2

8  
9

1  
3

6  
7

5  
6

8  
9

1 3

4 5

3 4

5 7

8 9

4 5 6

1 2

6 7

2 3

8 9

6 7

8 9

3 4  
5

7 8

1 9

2 3

### 10 Irregular Sudoku

10 points

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

# 11 Killer Sudoku

10 points

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 do not repeat inside a cage.

# 12 Thermo Sudoku

14 points

Apply standard Sudoku rules.

Additionally, the digits in each “thermometer” shaped region must be strictly increasing from the circular “bulb” to the other end(s).

01-03 Classic

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

04 Odd Even

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

05 Arrow

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

06 Diagonal

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

07 Windoku

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

08 Disjoint

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

09 Outside

			3									
			4	8	1	8	1	6	5		8	
			5	9	2	9	3	7	6		9	
			4	9	2	8	5	6	3	7	1	13
58			5	8	1	4	3	7	6	2	9	
67			3	6	7	9	1	2	5	4	8	45
	▶		9	7	5	2	6	8	1	3	4	34
68			8	1	6	3	4	9	2	5	7	57
234			2	4	3	5	7	1	9	8	6	89
1			1	5	8	6	2	4	7	9	3	
	▶		7	2	9	1	8	3	4	6	5	456
34			6	3	4	7	9	5	8	1	2	12
			6	2	8	6	8	3	7	1	2	
			7	3	9	7	9	4	8	9	3	

10 Irregular

▶	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

11 Killer

	12	3	15	14	15	4	12	5	17
	9	2	6	8	2	7	5	4	9
	7	4	8	5	1	9	6	2	3
▶	4	5	7	3	9	1	2	8	6
	1	6	3	2	8	5	9	7	4
▶	8	9	2	4	7	6	1	3	5
	2	3	9	1	5	8	4	6	7
	5	8	4	7	6	2	3	9	1
	6	7	1	9	4	3	8	5	2

12 Thermo

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