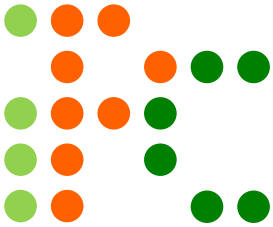
puzzle ramayan

and



Episode – 4
2nd – 7th April 2021

Regions
by
Swaroop Guggilam

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2021. Please check http://logicmastersindia.com/PR/2021pr.asp **for details.**

Important Links

Submission Page : http://logicmastersindia.com/live?contest=PR202104

Discussion Thread : http://logicmastersindia.com/t/?tid=2808

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* Fillomino
- 3* Double Choco
- 3* Sashigane
- 3* Spiral Galaxies
- 3* Compass
- 3* Combi-Block
- 2* Max Spiral Galaxies
- 2* Max Sashigane

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 on or after 2nd April (but on or before 7th April), login at the submission page using your LMI user-id 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 contest duration is 90 minutes.**
- The puzzle booklet can be downloaded, printed and solved on paper.
- There will not be any interface / applet to solve the puzzles on web browser, but external Penpa links will be provided. The participant is still expected to come back and enter the answer key if solving using the links.
- 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=2773.

About answer keys and Submission

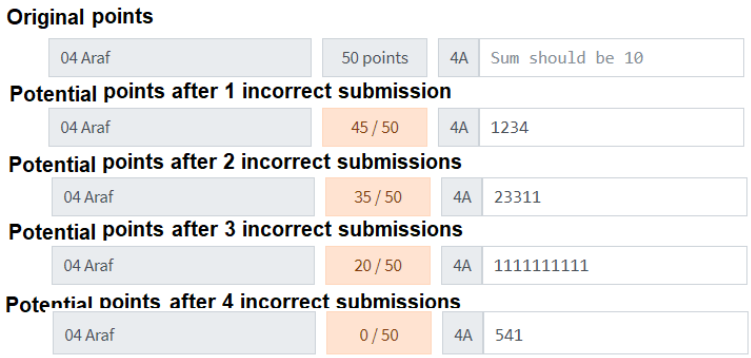
- Each puzzle has some answer keys, as described in the instructions.
- After solving the puzzle, you need to submit the puzzle using the answer keys.
- You may submit the answer keys anytime during the test duration. You may consider submitting a puzzle as soon as you solve it.
- Answer keys are always 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
- 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 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.

Fillomino	4, 5, 5
Double Choco	2, 3, 6
Sashigane	4, 3, 6
Spiral Galaxies	4, 2, 5
Compass	8, 3, 10
Combi-Block	1, 2, 7
Max Spiral Galaxies	4, 7
Max Sashigane	3, 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.



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)

Penpa Usage

This contest will also be solvable on the Penpa-Edit software. Below the rules of each puzzle will be a link to click to solve on the editor. The editor DOES NOT have a solution enabled so it will not check a solution. Participants must submit the answer key codes as they would with paper solving. It is therefore advisable to enter solution codes one at a time.
To practice on the editor, we have given links for solving the example puzzles too.

Credits

- **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/

About the Puzzle Booklet

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

Solutions and keys (including the key explanation) to examples are towards the end of the booklet in the Solutions section.
In addition to this, all these puzzle types can be found on puzz.link. Direct links have been provided by Swaroop at the end.

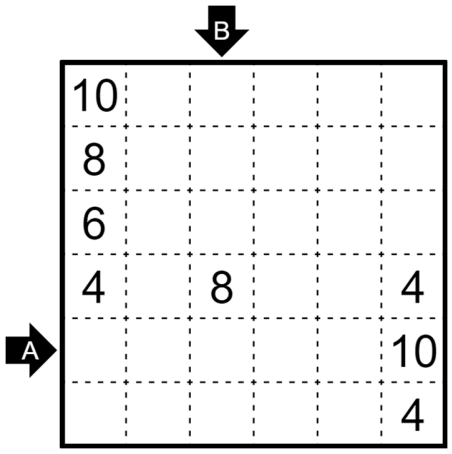
1-3 Fillomino

4 + 5 + 5 points

Divide the grid along the dotted lines into regions so that no two regions with the same area share an edge. Inside some cells are numbers; each number must represent the area of the region it belongs to. A region may contain zero, one, or more of the given numbers.

