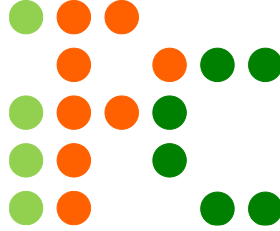


# puzzle Ramayan

and



Episode – 2  
21<sup>st</sup> – 27<sup>th</sup> February 2025

Loops & Object Placement  
by  
Madhav Sankaranarayanan  
& Prasanna Seshadri

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2025. Please check <http://logicmastersindia.com/PR/2025pr.asp> for details.

## Important Links

Submission Page: <http://logicmastersindia.com/live?contest=PR202502>

Discussion Thread: <http://logicmastersindia.com/t/?tid=4174>

F. A. Q. (contests): <http://logicmastersindia.com/t/?tid=2773>

F. A. Q. (online solving): <https://logicmastersindia.com/live/faq-online-solving.asp>

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

---

## About this Episode

This episode has 22 Puzzles from the following puzzle types:

- 3\* Slitherlink
- 3\* Myopia
- 3\* Round Trip
- 3\* Akari
- 3\* Dosun-Fuwari
- 3\* Battleships
- 2\* Round Trip [Tetromino]
- 2\* Battleships [Loop]

## How to participate?

- Understand the rules of different puzzles that will appear in this episode. This Instruction Booklet has rules for each puzzle.
- Any time on or after 21<sup>st</sup> February (but on or before 27<sup>th</sup> February), login at the submission page using your LMI user-id and password. Please check the submission page for exact timing.
- **If you plan to solve on paper:**
  - a) 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.
  - b) Click on "Start". At this time, password for pdf will be shown and timer will start. **The contest duration is 60 minutes.**
  - c) The puzzle booklet can be downloaded, printed and solved on paper.
  - d) We advise you to have a printer accessible with enough paper.
  - e) You are allowed to use writing implements, eraser, blank paper (including commercial graph paper), ruler, scissors, and tape.
- **If you plan to solve on LMI's Penpa-Integrated Interface:**
  - a) Click on this link and understand the instructions - <https://logicmastersindia.com/live/faq-online-solving.asp>
  - b) It is noted on the link too, but we note it here as well to be clear – the participants must still input the answer keys in the boxes below the puzzle and submit them to receive credit as given below.
- Outside solving help of any kind is not permitted. This includes but is not limited to: assistance of any kind from any other person; prepared notes, books, calculators, computers, or tools other than items explicitly permitted.
- Participants may use both paper solving and online solving, even interchangeably. Eventually our system will only count anything submitted in the submission boxes in either mode.

If you are participating at LMI for first time, it will be useful to check the F.A.Q. at <http://logicmastersindia.com/t/?tid=2773>.

## About answer keys and Submission

- Each puzzle has some answer keys, as described in the instructions.
  - After solving the puzzle, you need to submit the puzzle using the answer keys.
  - You may submit the answer keys anytime during the test duration. You may consider submitting a puzzle as soon as you solve it.
  - Answer keys are always to be entered from left to right or top to bottom
  - Don't enter any separator unless specified in the answer key
  - If one row and one column is marked, enter the row first and then the column
-

- If multiple rows are marked, enter from top to bottom for marked rows
- If multiple columns are marked, enter from left to right for marked columns
- Uppercase or lower case does not matter for answer keys where letters must be entered.
- Characters other than the ones explicitly expected by the answer key will cause the red highlight to appear around the submission box.

## Points Table and Scoring

Points typically indicate difficulty of the Puzzles and time required to solve them. You will get full points if you enter the correct answer key. While the organizers have made best efforts to match them, **your personal experience and preference may differ.**

Slitherlink	3, 5, 6
Myopia	4, 7, 5
Round Trip	4, 5, 9
Akari	2, 3, 4
Dosun-Fuwari	1, 1, 2
Battleships	5, 4, 5
Round Trip [Tetromino]	6, 9
Battleships [Loop]	6, 4

This test uses instant grading where a solver can submit any individual Puzzle and receive confirmation that the solution is correct or not. Each incorrect submission reduces the puzzle's potential score. The first, second, third, and fourth incorrect submissions reduce the potential score to 90%, 70%, 40%, and 0% respectively. A demonstration for this is shown below.

