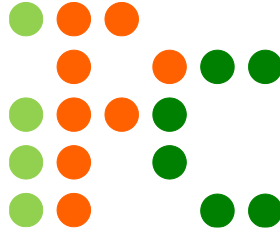


puzzle Ramayan

and



Episode – 3
14th – 20th March 2025

Number Placement & Made In India
by
Amit Sowani & Tigran Wadia

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=PR202503>

Discussion Thread: <http://logicmastersindia.com/t/?tid=4192>

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* Skyscrapers
- 3* Ripple Effect
- 3* Summon
- 2* Skyscrapers [NC]
- 3* Canal View
- 3* Mukkonn Enn
- 3* Place by Product
- 2* Place by Unique Products

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 14th March (but on or before 20th March), 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.**

Skyscrapers	2, 2, 3
Ripple Effect	2, 8, 9
Summon	2, 5, 8
Skyscrapers [NC]	4, 7
Canal View	2, 3, 4
Mukkonn Enn	2, 4, 6
Place by Product	3, 5, 5
Place by Unique Products	6, 8

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
---------	---------	----	-------

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

- **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 9 pages. This is relevant only for paper solvers.

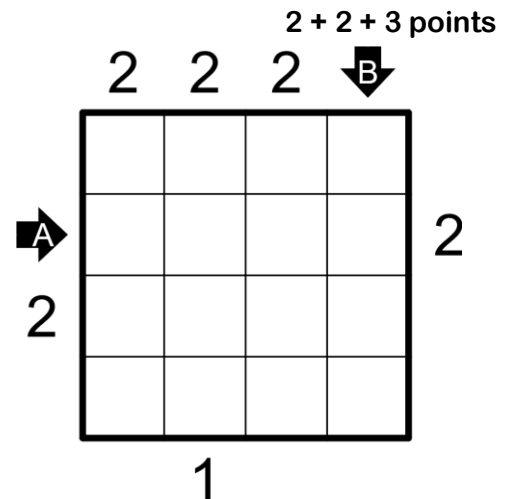
Solutions and keys (including the key explanation) to examples are towards the end of the booklet in the Solutions section.

1-3 Skyscrapers

Place a number from 1 to N into each cell so that each row and each column contains every number from that range with no repeats, where N is the side length of the grid. A clue outside the grid represents how many cells in the corresponding row or column contain a larger number than all cells before it in that row or column from the direction of the clue.

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

Penpa for example: <https://tinyurl.com/2ayo8hwx>

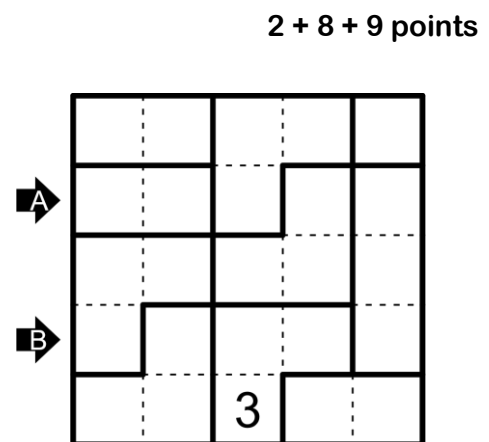


4-6 Ripple Effect

Place a number into each cell so that each region contains the numbers from 1 to N with no repeats, where N is the number of cells in the region. Two instances of the same number in the same row or column must have at least as many cells between them as the value of the number.

