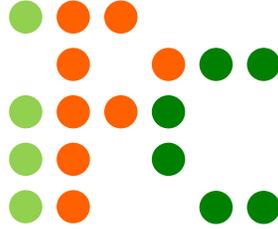


puzzle Ramayan

and



Episode – 1
13th – 19th January 2023

Classics
by
Prasanna Seshadri

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2023. Please check <http://logicmastersindia.com/PR/2023pr.asp> for details.

Important Links

Submission Page : <http://logicmastersindia.com/live?contest=PR202301>

Discussion Thread : <http://logicmastersindia.com/t/?tid=3081>

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

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

About this Episode

This episode has 22 Puzzles from the following puzzle types:

- 3* Cave
- 3* Shikaku
- 3* Kakuro
- 3* Yajilin
- 3* Easy As ABC
- 3* Snake
- 2* Cave [Product]
- 2* Yajilin [Clue Pool]

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 13th January (but on or before 19th January), 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.**

Cave	2, 3, 4
Shikaku	4, 3, 7
Kakuro	4, 6, 11
Yajilin	2, 5, 4
Easy As ABC	2, 6, 5
Snake	2, 4, 7
Cave [Product]	6, 3
Yajilin [Clue Pool]	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 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
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Potential points after 1 incorrect submission

04 Araf	45 / 50	4A	1234
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Potential points after 2 incorrect submissions

04 Araf	35 / 50	4A	23311
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Potential points after 3 incorrect submissions

04 Araf	20 / 50	4A	1111111111
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Potential points after 4 incorrect submissions

04 Araf	0 / 50	4A	541
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Bonus and Ranking

If you submitted all Puzzles correctly, you can have bonus points of 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

- **Botaku & riri pebby** 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 8 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.

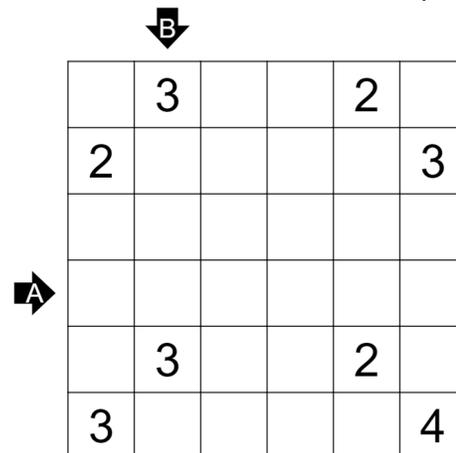
1-3 Cave

Shade some cells so that the shaded cells are all connected orthogonally by other shaded cells to the edge of the grid, and the remaining unshaded cells form one orthogonally connected area. Clues cannot be shaded, and represent the total number of unshaded cells that can be seen in a straight line vertically or horizontally, including itself.

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

Penpa for example: <https://tinyurl.com/2edjtv2a>

2 + 3 + 4 points



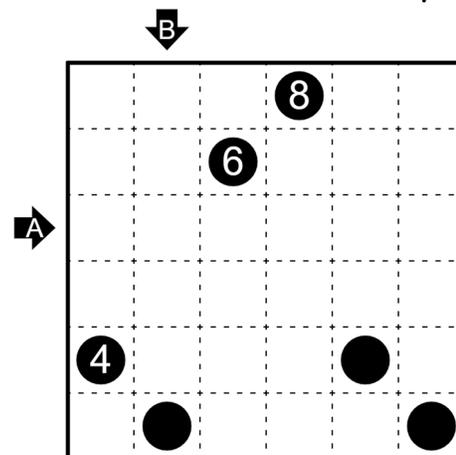
4-6 Shikaku

Divide the grid into rectangular regions of orthogonally connected cells. Each region must contain exactly one circle. A number in a circle represents how many cells are in the region the circle belongs to.

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

Penpa for example: <https://tinyurl.com/44m6ejn8>

4 + 3 + 7 points



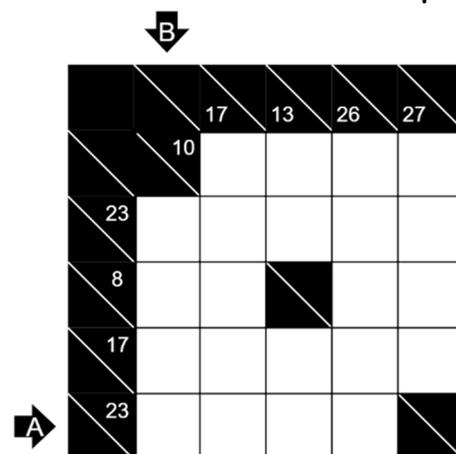
7-9 Kakuro

Fill in the white cells in the grid with digits from 1 to 9. The sum of digits in each horizontal / vertical group of cells is given on its left/top. Digits do not repeat within any set of consecutive white cells.