[The puzzles in the contest will be of sizes 8x8, 10x10 and 12x12. This example is 6x6.]

Penpa for example: https://git.io/JYEIx



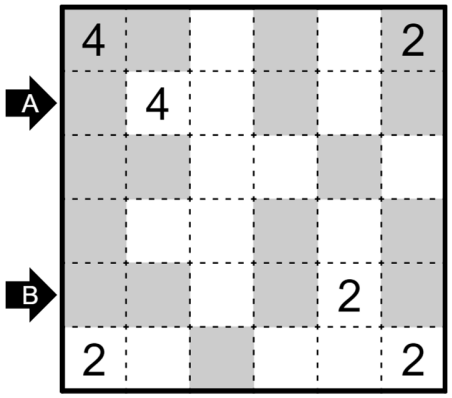
4-6 Double Choco

2 + 3 + 6 points

Divide the grid into regions along cell boundaries. Each region must contain one connected group of light cells, and one connected group of dark cells. These groups must be the same shape, but may be rotated and/or reflected. Numbers inside a cell indicate the number of cells in the single-colored shape they are contained in.

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

Penpa for example: https://git.io/JYE8g



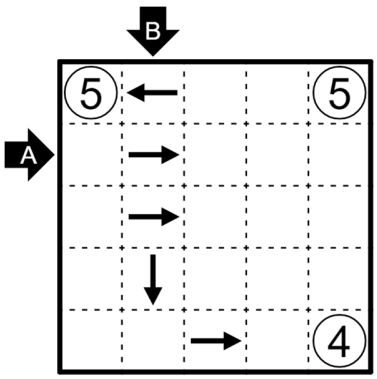
7-9 Sashigane

4 + 3 + 6 points

Divide the grid into L shaped blocks - one block wide. All blocks must be L shaped. Cells with open circles form the knee (bend) in a block. The number in an open circle shows the number of cells in its block. Open circles without numbers may have any number of cells. Cells with arrows form one end of its block, the arrow points towards the knee of this block. The number of marks in a block (arrows or open circles) may be 0, 1, 2, or 3.

[The puzzles in the contest will be of sizes 10x10, 9x9 and 10x10. This example is 5x5.]

Penpa for example: https://git.io/JYE4V



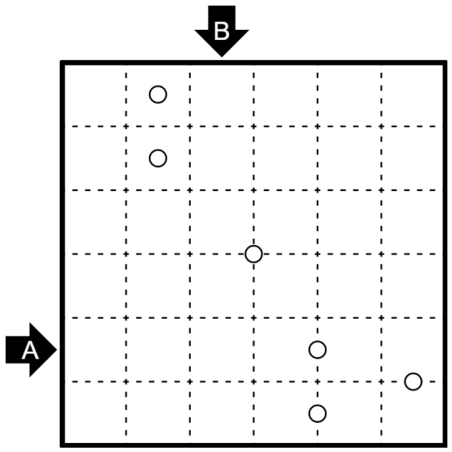
10-12 Spiral Galaxies

4 + 2 + 5 points

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

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

Penpa for example: https://git.io/JYEBG



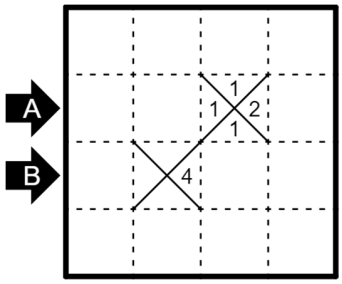
13-15 Compass

8 + 3 + 10 points

Divide the grid into regions of orthogonally connected cells, each containing exactly one compass. A number in a compass indicates how many cells belong to its region that are further in the indicated direction than the compass itself.