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

Penpa for example: <https://tinyurl.com/2mla3a6q>

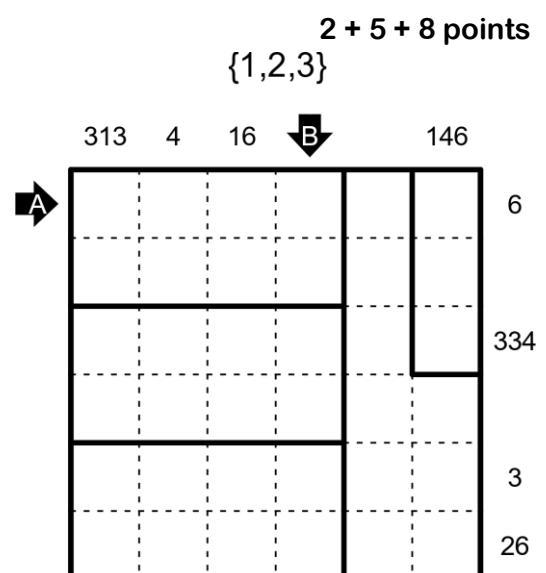


7-9 Summon

Place numbers into some cells such that cells with the same digit don't touch, not even diagonally, and each region contains exactly the set of digits outside the grid. Groups of consecutive cells containing digits in a row or column form numbers by reading the digits left to right or top to bottom, respectively. Clues outside the grid indicate the sum of such numbers in the corresponding row or column.

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

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



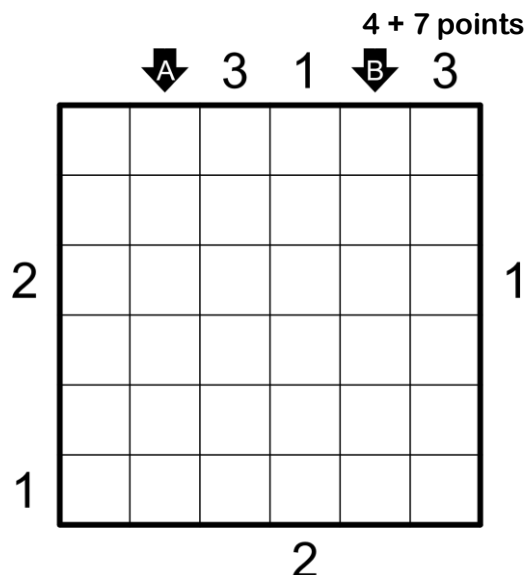
10-11 Skyscrapers [NC]

Apply regular 'Skyscrapers' rules.

Additionally, pairs of orthogonally adjacent cells may not contain consecutive numbers.

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

Penpa for example: <https://tinyurl.com/2dfuz925>

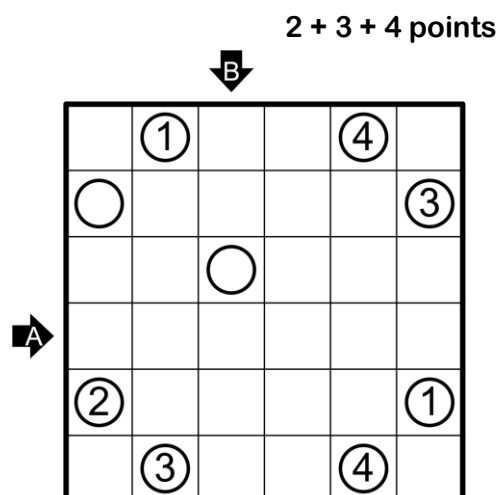


12-14 Canal View

Shade some cells so that all shaded cells form one orthogonally connected area and no 2x2 region is entirely shaded. Circles cannot be shaded, and numbers in them represent the number of shaded cells connected in a straight line horizontally or vertically to the clue.

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

Penpa for example: <https://tinyurl.com/25g3r2cr>

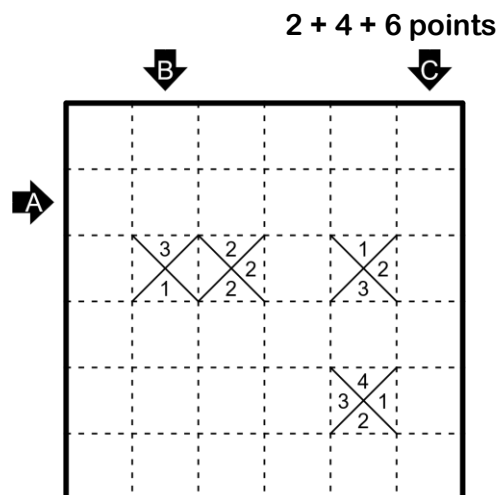


15-17 Mukkonn Enn

Draw a non-intersecting loop through the centers of all cells. When the loop exits a clued cell from a side with a number, it must travel in a straight line for exactly the indicated number of cells (turning on the Nth cell, where N is the value of the clue). A number does not necessarily mean that the clue must be exited from its side.

