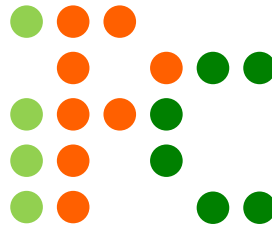


puzzle रामायण

and



Episode – 2
5th – 10th February 2021

Loops
by
Ashish Kumar

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=PR202102>

Discussion Thread : <http://logicmastersindia.com/t/?tid=2786>

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* Slitherlink
- 3* Masyu
- 3* Country Road
- 3* Round Trip
- 3* Ripple Loop
- 3* Regional Yajilin
- 2* Masyu – All Cells
- 2* Slitherlink – S & W

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 5th February (but on or before 10th February), 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.

Slitherlink	2, 4, 6
Masyu	2, 2, 4
Country Road	4, 3, 2
Round Trip	3, 7, 6
Ripple Loop	2, 6, 7
Regional Yajilin	4, 4, 8
Masyu – All Cells	3, 5
Slitherlink – S & W	6, 10

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 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

- **Murat Can Tonta** 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 9 pages. We expect you to print and solve on paper, so you would need to have a printer accessible with enough paper.

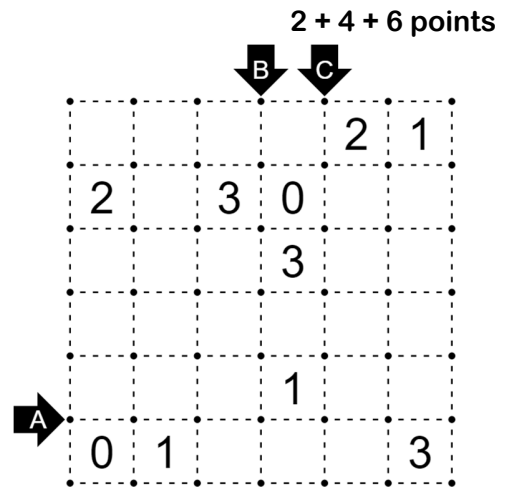
Solutions and keys (including the key explanation) to examples are at the end of the booklet in the Solutions section.

1-3 Slitherlink

Draw a single closed loop that only consists of horizontal and vertical segments between the dots. Numbers inside a cell indicate how many of the edges of that cell are part of the loop.

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

Penpa for example: <https://git.io/Jtu3v>



4-6 Masyu

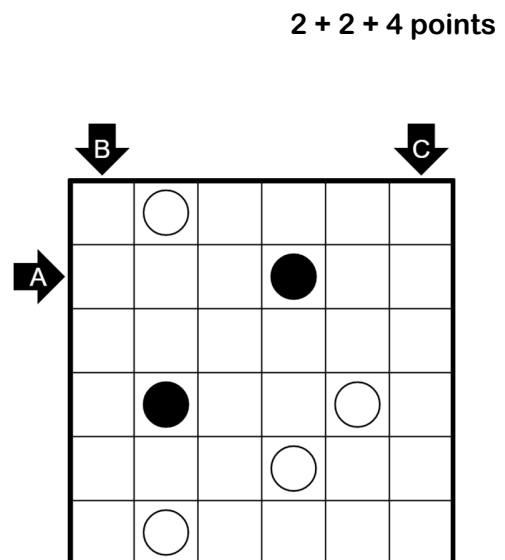
Draw a single closed loop in the grid passing horizontally and vertically through the centers of cells, that passes through all circled cells.

The loop must go straight through the cells with white circles, with a turn in at least one of the cells immediately before/after each white circle.

The loop must make a turn in all the black circles, but must go straight in both cells immediately before/after each black circle.

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

Penpa for example: <https://git.io/JtuZa>

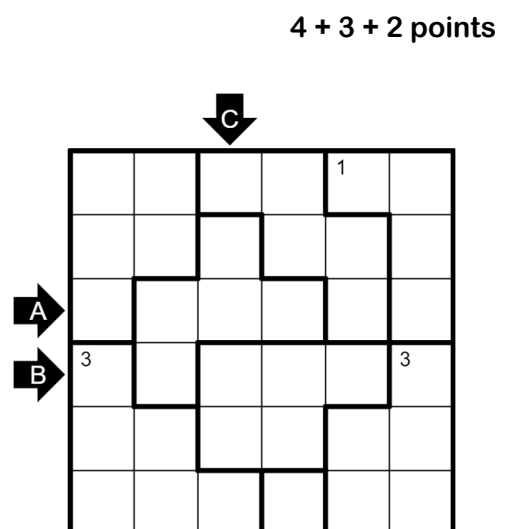


7-9 Country Road

Draw a single closed loop in the grid passing horizontally and vertically through the centers of cells. The loop must visit each thickly outlined region exactly once, and any two edge-adjacent cells the loop does not go through must be in the same region. A number in a region gives the number of cells the loop visits in that region.