[The puzzles in the contest will be of sizes 10x10, 8x8 and 10x10. This example is 4x4.]

Penpa for example: https://git.io/JYE03



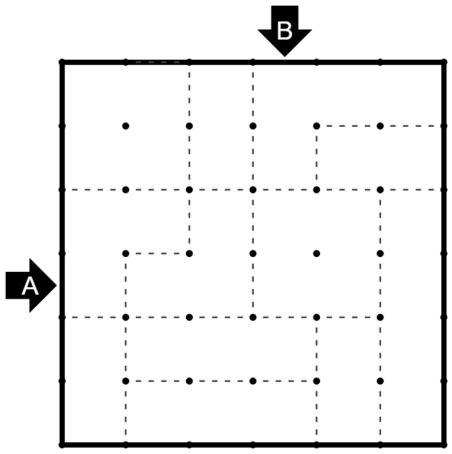
16-18 Combi-Block

1 + 2 + 7 points

Combine pairs of orthogonally connected regions such that no pair forms a rectangle and no two orthogonally adjacent pairs are the same combined shape. Rotations and reflections are considered the same shape.

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

Penpa for example: https://git.io/JYEEa



19-20 Max Spiral Galaxies

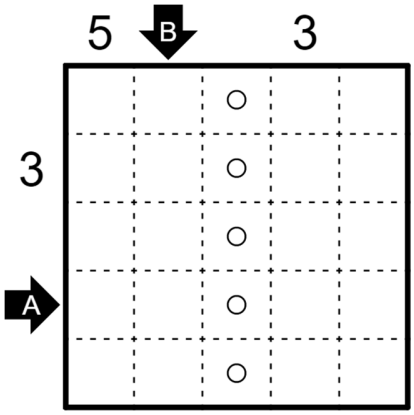
4 + 7 points

Follow regular Spiral Galaxies rules.

Additionally, numbers outside show the maximum number of cells occupied by a single region in that row/column. The cells need not be in a line, and the maximum number must be realized at least once.

[The puzzles in the contest will be of sizes 8x8 and 10x10. This example is 5x5.]

Penpa for example: https://git.io/JYEzK



21-22 Max Sashigane

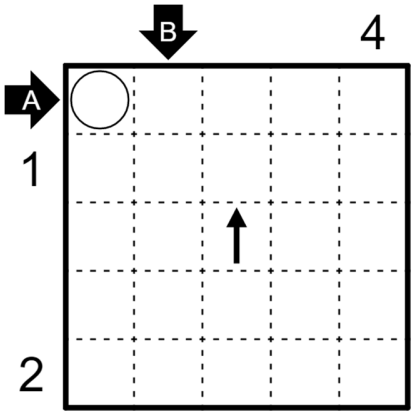
3 + 6 points

Follow regular Sashigane rules.

Additionally, numbers outside show the maximum number of cells occupied by a single region in that row/column. The maximum number must be realized at least once.

[The puzzles in the contest will be of sizes 8x8 and 10x10. This example is 5x5.]

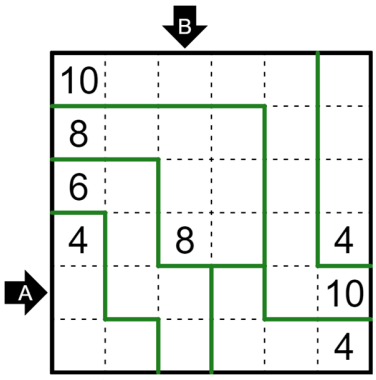
Penpa for example: https://git.io/JYEgF



Solutions

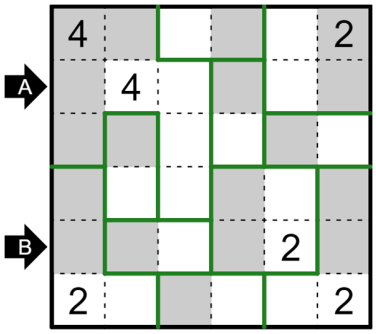
For this round, all answer keys will be the same - For each marked row/column, enter the number of cells till each region border/grid edge - from left to right / top to bottom. Enter the units digit for multi-digit numbers.

