puzzle
Ramayan
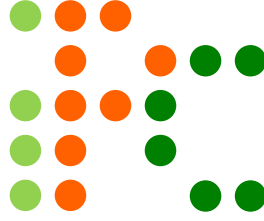
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Episode – 5
26th – 28th December

by Ashish Kumar

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2016. Please check http://logicmastersindia.com/PR/2015-16pr.asp for details.

About this Episode

This episode has 22 puzzles, with 5 base Snake puzzle types and 2 derived Snake puzzles.

• 4* Standard Snake • 4* Horse Snake • 4* Summed Snake • 4* Toroidal Snake • 4* Graffiti Snake	• 1* False Graffiti Snake • 1* Multiple Snake

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 during the weekend or Monday, 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.

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.

Standard Snake	1, 2, 3, 7
Horse Snake	2, 5, 6, 10
Summed Snake	3, 4, 6, 5
Toroidal Snake	4, 3, 6, 10
Graffiti Snake	2, 1, 2, 6
False Graffiti	3
Multiple Snakes	9

Instant Grading

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)

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About the Puzzle Booklet

The password protected Puzzle booklet will have **9** pages. We expect you to print and solve on paper, so you would need to have a printer accessible with enough paper.

The font sizes, cell sizes, colors, borders, shading, margin in the puzzle booklet and instruction booklet will be identical.

Also, we strongly advise you to save the pdf file on your computer, open the pdf (with the password) using Adobe Acrobat Reader and then print. If you print directly from the browser (for example Google Chrome), unintentional printing problems may arise (see this post for details http://logicmastersindia.com/t/?tid=1189).
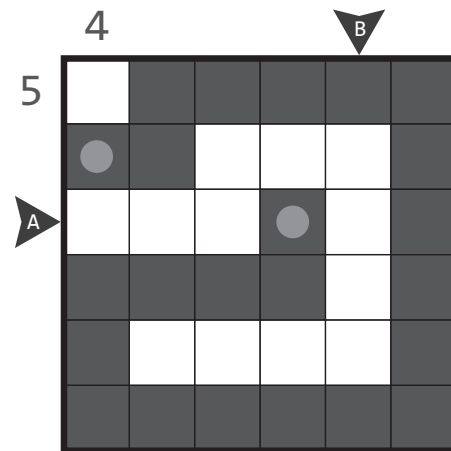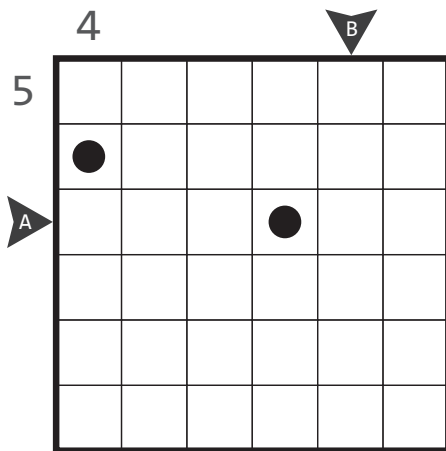
Snake

➢ Locate a snake (a 1 cell-wide single continuous path) in the grid whose head and tail are given.
➢ The snake does not touch itself, even diagonally.
➢ Numbers outside the grid indicate the number of snake cells in that row/column.

