

Episode-1
$27^{\text {th }}-30^{\text {th }}$ January

## Classics \& Regions by Robert Vollmert

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2017. Please check http://logicmastersindia.com/PR/201617pr. asp for details.

Important Links
Submission Page : http://logicmastersindia.com/PR/201701/ Discussion Thread: http://logicmastersindia.com/t/?tid=1380
F. A. Q. : http://logicmastersindia.com/t/?tid=381

## About this Episode

This episode has 22 Puzzles from the following five puzzle types:

- $3^{*}$ Fence
- 3* Slant
- 3* Star Battle (+ 2* Star Battle Variant Instructionless)
- $3^{*}$ Spiral Galaxies
- $3^{*}$ Fillomino
- 3* Shikaku (+ 2* Shikaku Variant Instructionless)


## How to participate?

- Understand the rules of different puzzles that will appear in this episode. This Instruction Booklet has rules 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.
- Any time after $27^{\text {th }}$ January (but before $31^{\text {st }}$ January (not including $31^{\text {stt }}$ ), 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.
- The puzzle booklet should be downloaded, printed and solved on paper.
- There will not be any interface / applet to solve the puzzles on web browser.
- Most of the puzzles are designed to be solved faster on paper.
- We advise you to have a printer accessible with enough paper.
- 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.
- You are allowed to use writing implements, eraser, blank paper (including commercial graph paper), ruler, scissors, and tape.

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

## 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
- If horizontal and vertical keys are needed, first enter the horizontal and then the vertical
- Uppercase or lower case of answer key does not matter
- Characters other than alphabets, numbers and comma will be removed while checking the answer


## 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.

| Fence 9x9, 8X8, 9X9 | $3,4,7$ |
| :--- | :--- |
| Star Battle 9X9, 9X9, 10X10 | $2,4,8$ |
| Slant 7X7, 7X7, 8X8 | $2,3,6$ |
| Star Battle Instructionless | 4,7 |
| Spiral Galaxies 7x7, 7X7, 9X9 | $3,3,7$ |
| Fillomino 9X9, 10X10, 9X9 | $3,5,8$ |
| Shikaku 8X8, 8X8, 12X12 | $2,6,3$ |
| Shikaku Instructionless | 4,6 |

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 submission reduces the potential score to $90 \%, 70 \%, 40 \%$, and $0 \%$ respectively.

## Bonus and Ranking

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

Ranking will be based on following rules in order:

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

## About the Puzzle Booklet

The password protected Puzzle booklet will have approximately 10-12 pages. We expect you to print and solve on page, so you would need to have a printer accessible with enough paper.

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.


Answer Key: Enter length of largest line segment in marked row/column. Enter '0' if there are no line segments along the marked direction.
Example: 113, 212

## Star Battle

Place stars in the grid such that every row, column and thick-outlined region contains two stars. Stars cannot touch each other, not even diagonally.


Answer Key: Enter column of left-most star of each row from top to bottom.
Example: BFBFAEAE

Draw exactly one diagonal line in each cell. The numbers in some intersections of the grid lines indicate how many diagonal lines end at the intersection. The lines must not form a closed loop.


Answer Key: Enter the groups of cells containing same orientations of the diagonal lines along the marked row/column.
Example: 21131, 4112, 13211

## Star Battle Instructionless

The rules of this puzzle vary slightly from the Star Battle rules. One example with solution will be given in the puzzle booklet to demonstrate the change in the rules. It is part of solving process to determine the rule changes by exploring/solving the examples. There will not be any worded instruction in the puzzle booklet for this puzzle.

## Spiral Galaxies

Divide the grid into 180 degree symmetrical regions along the gridlines, so that each cell is part of only one region. Each region must contain exactly one circle, which represents the central symmetry point of the region. All circles are given. All cells must be part of a region.


Answer Key: Write the number of cells that belong to different regions in marked row/column.
Example: 1222,21211

## Fillomino

Divide the grid into different regions along the gridlines. No two regions of the same size (number of cells in the region) can touch each other by a side. Numbers in the grid indicate that the cell is part of a region of that size (number of cells in the region). A region can contain more than one given number. There can be regions without any given numbers also.


Answer Key: Write the number of cells that belong to different regions in marked row/column.
Example: 221, 11111

## Shikaku

Divide the grid into a number of non-overlapping rectangles, including squares, along the grid lines. Numbers in the grid indicate the size (number of cells) of the rectangle they are in. Each rectangle must contain exactly one given number.


Answer Key: Write the number of cells that belong to different regions in marked row/column.
Example: 411, 11121

## Shikaku Instructionless

The rules of this puzzle vary slightly from the Shikaku rules. One example with solution will be given in the puzzle booklet to demonstrate the change in the rules. It is part of solving process to determine the rule changes by exploring/solving the examples. There will not be any worded instruction in the puzzle booklet for this puzzle.