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

Penpa for example: <https://git.io/JtunZ>



10-12 Round Trip

3 + 7 + 6 points

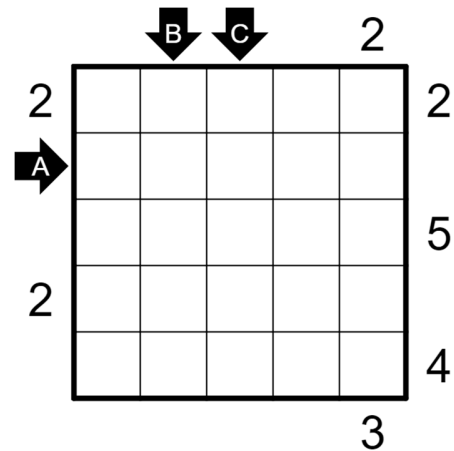
Draw a single closed loop in the grid passing horizontally and vertically through the centers of cells. The loop may cross itself, but otherwise does not touch or retrace itself.

The clue numbers to the left/right of the rows indicate the number of squares visited by the nearest section of the loop that travels horizontally in the rows.

The clue numbers to the top/bottom of the columns indicate the number of squares visited by the nearest section of the loop that travels vertically in the columns.

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

Penpa for example: <https://git.io/JtunD>



13-15 Ripple Loop

2 + 6 + 7 points

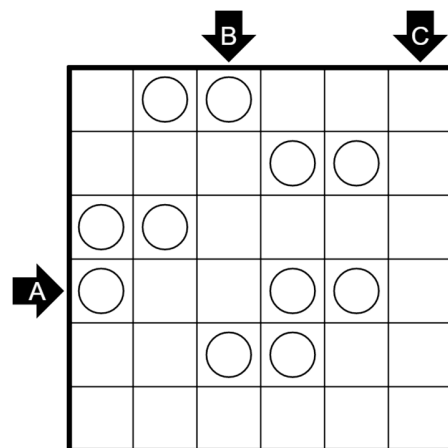
Draw a single closed loop in the grid passing horizontally and vertically through the centers of cells.

The loop must visit all cells of the grid.

When two circles are edge-adjacent, the loop must go straight through one and make a turn in the other.

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

Penpa for example: <https://git.io/Jtucb>



16-18 Regional Yajilin

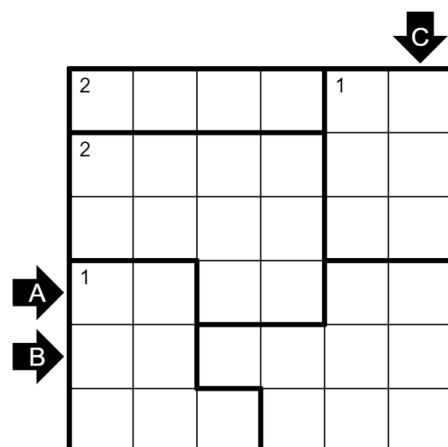
4 + 4 + 8 points

Shade some cells, so that a single closed loop can be drawn through all remaining cells. The loop runs horizontally and vertically through the centers of the cells.

No two shaded cells can share a border. A number in a thickly outlined region indicates the amount of cells that need to be shaded in it.

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

Penpa for example: <https://git.io/Jtuc3>



19-20 Masyu – All Cells

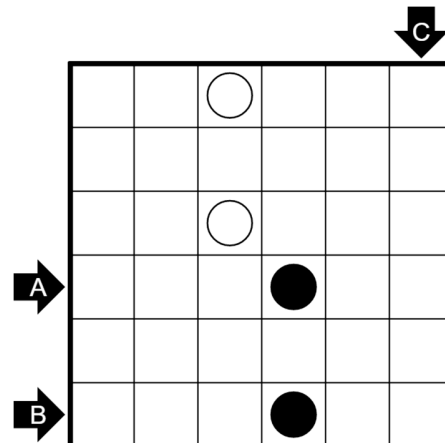
3 + 5 points

Apply Masyu rules.

Additionally, the loop must visit all cells of the grid.

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

Penpa for example: <https://git.io/Jtucu>



21-22 Slitherlink – S & W

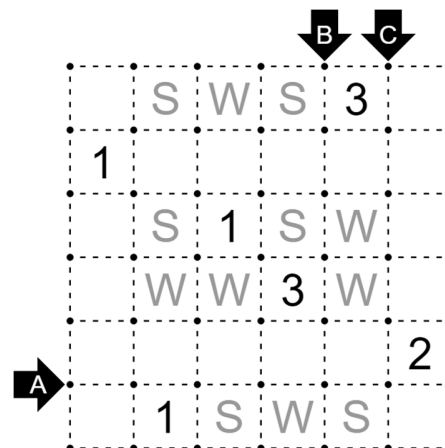
6 + 10 points

Apply Slitherlink rules.

Additionally, all instances of sheep (S) must be inside the loop, and all instances of wolves (W) must be outside the loop.