Answer key: Describe the marked rows/columns.
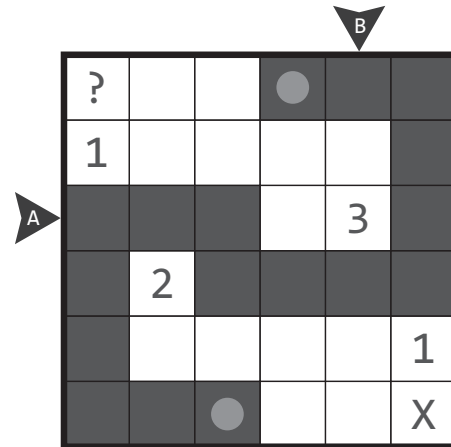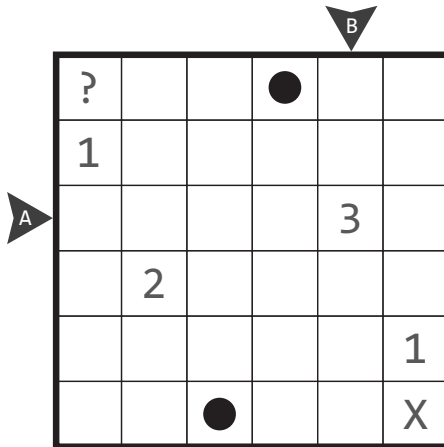*For the example, the answer is 3111,141*

About answer keys

• All puzzles follow use the same answer mechanism in this test.
• Each puzzle will have some rows or columns marked.
• For each marked row, you need to enter the lengths of group of snake cells and non-snake cells, from left to right.
• For each marked column, you need to enter the lengths of group of snake cells and non-snake cells, from top to bottom.
• In Toroidal Snake, ignore the fact the grid is toroidal when entering the answer key.

Horse Snake

- ➢ Apply Snake rules.
- ➢ A clue in a cell corresponds to the number of snake cells (head and tail included) which can be reached in a knight step from this cell. A knight, as in Chess, moves two cells forward followed by one sideways.
- ➢ The clue "?" must be replaced by a number greater than zero.
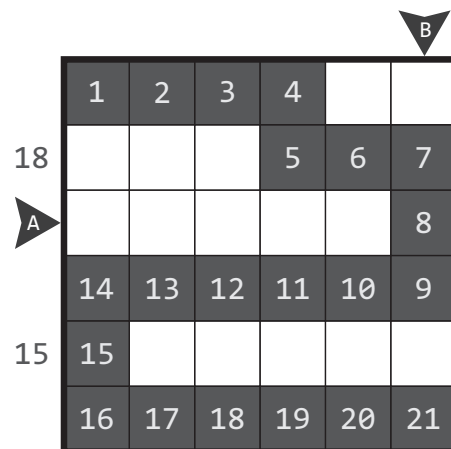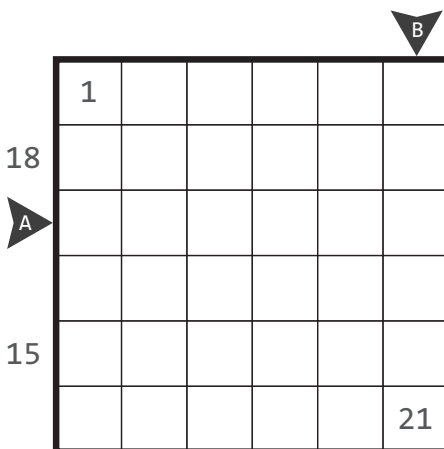- ➢ The cells with "X" must not be a part of the snake

Answer key: Describe the marked rows/columns.
For the example, the answer is 321,1212

Summed Snake

- ➢ Locate a snake (a 1 cell-wide single continuous path) in the grid whose head and tail are given.
- ➢ The snake does not touch itself, even diagonally.
- ➢ Numbers starting with 1 at the head of the snake are put along the path of the snake.
- ➢ Numbers outside the grid indicate the sum of all the snake parts in particular row and column.