### Original points

04 Araf	50 points	4A	Sum should be 10
---------	-----------	----	------------------

### Potential points after 1 incorrect submission

04 Araf	45 / 50	4A	1234
---------	---------	----	------

### Potential points after 2 incorrect submissions

04 Araf	35 / 50	4A	23311
---------	---------	----	-------

### Potential points after 3 incorrect submissions

04 Araf	20 / 50	4A	1111111111
---------	---------	----	------------

### Potential points after 4 incorrect submissions

04 Araf	0 / 50	4A	541
---------	--------	----	-----

## Bonus and Ranking

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

Ranking will be based on following rules in order:

1. Most total points
2. Earliest final submission time, up to seconds (ignoring incorrect submissions)

### Credits

- **Wessel Strijkstra and Superrabbit** for test solving the puzzles and providing invaluable feedback.
- 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/> and also working to integrate it with our contest engine.

## About the Puzzle Booklet

The password protected Puzzle booklet will have 11-12 pages. This is relevant only for paper solvers.

*Solutions and keys (including the key explanation) to examples are towards the end of the booklet in the Solutions section.*

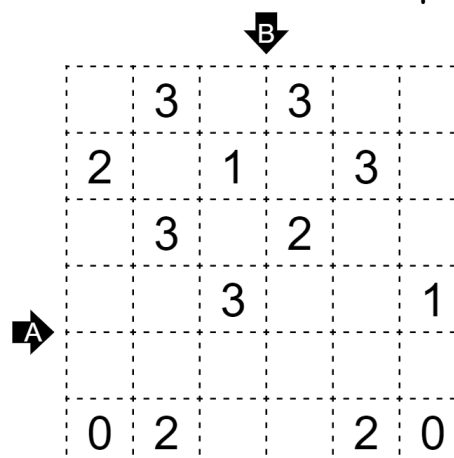
### 1-3 Slitherlink

Draw a single, non-intersecting loop that only consists of horizontal and vertical segments between the dots. Numbers inside a cell indicate how many of the edges of that cell are part of the loop.

[The puzzles in the contest will be of sizes 8x8, 9x9 and 10x10. This example is 6x6.]

Penpa for example: <https://tinyurl.com/ycktzvtb>

3 + 5 + 6 points



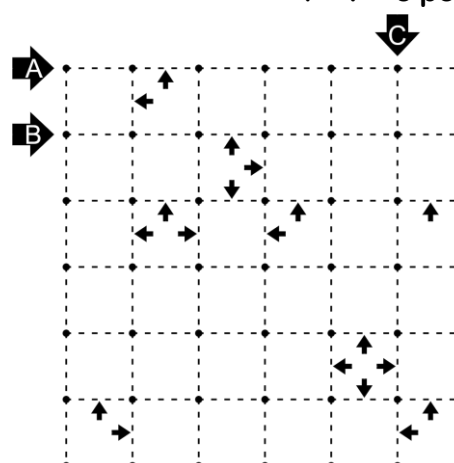
### 4-6 Myopia

Connect some pairs of orthogonally adjacent dots to form a single non-intersecting loop. Clued cells contain arrows indicating all of the orthogonal directions which tie for having a loop segment appearing closest to the clued cell.

[The puzzles in the contest will be of sizes 8x8, 9x9 and 10x10. This example is 6x6.]

Penpa for example: <https://tinyurl.com/294wz2ah>

4 + 7 + 5 points



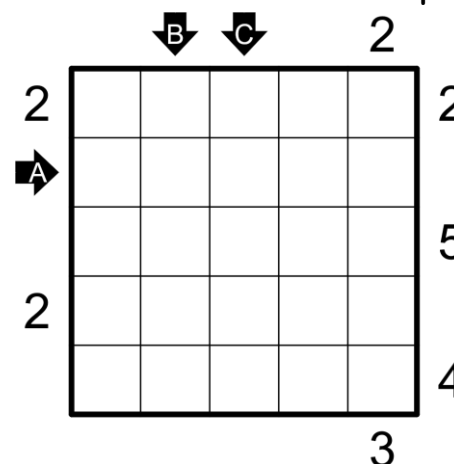
### 7-9 Round Trip

Draw a loop through the centers of some cells so that each number outside the grid represents the number of cells used by the first line segment traveling within the corresponding row or column from the direction of the clue. Two perpendicular line segments may intersect each other, but not turn at their intersection or otherwise overlap.

