OutTh!nk, IIM Calcutta

In Association with

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Presents

Japanese Pazuru – 7 Lakes Fest

This is a contest that will feature an assorted collection of Sudoku variations, and popular Japanese-style puzzle types. This booklet gives the rules and examples of the puzzle types that will appear, along with other information on the contest.

How to participate?

- Understand the rules of different Puzzles that will appear in this test. This Instruction Booklet has rules and examples for each Puzzle.
- Download the password protected Puzzle booklet (will be uploaded before the test starts). The Puzzle booklet contains the actual Puzzles to be solved. It is password protected, so you won't be able to open it.
- The contest will take place on the 25th and the 27th. The exact timings will be announced later.
- Within the specified time, login at the submission page using your LMI user-id and password.
- Click on "Start". At this time, password for pdf will be shown and timer will start.
- You can either solve online using the Penpa interface (details below) or print the pdf and solve on paper.
- Some Puzzles will be marked with arrows
- After solving a Puzzle
    - Fill the answer form as per the answer key format given in the Instruction booklet, along the marked arrow(s) (this is the same even if you are solving on Penpa)
    - 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.

Contest Duration & Bonus

The contest will have two rounds of 60 minutes each. In each round, participants will be awarded a bonus of 10 points per minute saved, computed up to seconds, for submitting all puzzles correctly within 60 minutes. The top participants from Round 1 will be eligible to participate in Round 2. The organizers reserve the right to decide the number of participants eligible based on the total number.

Penpa Usage

This contest will also be solvable on the Penpa-Edit software. Below the rules of each puzzle will be a link to click to solve on the editor. The editor DOES NOT have a solution enabled so it will not check a solution. Participants must submit the answer key codes as they would with paper solving. It is therefore advisable to enter solution codes one at a time to avoid system lag with too many tabs open.

To practice on the editor, we have given links for solving some of the example puzzles too.

Credits

We sincerely thank the following people for their contributions to this contest:
- The original creator **opt-pan** for penpa edit - https://opt-pan.github.io/penpa-edit/
- Swaroop Guggilam for his recent efforts in adding features to Penpa-edit - https://swaroopg92.github.io/penpa-edit/
- Logic Masters India team for hosting the competition.

Round 1

Classic Sudoku

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.
Penpa Link: https://git.io/JIisW
Answer key: The digits along the marked rows/columns, including given digits. The answer to the example is 783152649, 128563497.

Odd Even Sudoku

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).
Penpa Link: https://git.io/JIiGU
Answer key: The digits along the marked rows/columns, including given digits. The answer to the example is 672195348, 426853791.

Star Battle

Place two stars (1 in the example) in each row, column and boldly outlined region. Cells with stars cannot touch each other orthogonally or diagonally.
Penpa Link: https://git.io/JUnpr (press 1 for Star and 0 for X)
Answer key: The column number of the left-most star in each row from top to bottom. The answer for the example is 513624.
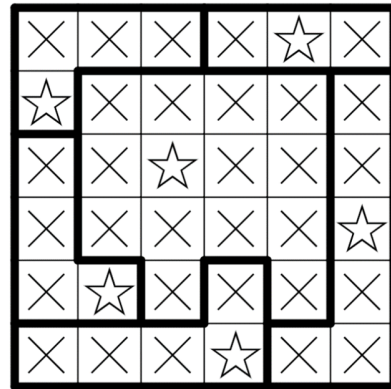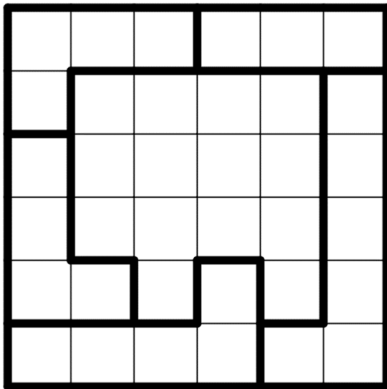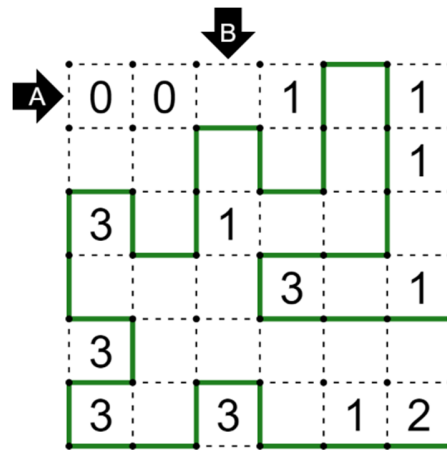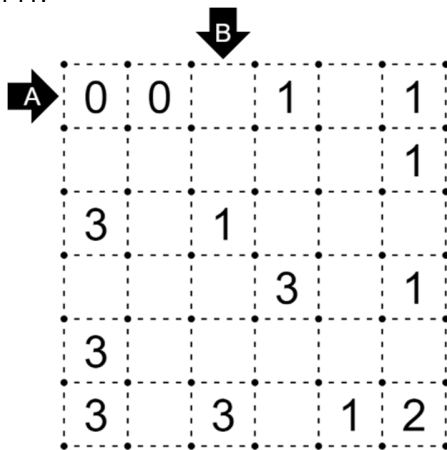