Fillomino



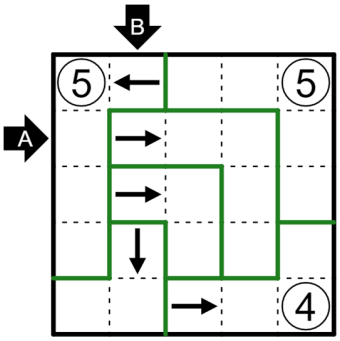
Key: 1212, 132

Double Choco



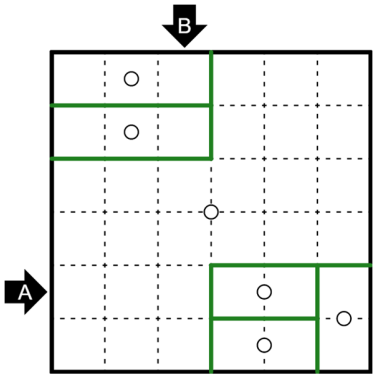
Key: 312, 1221

Sashigane



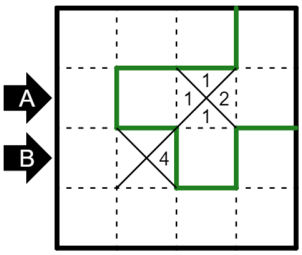
Key: 131, 1112

Spiral Galaxies



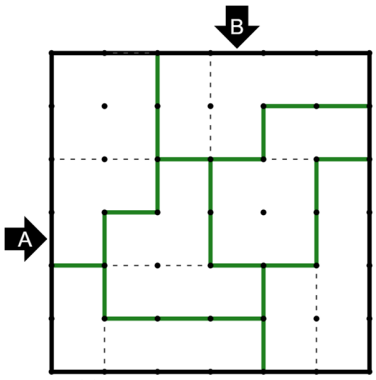
Key: 321, 114

Compass



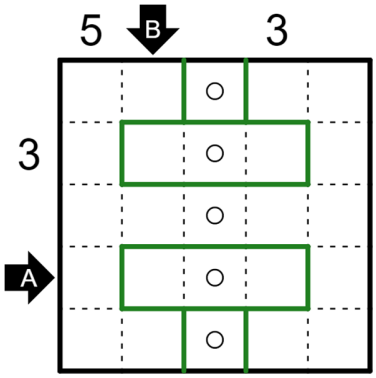
Key: 13, 211

Combi-Block



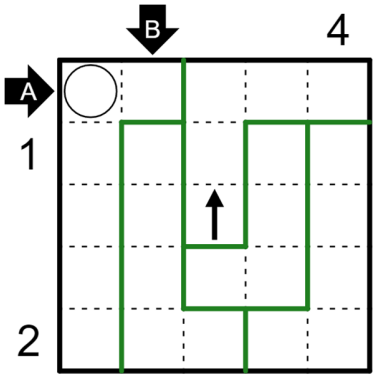
Key: 1221, 2211

Max Spiral Galaxies



Key: 131, 11111

Max Sashigane



Key: 23, 14

Links:

Fillomino - https://puzz.link/db/?type=fillomino&variant=no

Double Choco - https://puzz.link/db/?type=dbchoco&variant=no

Sashigane - https://puzz.link/db/?type=sashigane&variant=no

Spiral Galaxies - https://puzz.link/db/?type=tentaisho&variant=no

Compass - https://puzz.link/db/?type=compass&variant=no

Combi Block - https://puzz.link/db/?type=cbblock&variant=no