[The puzzles in the contest will be of sizes 7x7, 8x8 and 9x9. This example is 5x5.]

Penpa for example: <http://tinyurl.com/252wu8ob>

4 + 5 + 9 points



### 10-12 Akari

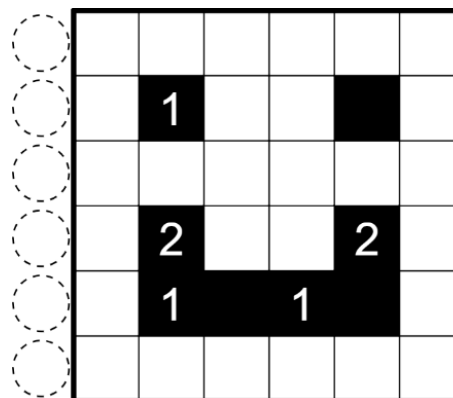
Place lights in some cells so that every cell is illuminated. Lights illuminate the cell they're in as well as all cells seen in a straight line horizontally or vertically, not obstructed by a black cell. Lights may not illuminate each other.

Clues represent the number of lights in the (up to) four cells surrounding the clue.

[The puzzles in the contest will be of sizes 8x8, 9x9 and 10x10. This example is 6x6.]

Penpa for example: <https://tinyurl.com/2764q7dv>

2 + 3 + 4 points



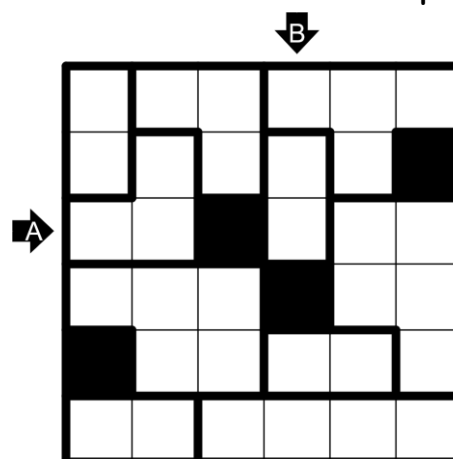
### 13-15 Dosun-Fuwari

Place one iron ball and one balloon in each region. Iron balls may only be placed directly above the bottom edge of the grid, a black cell, or another iron ball. Balloons may only be placed directly below the top edge of the grid, a black cell, or another balloon.

[The puzzles in the contest will be of sizes 7x7, 8x8 and 9x9. This example is 6x6.]

Penpa for example: <https://tinyurl.com/2xzlupjb>

1 + 1 + 2 points

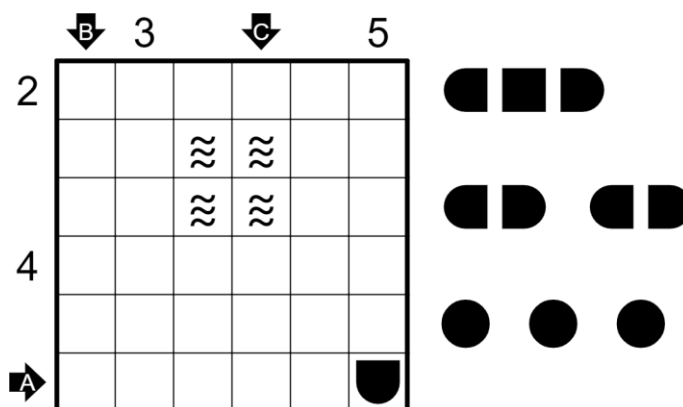


### 16-18 Battleships

Place the given fleet of ships into the grid so that no two ships are touching, not even diagonally. Rotating ships is permitted. A clue outside the grid indicates the number of cells in the corresponding row or column that are occupied by ships. Cells with waves cannot be occupied by a ship. A given ship segment must be used as the part of a ship that its shape represents.

