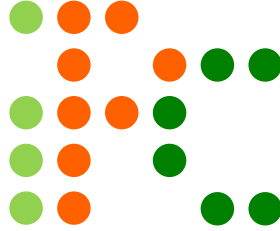


# puzzle Ramayan

and



Episode – 3  
8<sup>th</sup> – 13<sup>th</sup> April 2022

Regions & Evergreens  
by  
Ashish Kumar

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2022. Please check <http://logicmastersindia.com/PR/2022pr.asp> for details.

## Important Links

Submission Page : <http://logicmastersindia.com/live?contest=PR202203>

Discussion Thread : <http://logicmastersindia.com/t/?tid=3021>

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

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

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## About this Episode

This episode has 22 Puzzles from the following puzzle types:

- 3\* Five Cells
- 3\* Sashigane
- 3\* Double Choco
- 3\* Shakashaka
- 3\* Hitori
- 3\* Easy as ABC
- 2\* Five Cells (Skyscrapers)
- 2\* Easy As ABC (Position)

## 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 8<sup>th</sup> April (but on or before 13<sup>th</sup> April), 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.**

Five Cells	4, 8, 10
Sashigane	2, 4, 7
Double Choco	5, 4, 11
Shakashaka	2, 1, 2
Hitori	2, 6, 7
Easy as ABC	2, 1, 6
Five Cells (Skyscrapers)	1, 3
Easy as ABC (Position)	3, 9

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	111111111
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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 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

- **David Altizio (A.K.A. djmathman), Jacob Cohen (A.K.A. Conflux) & Yosh (rand\_yosh314)** 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 Five Cells

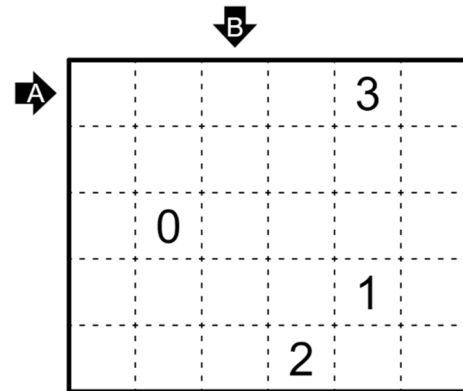
4 + 8 + 10 points

Divide the grid into regions of five orthogonally connected cells. Clues represent the number of edges drawn surrounding the clue (up to four).

[The puzzles in the contest will be of sizes 5x6, 8x10 and 10x10 respectively. This example is 5x6.]

Penpa for example:

<https://tinyurl.com/ycmn8kdc>



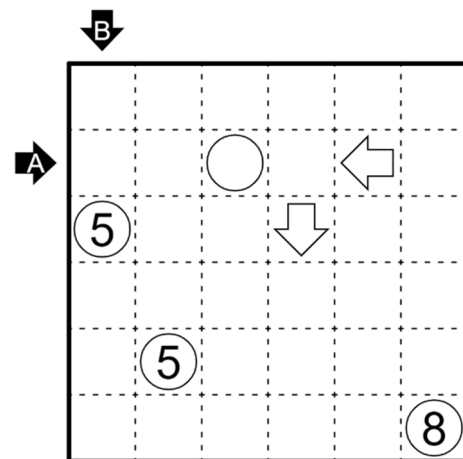
## 4-6 Sashigane

2 + 4 + 7 points

Divide the grid into regions of orthogonally connected cells. Each region must be an L shape with a width of one cell. Arrows must lie at one end of an L and point toward the bend. Circles must lie at the bend of an L, and if one contains a number, the L it's inside must contain the indicated number of cells.

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

Penpa for example: <https://tinyurl.com/y9u2udn3>



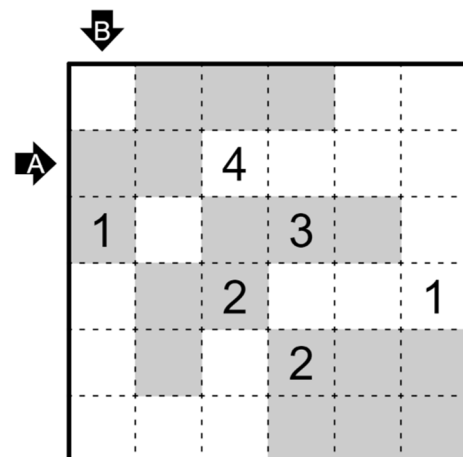
## 7-9 Double Choco

5 + 4 + 11 points

Divide the grid into regions of orthogonally connected cells, each containing a connected group of white cells and a connected group of grey cells, with the property that the shape of the white cells is identical to the shape of the grey cells, allowing rotations and reflections. Clued cells must belong to a region containing the indicated number of white cells and the indicated number of grey cells.

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

Penpa for example: <https://tinyurl.com/y87s6waj>



## 10-12 Shakashaka

Shade a right triangle in some empty cells, each of which occupies exactly half the cell it's in. Each unshaded area must be rectangular in shape. A number in a cell represents how many of the (up to) four cells orthogonally adjacent to the clue contain triangles.

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

Penpa for example: <https://tinyurl.com/yas7d4d3>

2 + 1 + 2 points

A

			2		
0					
					1

## 13-15 Hitori

Shade some cells so that no two shaded cells are orthogonally adjacent and the remaining unshaded cells form one orthogonally connected area. No two cells in the same row or column containing the same number may both be unshaded.