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

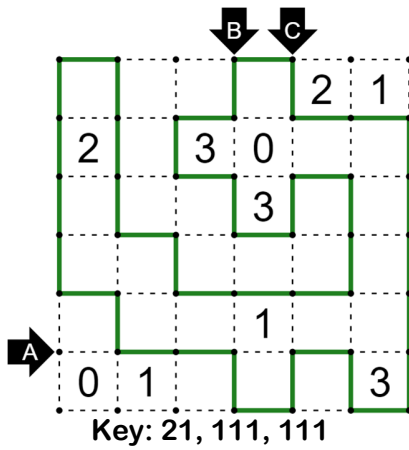
Penpa for example: <https://git.io/JtuCl>



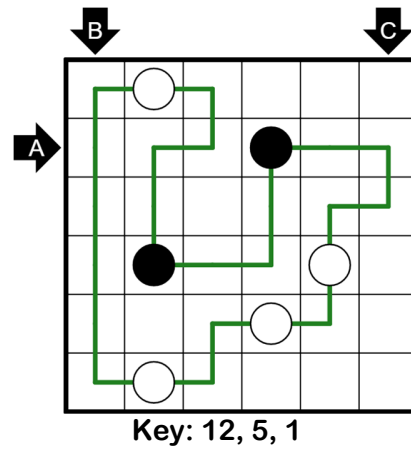
Solutions

For this round, all answer keys will be the same - For each marked row/column, enter the lengths of loop segments in that direction - from left to right / top to bottom. Enter 0 if there are no segments along the row/column. Note the difference in the way lengths are counted in Slitherlink vs the other puzzles.

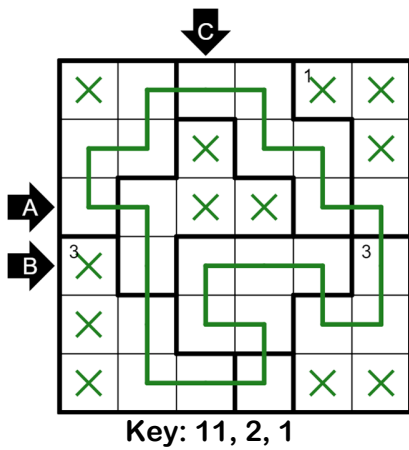
Slitherlink



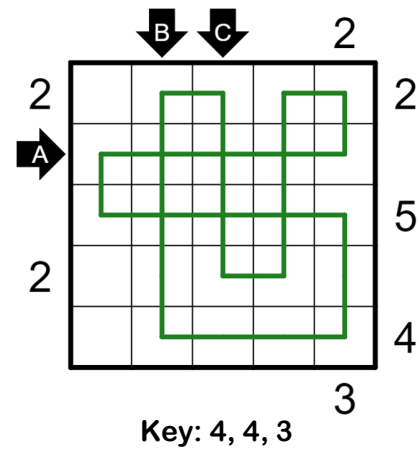
Masyu



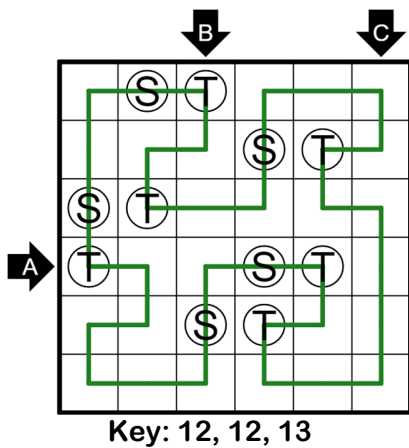
Country Road



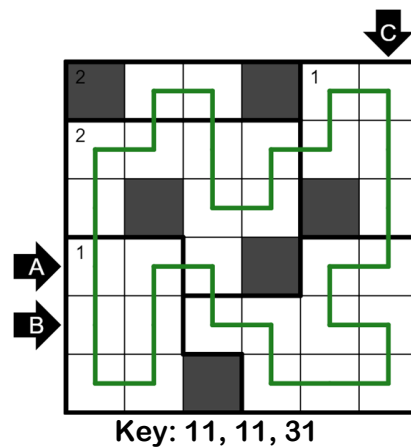
Round Trip



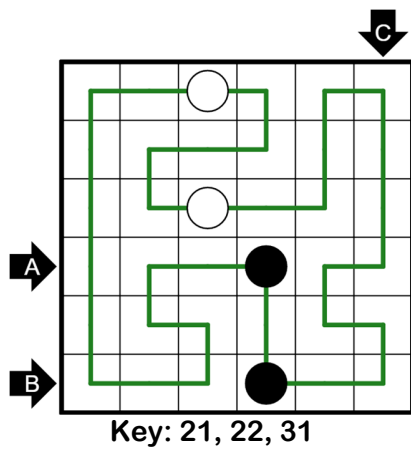
Ripple Loop



Regional Yajilin



Masyu – All Cells



Slitherlink – S & W