Answer key: Describe the marked rows/columns.
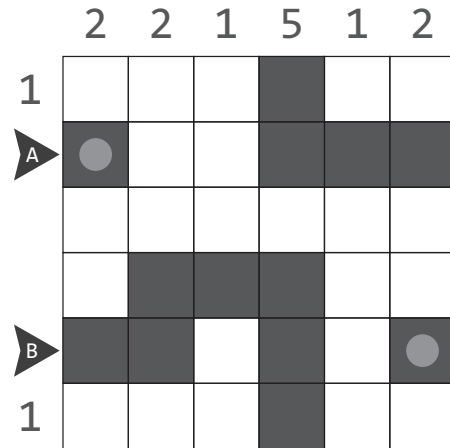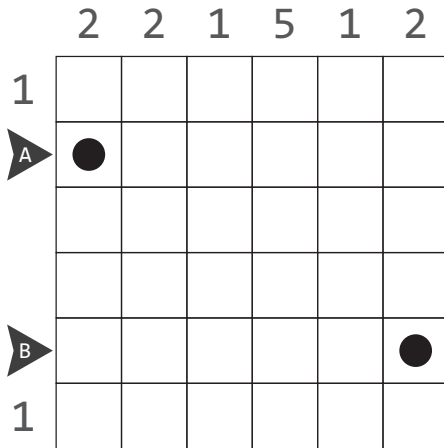*For the example, the answer is 51,1311*

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Toroidal Snake

- Apply Snake rules.
- Additionally, the grid wraps around itself. So the snake can go from one edge to another.

Answer key: Describe the marked rows/columns.
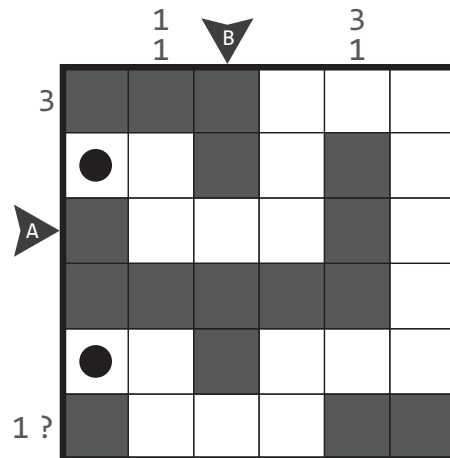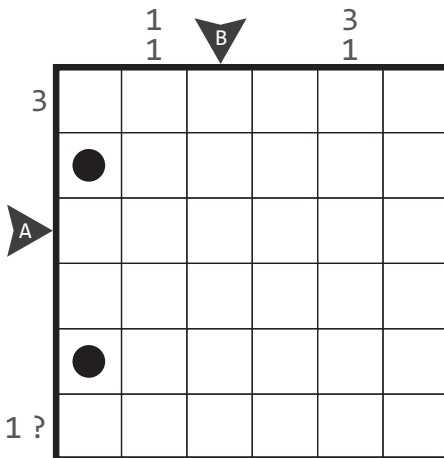*For the example, the answer is 123,21111*

Graffiti Snake

- Paint some cells black to create walls.
- Numbers outside the grid indicate the lengths of blackened cell blocks in the corresponding directions, in order.
- If there is more than one blackened block in a row or column, there must be at least one white cell between the blocks.
- After all black cells are determined; a snake should travel through all the unoccupied cells, moving horizontally or vertically without touching itself, even diagonally.
- The head and the tail of the snake are given in circles.
- The clue "?" must be replaced by a number greater than zero.

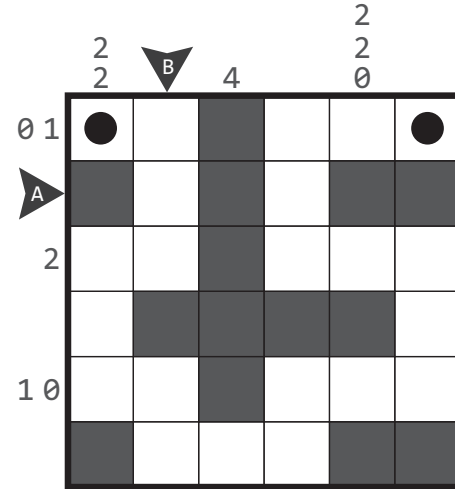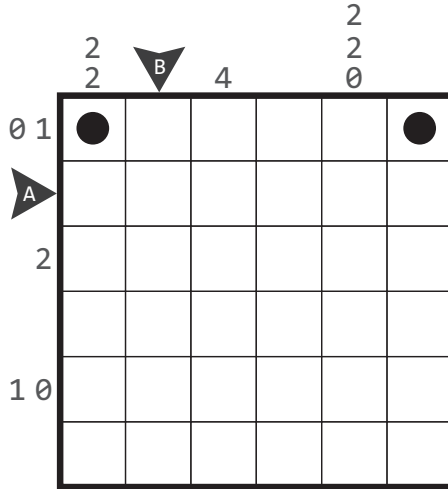*Answer key: Describe the marked rows/columns.*
For the example, the answer is 1311,2121