[The puzzles in the contest will be of sizes 8x8, 9x9 and 10x10. This example is 6x6.]  
 Penpa for example: <https://tinyurl.com/26895pmb>

5 + 4 + 5 points



## 19-20 Round Trip [Tetromino]

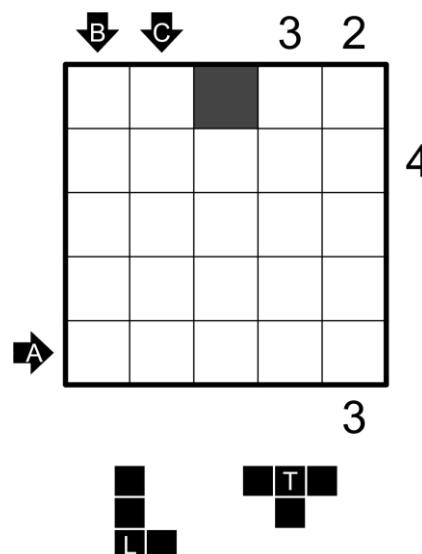
6 + 9 points

Apply regular Round Trip rules.

All cells that are not visited by the loop must contain tetrominoes, i.e., groups of four shaded cells. Place all tetrominoes given in the bank below the grid, allowing for rotations and reflections. Tetrominoes cannot touch each other, even diagonally.

[The puzzles in the contest will be of sizes 8x8 and 9x9. This example is 5x5.]

Penpa for example: <https://tinyurl.com/26dqfwjd>



## 21-22 Battleships [Loop]

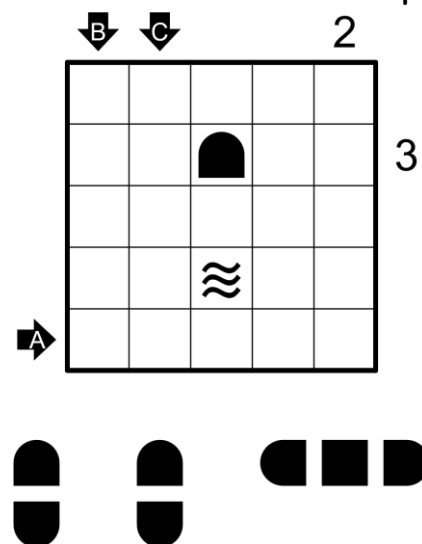
6 + 4 points

Apply regular Battleships rules.

Draw a non-intersecting loop through the centers of all cells that do not contain ship segments, including given water cells.

[The puzzles in the contest will be of sizes 8x8 and 9x9. This example is 5x5.]

Penpa for example: <https://tinyurl.com/2ccgh87k>



## Solutions

For this round, all answer keys will NOT be the same for all puzzles.

