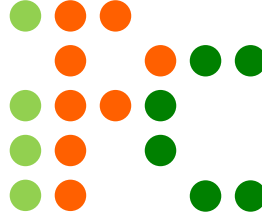


पुज्जल रलवडुवत

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Episode – 8
26th– 28th March
90 minutes

Object Placement
by Rajesh Kumar

Puzzle Ramayan rounds will also serve as qualifiers for Indian Puzzle Championship for year 2016. Please check <http://logicmastersindia.com/PR/2015-16pr.asp> for details.

Important Links

Submission Page : <http://logicmastersindia.com/PR/201603/>

Discussion Thread : <http://logicmastersindia.com/t/?tid=1249>

F. A. Q. : <http://logicmastersindia.com/t/?tid=381>

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

About this Episode

This episode has 22 puzzles, with 5 base puzzle types and 2 Instructionless puzzles based on two of the types.

<ul style="list-style-type: none"> • 4* Minesweeper • 4* Akari • 4* Tents • 4* Tetromino/Pentomino • 4* Battleships 	<ul style="list-style-type: none"> • 1* Minesweeper Instructionless • 1* Tents Instructionless
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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 between Saturday to Monday, login at the submission page using your LMI userid 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.
- You will have 90 minutes to solve and submit the puzzles, after your timer starts.
- The puzzle booklet should be downloaded, printed and solved on paper.
- There will not be any interface / applet to solve the puzzles on web browser.
- 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=381>.

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.

Minesweeper	1, 1, 6, 3
Akari	1, 1, 3, 5
Tents	1, 3, 4, 7
Battleships	2, 2, 3, 6
Tetromino / Pentomino	5, 3, 7, 15
Minesweeper Instructionless	8
Tents Instructionless	13

Instant Grading

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 submission reduces the potential score to 90%, 70%, 40%, and 0% respectively.

Bonus and Ranking

If you submitted all Puzzles correctly, you can have bonus points 1 point per minute saved, computed upto seconds.

Ranking will be based on following rules in order:

1. Most total points
2. Earliest final submission time, upto seconds (ignoring incorrect submissions)

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.

The font sizes, cell sizes, colors, borders, shading, margin in the puzzle booklet and instruction booklet will be identical.

Also, we strongly advise you to save the pdf file on your computer, open the pdf (with the password) using Adobe Acrobat Reader and then print. If you print directly from the browser (for example Google Chrome), unintentional printing problems may arise (see this post for details <http://logicmastersindia.com/t/?tid=1189>).

Minesweeper

- Place mines into some empty cells in the grid such that the numbers in the grid represent the number of mines in the 8 neighboring cells, including diagonal ones.
- In some of the puzzles, number of mines to be used will be given.

Answer key: Enter the number of mines for each row, from top to bottom.

For the first example, the answer key is 32212. For the second example, the answer key is 133350.

	7		2	
	2		3	

●	●	●		
●	7	●	2	
●	●			
	2		3	●
			●	●

15 mines

2		3	2		0
1					2
2					3
2		3	3		1

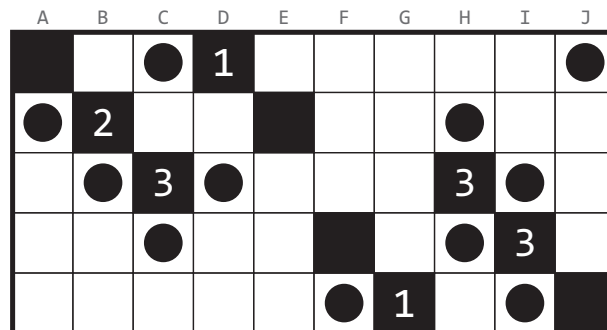
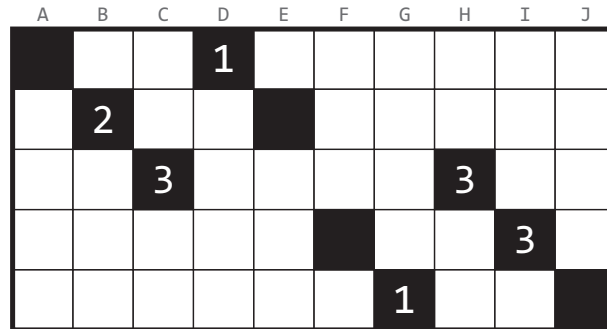
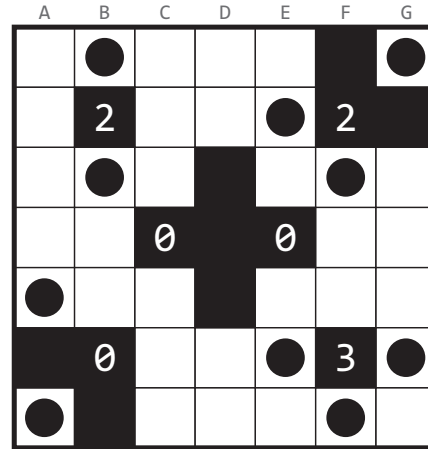
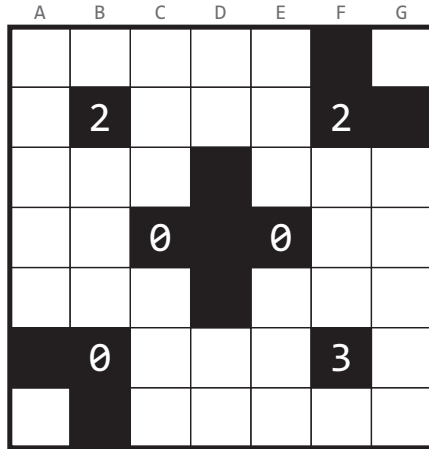
2	●	3	2		0
●		●	●		
1		●	●	●	2
2		●	●	●	3
●	●	●	●	●	
2		3	3		1