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

Penpa for example: <https://tinyurl.com/y3t385sz>

4 + 6 + 11 points

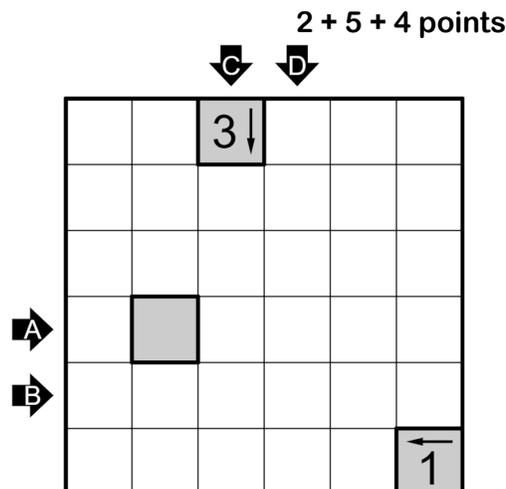


10-12 Yajilin

Shade some cells and then draw a single closed loop (without intersections or crossings) through all remaining white cells. Shaded cells cannot share an edge with each other. Some cells are outlined and in gray and cannot be part of the loop, but aren't counted as 'shaded' either. Numbered arrows in such cells indicate the total number of shaded cells that exist in that direction in the grid.

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

Penpa for example: <https://tinyurl.com/2gx8x3k7>

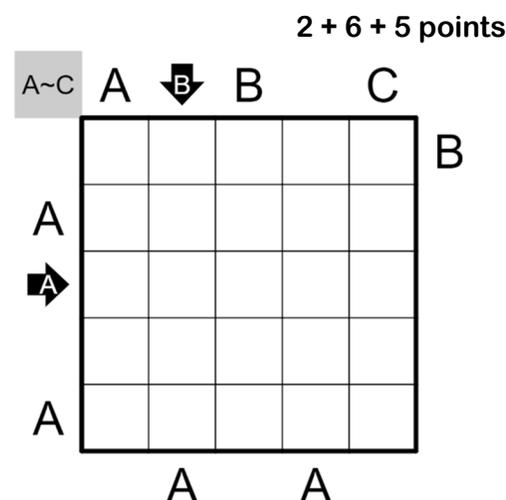


13-15 Easy as ABC

Place letters from the range given outside the grid into some cells so that each row and column contains each letter once. A clue outside the grid represents the first letter seen in the corresponding row or column from that direction.

[The puzzles in the contest will be of sizes 5x5, 6x6 and 6x6. This example is 5x5.]

Penpa for example: <https://tinyurl.com/yc8tj4qc>

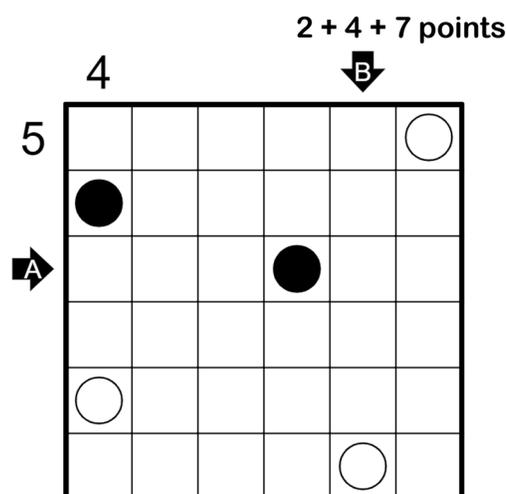


16-18 Snake

Shade some cells to form a non-intersecting path of 1-cell width which does not touch itself, not even diagonally. A black circle must lie on an end of the path. A white circle must lie somewhere along the path, but not at an end. A number outside the grid represents how many cells in the corresponding row or column are shaded.

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

Penpa for example: <https://tinyurl.com/3uhznn2c>



19-20 Cave [Product]

6 + 3 points

This is a variation of Cave. Apply Cave rules, except for the behaviour of the clues.

Clues now represent the product of the number of unshaded cells that can be seen in a straight line vertically, including itself, and the number of unshaded cells that can be seen in a straight line horizontally, including itself.

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

Penpa for example: <https://tinyurl.com/2duu59r4>

8			5		
	6			4	
					3
		6			

21-22 Yajilin [Clue Pool]

4 + 6 points

Apply regular Yajilin rules.

Instead of a single number and an indicated direction, the clues are now in the form of four numbers. These are valid Yajilin clues for all 4 cardinal directions and it is part of solving to determine the way they get assigned. A “?” stands for any number including 0.

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

Penpa for example: <https://tinyurl.com/2l4v3njh>

					0 0 0

Solutions

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

The keys are given section by section.

Cave, Snake, Cave [Product] – For each marked row/column, enter the number of consecutive shaded and unshaded cells in the direction of the arrow.

Shikaku – For each marked row/column, enter the number of consecutive cells belonging to separate regions in the direction of the arrow. Use unit's digit for double digit values.

Kakuro, Easy As ABC – For each marked row/column, enter the digits in the direction of the arrow. (For Easy As) Enter X for empty cells. Only enter the digits within the grid, not outside clues.

Yajilin, Yajilin [Clue Pool] – 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.

Cave

Key: 1113, 1311

Shikaku

Key: 1221, 24

Kakuro

Key: 5639, 1325

Yajilin

Key: 1, 21, 0, 111

Easy as ABC

Key: BXXCA, CXXBA

Snake

Key: 3111, 141

Cave [Product]

Key: 12111, 123

Yajilin [Clue Pool]

Key: 0, 31, 0, 12