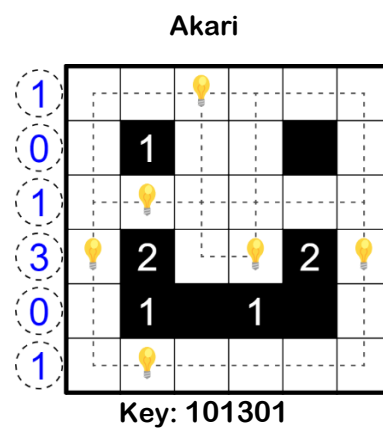
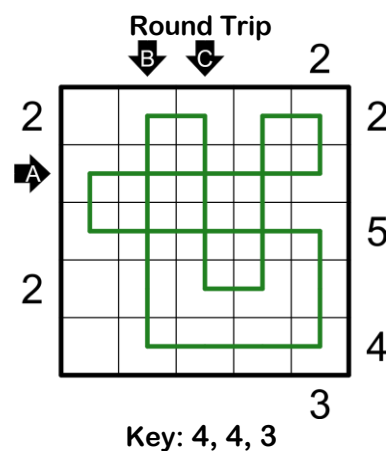
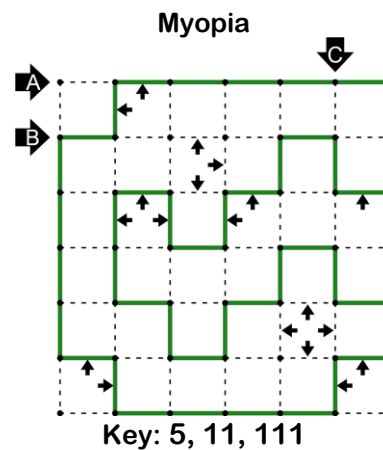
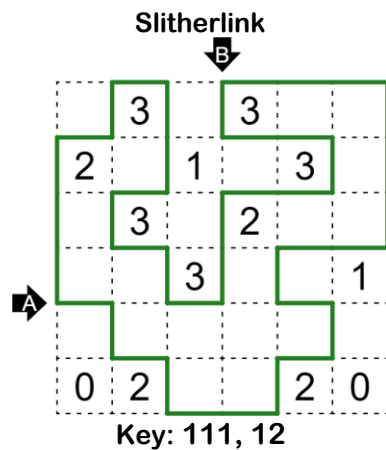
The keys are given section by section.

**Slitherlink, Myopia, Round Trip, Round Trip [Tetromino], Battleships [Loop]** – For each marked row/column, enter the lengths of separate loop segments in the direction of the arrow. Use unit's digit for double digit values. Enter 0 if there are no segments.

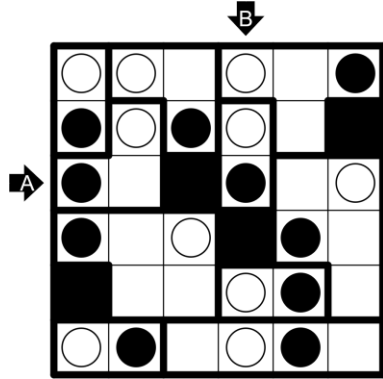
**Akari** – For each row from top to bottom, enter the number of lights.

**Dosun-Fuwari** – For each marked row/column, enter the contents of each cell from left to right/top to bottom. Enter 1 for a cell occupied by a balloon, 2 for a cell occupied by a ball and 0 for a blank or black cell.

**Battleships** – For each marked row/column, enter either the size of the ship that has a segment in the cell, or X for cells without ship segments, in the direction of the arrow.

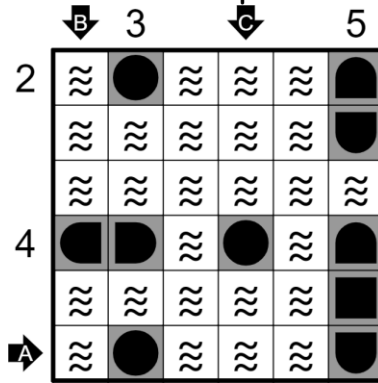


Dosun-Fuwari



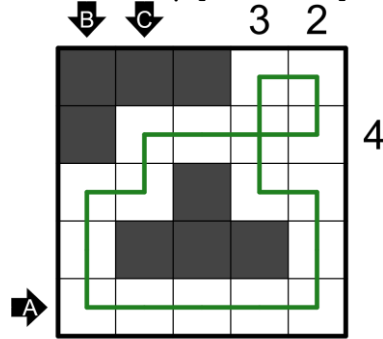
Key: 200201, 112011

Battleships



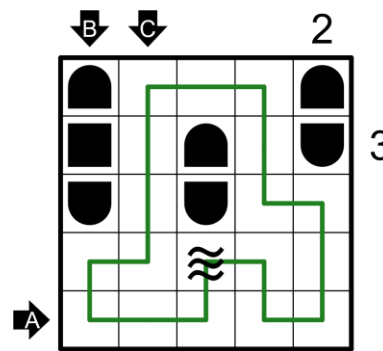
Key: X1XXX3, XXX2XX, XXX1XX

Round Trip [Tetromino]



Key: 4, 2, 1

Battleships [Loop]



Key: 21, 1, 3