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

Penpa for example: <https://tinyurl.com/y7ao8rld>

2 + 6 + 7 points

A


## 16-18 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, 5x5 and 6x6. This example is 5x5.]

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

2 + 1 + 6 points

A~C


## 19-20 Five Cells (Skyscrapers)

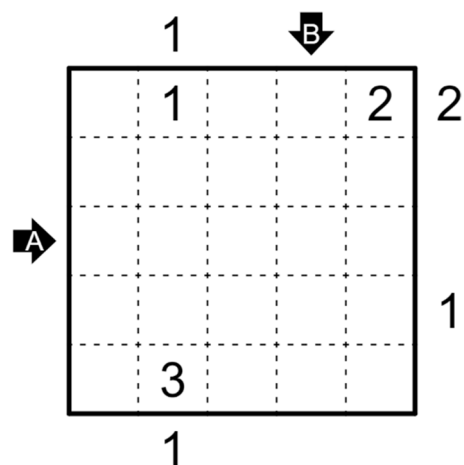
1 + 3 points

Divide the grid into regions of five orthogonally connected cells. Clues represent the number of edges drawn surrounding the clue (up to four).

Also, numbers outside the grid show the number of separate region segments visible in that direction. A segment of length N in a given direction is taken as a building of height N. Buildings of height N block the view of all buildings behind them of equal or lesser height.

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

Penpa for example: <https://tinyurl.com/y7uaxzjq>



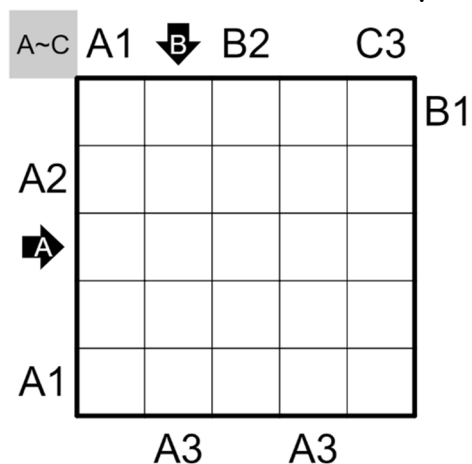
## 21-22 Easy as ABC (Position)

3 + 9 points

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 'X'th letter seen in the corresponding row or column from that direction, where X is the number given to the right of the letter.

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

Penpa for example: <https://tinyurl.com/y8rggqrc>



## Solutions

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

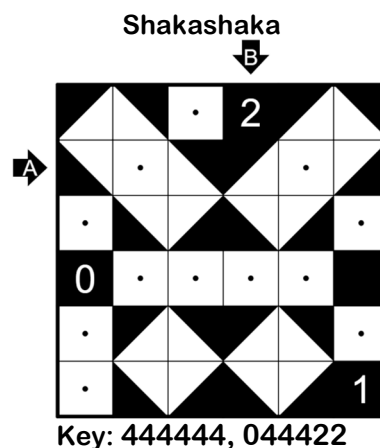
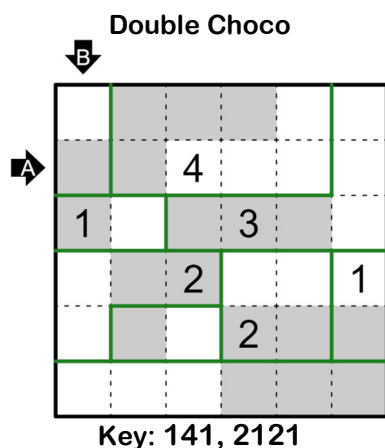
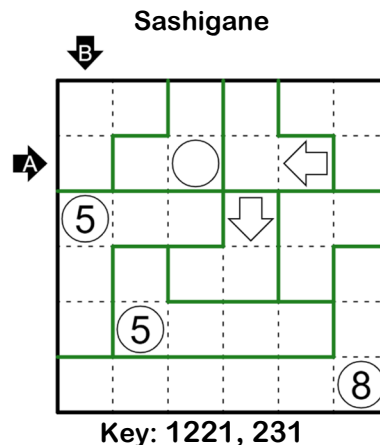
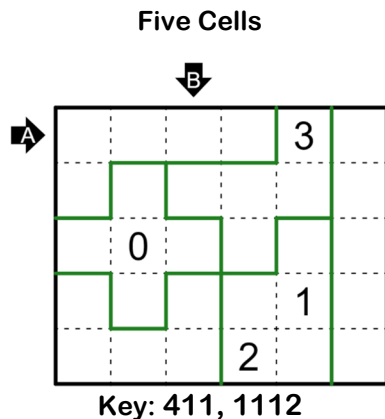
The keys are given section by section.

**Five Cells, Sashigane, Double Choco, Five Cells (Skyscrapers)** – 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.

**Shakashaka** – For each marked row/column, enter the size of the unshaded rectangle (in number of cells) each cell belongs to. For slanted rectangles, each cell with a triangle counts as half a cell to the size. Enter 0 for clue cells.

**Hitori** – For each marked row/column, enter the number of consecutive shaded and unshaded cells in the direction of the arrow.

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



**Hitori**

↓ B

1	1			4	1
3	5	5		3	2
		4		6	5
9	8		9		
4	8		7	7	8
4	5			3	3

Key: 11211, 312

**Easy as ABC**

↓ B

A~C	A	B		C	
	A	C	B		B
A			A	B	C
A	B			C	A
	C	B		A	
A		A	C		B

Key: BXXCA, CXXBA

**Five Cells (Skyscrapers)**

↓ B

	1			2	2
1					
1					
3					1
	1				

Key: 221, 212

**Easy as ABC (Position)**

↓ B

A~C	A1	B2		C3	
	A	C		B	B1
A2		C	A	B	
A	B	C		A	
	B		C	A	
A1		A	B	C	

Key: BCXAX, XACBX