Slitherlink

Draw a single closed loop that does not touch or cross itself. Digits in the grid indicate the amount of line segments of that cell used by the loop.
Penpa Link: https://git.io/JIi8P
Answer key: Contiguous groups of cells inside and outside the loop. The answer for the example is 411, 141.
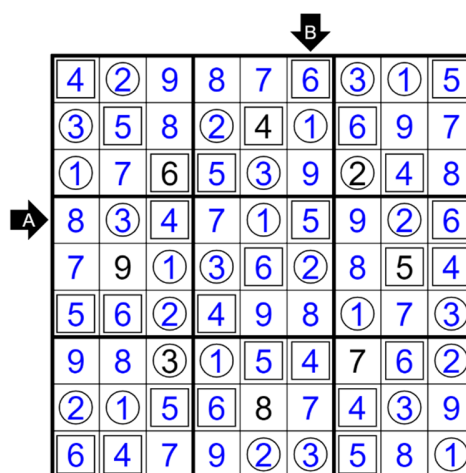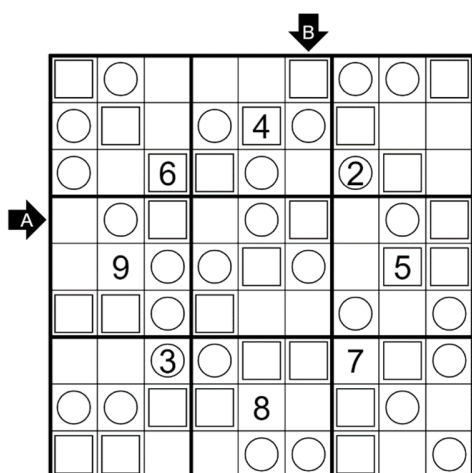
Round 2

Trio Sudoku

Apply classic Sudoku rules. Cells with circles must contain the digits 1, 2 and 3. Cells with squares must contain the digits 4, 5 and 6. Blank cells must contain the digits 7, 8 and 9.
Penpa Link: https://git.io/JIiZR
Answer key: The digits along the marked rows/columns, including given digits. The answer to the example is 834715926, 619528473.
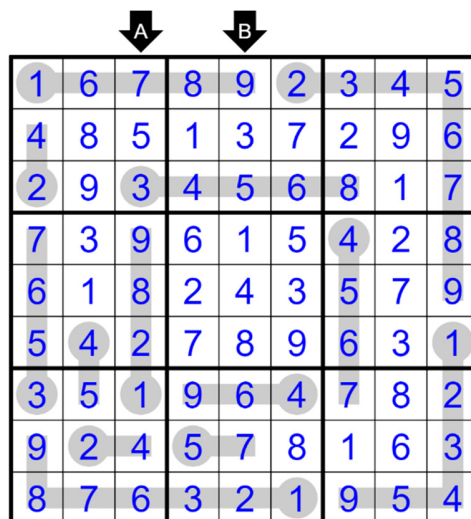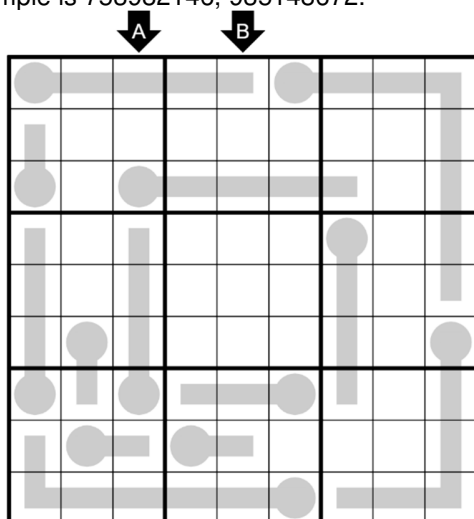

Thermo Sudoku

Apply classic Sudoku rules. Additionally, the digits in each "thermometer" shaped region must be strictly increasing from the circular "bulb" to the other end(s).
Penpa Link: https://git.io/JIinw
Answer key: The digits along the marked rows/columns, including given digits. The answer to the example is 753982146, 935148672.

Kakuro

Enter a single digit from 1 to 9 into each white cell so that the sum of digits in each Across entry equals the value given to the left of the entry, and the sum of digits in each Down entry equals the value given above the entry. No digit may be repeated within a single entry (i.e., group of cells connected horizontally or vertically without any black cells between).

Penpa Link: https://git.io/JUcT6

Answer key: The digits along the marked rows/columns, ignoring black cells. The answer to the example is 295815, 56984.

Nurikabe

Shade some cells black so that the grid is divided into non-overlapping white regions. Cells are considered to be in the same region if they are adjacent horizontally or vertically. Each given number must be in a white region that has the same area in cells as that number. Each white region must have exactly one given number. All black cells must be connected with each other, but no 2×2 group of cells can be entirely shaded black.

Penpa Link: https://git.io/JIiWu

Answer key: Contiguous groups of shaded & unshaded cells along marked arrows. The answer for the example is 221,1112.