

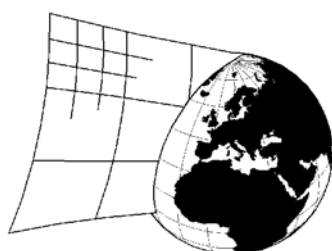
Competition puzzles Puzzles

SUDOKUCUP 11



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Spedrapid

1) Tents (8 points)

Place a tent horizontally or vertically next to each tree.
Tents connected to different trees do not touch each other, not even diagonally.
Numbers outside the grid indicate the number of tents in that row or column.

| | | | | | | | | | | |
|---|---|---|---|---|---|--|---|---|---|---|
| | | | | | | | ● | | | |
| | | ● | | ● | | | | | | |
| ● | | | ● | | | | ● | | | |
| | | | | | | | ● | ● | | 1 |
| | ● | ● | | | | | ● | | | |
| ● | | | | | | | ● | | | |
| | | | | | | | | ● | | |
| | ● | | ● | | ● | | | | | 1 |
| | | | | | | | | | ● | |
| | | | | ● | | | | | | |
| | | | | | | | | | | 1 |
| | | | | | | | | | | |

Answer

A = Write down the number of tents in each row from top to bottom.
B = Write down the number of tents in each column from left to right.

2) Give me a five (17 points)

Draw a single, non-intersecting loop into the grid that passes through all cells. Every fifth cell of the loop is marked with a circle.

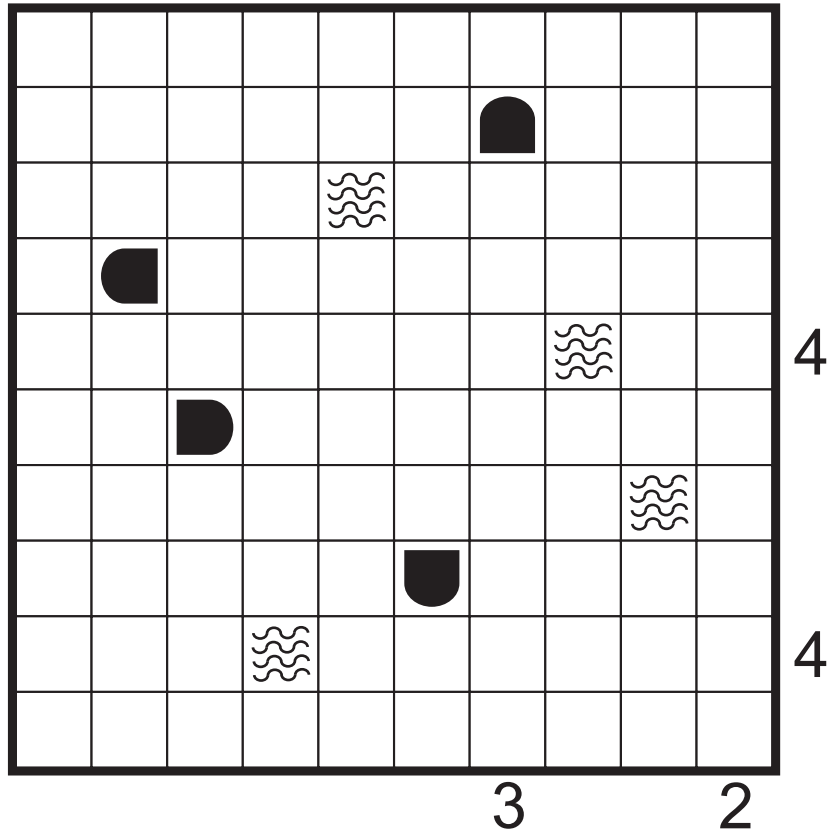
| | | | | | | | | | |
|------------|---|--|--|---|--|---|---|---|---|
| | ○ | | | | | | | ○ | |
| A ▷ | | | | ○ | | | | | |
| | | | | | | ○ | | ○ | |
| B ▷ | ○ | | | ○ | | | ○ | | |
| | | | | | | | | | ○ |
| | ○ | | | | | ○ | | | ○ |
| C ▷ | | | | ○ | | ○ | | | |
| | ○ | | | | | | | ○ | |

Answer

A = Write down the length of all horizontal segments of the loop in the 2nd row.
B = Write down the length of all horizontal segments of the loop in the 4th row.
C = Write down the length of all horizontal segments of the loop in the 7th row.