Akari

- Place lightbulbs in some of the white cells so that all white cells are illuminated.
- Lightbulbs illuminate all cells they can see horizontally and vertically, including the cell in which it is placed.
- Lightbulbs are blocked by black cells or the edge of the grid.
- No two lightbulbs may illuminate each other.
- Numbers in black cells indicate how many orthogonally adjacent cells contain a lightbulb.

Answer key: Enter the number of light bulbs for each row, from top to bottom.

For the first example, the answer key is 2120122. For the second example, the answer key is 22322.

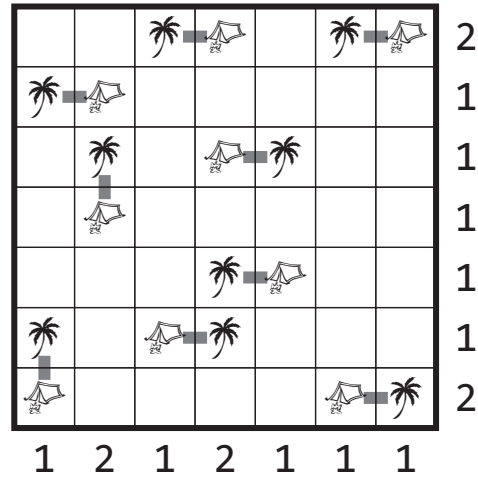
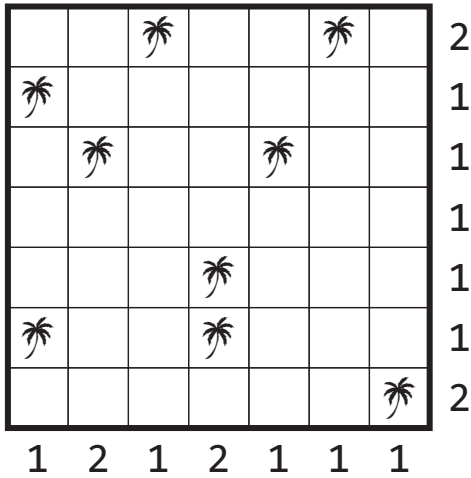
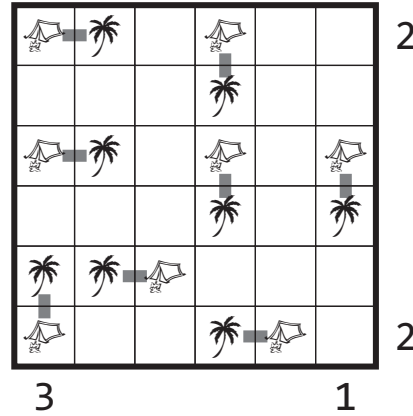
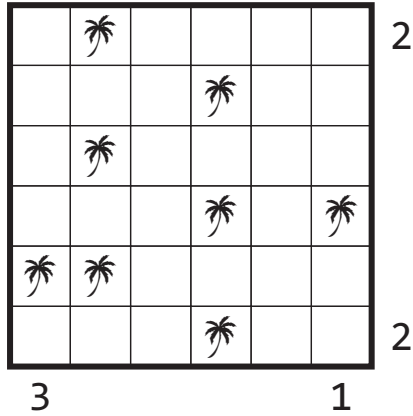


Tents

- Place one tent horizontally or vertically next to each tree.
- Tents do not touch each other, not even diagonally.
- The numbers outside the grid indicate the number of tents in that row or column.

Answer key: Enter the maximum continuous non-tent area for each row, from top to bottom. In case of double digit numbers, enter the right (unit) digit only.

For the first example, the answer key is 262633. For the second example, the answer key is 3535444.



Battleships

- Place the given fleet of ships with the shapes of the ships as shown.
- The numbers outside the grid indicate the number of cells occupied by ships in that row or column.
- Ships cannot touch each other, not even diagonally.
- Some cells are known to be water and are indicated by waves.

Answer key: For each row from top to bottom, enter the column position of first ship segment. Enter “-“ if there are no ships in the row.