False Graffiti

- ➢ Apply Graffiti Snake rules, except that all clues outside the grid are false.
- ➢ They are either 1 less or 1 more than the actual clues
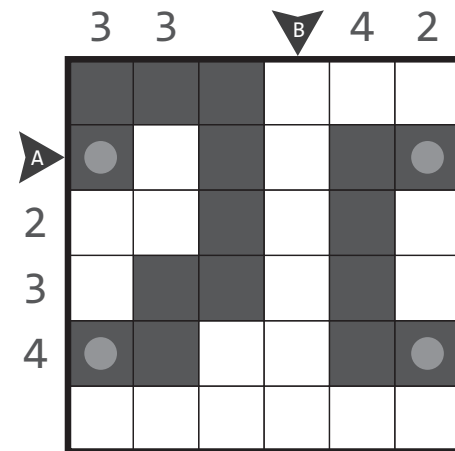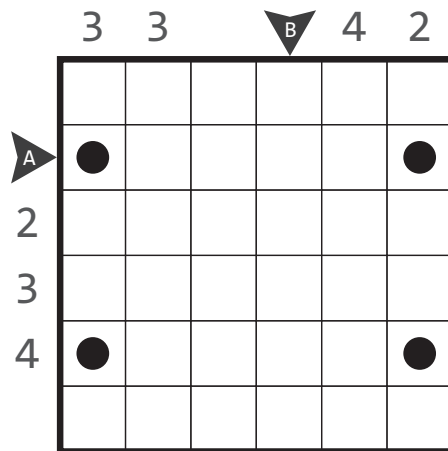- ➢ Note that 1 can become 0 too.

Answer key: Describe the marked rows/columns.
For the example, the answer is 11112,312

Multiple Snakes

- ➢ Apply Snake rules; however multiple snakes are there in the grid.
- ➢ Head and tail of all snakes are given.
- ➢ Different snakes do not touch each other, even diagonally.

Answer key: Describe the marked rows/columns.
For the example, the answer is 11112,6

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Links to previous LMI tests for practice puzzles

Snake
Indian Puzzle Championship 2012 - http://logicmastersindia.com/lmitests/?test=IPC2012
WPC Practice Test - http://logicmastersindia.com/lmitests/?test=M201310P2
Don't Worry Be Happy - http://logicmastersindia.com/lmitests/?test=M201310P3
Indian Puzzle Championship 2014 - http://logicmastersindia.com/lmitests/?test=IPC2014

Horse Snake
LMI Sprint Test - http://logicmastersindia.com/lmitests/?test=M201109P
Best of LMI Puzzle Tests - http://logicmastersindia.com/lmitests/?test=M201301P

Summed Snake
Riad's April Contest - http://logicmastersindia.com/lmitests/?test=M201504Contest

Toroidal Snake
Snake Variations Contest 2015 - http://logicmastersindia.com/lmitests/?test=SVC2015

Graffiti Snake
Puzzle Marathon 2012 - http://logicmastersindia.com/lmitests/?test=M201201P
Indian Puzzle Championship 2012 - http://logicmastersindia.com/lmitests/?test=IPC2012
Best of LMI Puzzle Tests - http://logicmastersindia.com/lmitests/?test=M201301P
Puzzle Marathon 2013 - http://logicmastersindia.com/lmitests/?test=M201303P