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

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



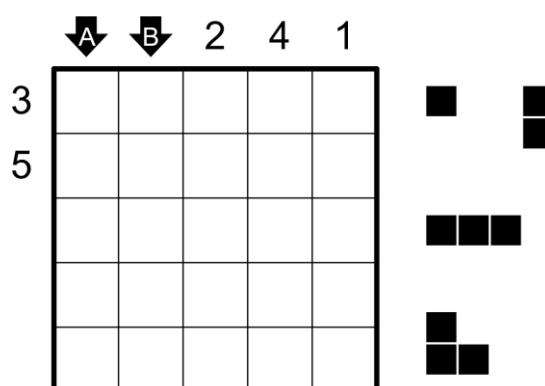
18-20 Place by Product

3 + 5 + 5 points

Place each shape from the bank given outside the grid into the grid so that no two shapes are touching, not even diagonally. Rotating and reflecting shapes is allowed. A clue outside the grid indicates the product of the lengths of the groups of consecutive unshaded cells in the corresponding row or column.

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

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



21-22 Place by Unique Products

6 + 8 points

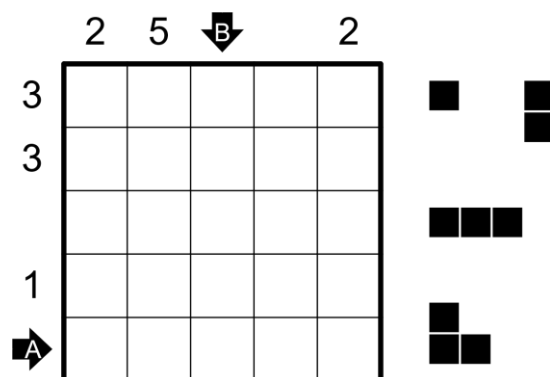
Apply regular 'Place by Product' rules.

Additionally, each given product must be met by a different equation, where ordering is irrelevant.

e.g. Three instances of 4 can be met by '4x1' and '4' and '4x1x1', but '4x1' and '1x4' are considered the same and cannot both exist.

[The puzzles in the contest will be of sizes 6x6 and 8x8. This example is 5x5.]

Penpa for example: <https://tinyurl.com/29rzh8zr>



Solutions

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

The keys are given section by section.

Skyscrapers, Ripple Effect, Summon, Skyscrapers [NC] – For each marked row/column, enter the digits in the direction of the arrow, ignoring outside clues but including given digits inside the grid. Enter X for empty/shaded cells.

Canal View, Place by Product, Place by Unique Products – For each marked row/column, enter the number of consecutive shaded and unshaded cells in the direction of the arrow.

Mukkonn Enn – For each marked row/column, enter the lengths of separate loop segments in the direction of the arrow. Enter 0 if there are no segments.

Puzzle	Inventor(s)
Canal View	Prasanna Seshadri
Mukkonn Enn	Prasanna Seshadri & Rohan Rao
Place by Product	Ravi Kumar Macherla

Skyscrapers

2 2 2 ↓ B

	1	3	2	4	
→ A	4	2	1	3	2
2	3	1	4	2	
	2	4	3	1	
					1

Key: 4213, 4321

Ripple Effect

	2	1	3	2	1
→ A	1	2	1	3	2
	3	1	2	1	3
→ B	2	3	1	2	1
	1	2	3	1	2

Key: 12132, 23121

Summon
{1,2,3}

313 4 16 ↓ B 146

→ A	3		2			1	6
	1					2	
	3	2	1		1	3	334
			1			2	3
		2	3			3	26

Key: 3X2XX1, XXXXXX

Skyscrapers [NC]

↓ A 3 1 ↓ B 3

	1	5	3	6	4	2	
	3	1	5	2	6	4	
2	5	3	1	4	2	6	1
	2	6	4	1	5	3	
	4	2	6	3	1	5	
1	6	4	2	5	3	1	
							2

Key: 513624, 462513