For the example, the answer key is AEC-EAEA.

The image shows a fleet of ships on the left: a 3x1 ship, a 2x1 ship, a 2x1 ship, a 1x1 ship, a 1x1 ship, a 1x1 ship, a 1x1 ship, and four 1x1 ships. To the right is an 8x8 grid with columns labeled A-H and rows labeled 1-8. Wave indicators are present at (G,1), (A,2), (B,2), (G,7), and (H,8). Row numbers are 3, 1, 3, 0, 4, 3, 3, 3. Column numbers are 3, 3, 3, 0, 3, 2, 3, 3.

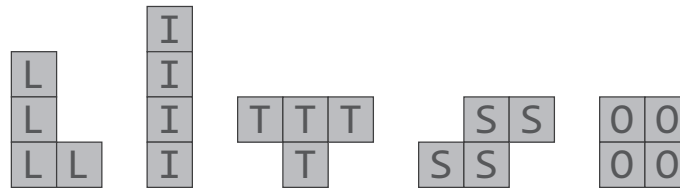
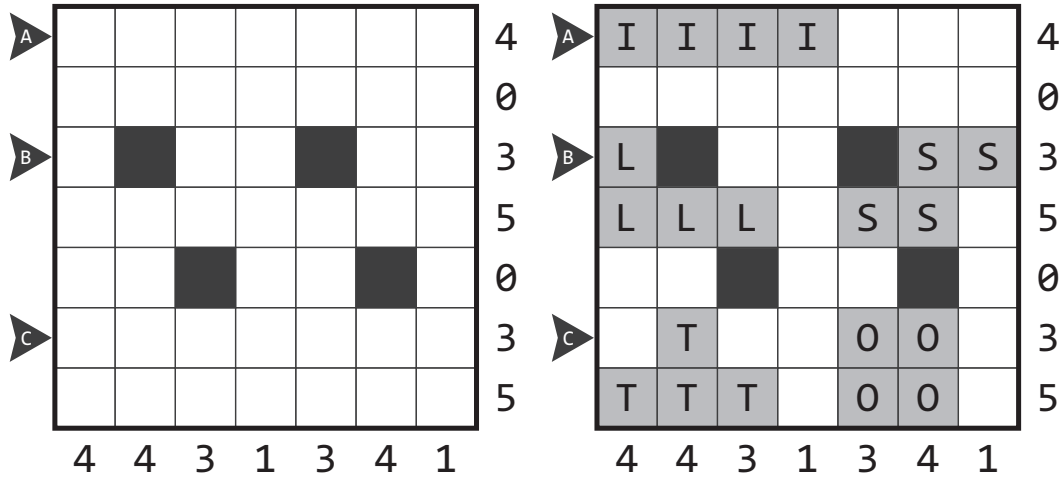
The grid is filled with ships according to the answer key AEC-EAEA. Row 1: Ship at A (1x1), Ship at B (1x1), Ship at G (1x1). Row 2: Ship at A (1x1), Ship at B (1x1). Row 3: Ship at C (1x1), Ship at G (1x1), Ship at H (1x1). Row 4: Ship at E (1x1), Ship at F (1x1), Ship at G (1x1), Ship at H (1x1). Row 5: Ship at A (1x1), Ship at B (1x1), Ship at C (1x1). Row 6: Ship at E (1x1), Ship at F (1x1). Row 7: Ship at A (1x1), Ship at B (1x1), Ship at C (1x1). Row 8: Ship at A (1x1), Ship at B (1x1), Ship at C (1x1). Row numbers are 3, 1, 3, 0, 4, 3, 3, 3. Column numbers are 3, 3, 3, 0, 3, 2, 3, 3.

Tetromino / Pentomino

- Place the given set of polyominoes in grid.
- Polyominoes do not touch each other, even diagonally.
- Rotations and reflections are allowed.
- Polyominoes cannot be placed in shaded cells.
- The numbers outside the grid indicate the number of cells occupied by polyominoes in that row or column.

Answer key: Enter the letters corresponding to first two polyominoes seen from the marked directions. (– if not enough polyominoes)

For the example, the answer key is I-,LS,TO



Minesweeper Instructionless

- The rules of this puzzle vary slightly from the Minesweeper rules.
- One example with solution will be given in the puzzle booklet to demonstrate the changes in the rules.
- It is part of solving process to determine the rule changes by exploring/solving the examples.
- There will not be any worded instruction in the puzzle booklet for this puzzle.

Answer key: Enter the number of mines for each row, from top to bottom.

Tents Instructionless

- The rules of this puzzle vary slightly from the Tents rules.
- One example with solution will be given in the puzzle booklet to demonstrate the changes in the rules.
- It is part of solving process to determine the rule changes by exploring/solving the example.
- There will not be any worded instruction in the puzzle booklet for this puzzle.

Answer key: Enter the maximum continuous non-tent area for each row, from top to bottom. In case of double digit numbers, enter the right (unit) digit only.