3) Battleships (9 points)

Locate the indicated fleet in the grid. Each segment of a ship occupies a single cell. Ships can be rotated. Ships do not touch each other, even diagonally. Some ship segments, or sea cells without any ship segments, are given in the grid. The numbers on the right and bottom edges of the grid reveal the number of ship segments in that row or column.



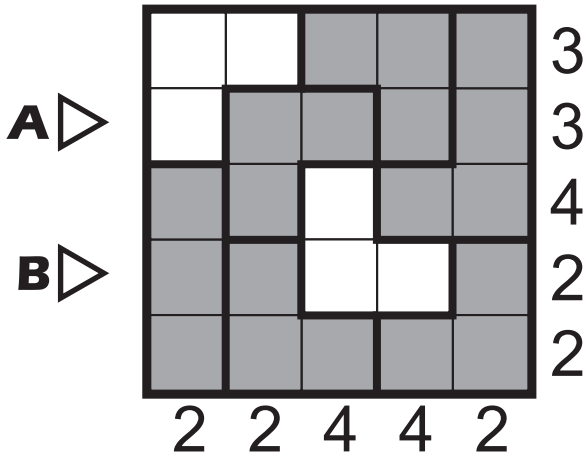
Answer

A = Write down the number of ship segments in each row from top to bottom.

B = Write down the number of ship segments in each column from left to right.

4) Black and white areas (7 points)

Draw a circle into some of the cells such that each white region contains an even number of circles and each shaded region contains an odd number of circles. Numbers around the grid indicate how many circles are there in that row/column.

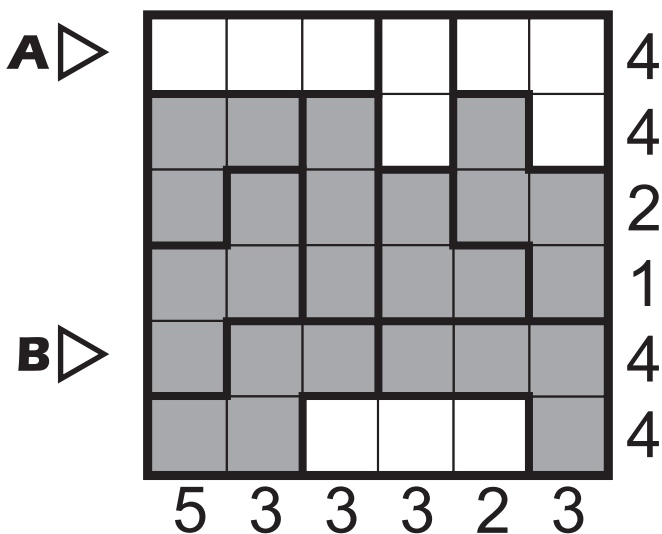


Answer

A = Write down the content of the 2nd row. (O = circle, X = blank cell)
B = Write down the content of the 4th row. (O = circle, X = blank cell)

5) Black and white areas (8 points)

Draw a circle into some of the cells such that each white region contains an even number of circles and each shaded region contains an odd number of circles. Numbers around the grid indicate how many circles are there in that row/column.



Answer

A = Write down the content of the 1st row. (O = circle, X = blank cell)
B = Write down the content of the 5th row. (O = circle, X = blank cell)

6) Bosnian Snake (9 points)

A
▽

B
▽

C
▽

Draw a snake into the grid whose head and tail are given as black dots but its length is unknown. The snake cannot touch itself, not even diagonally. Clues in the grid indicate the number of horizontally, vertically or diagonally adjacent cells that are occupied by the snake.

| | | | | | | | | | |
|---|---|---|---|--|--|---|---|---|---|
| ● | | | | | | 2 | | | |
| | | | 7 | | | | | | |
| | | | | | | | | | |
| | 5 | | | | | | 3 | | |
| | | | | | | 1 | | | |
| | | | 5 | | | | | | |
| | | 4 | | | | | | 4 | |
| | | | | | | | | | |
| | | | | | | 4 | | | |
| | | | 4 | | | | | | ● |

Answer

A = Write down the length of all vertical segments of the snake in the 3rd column.

B = Write down the length of all vertical segments of the snake in the 5th column.

C = Write down the length of all vertical segments of the snake in the 8th column.

7) Ariadne's Thread (13 points)

A
▽

B
▽

C
▽

Connect all the numbers in increasing order starting from 1. The line consists of horizontal and vertical segments only and it never crosses or overlaps itself. Some cells may remain empty.

| | | | | | | | | | |
|--|---|---|--|---|---|---|--|--|--|
| | | | | 5 | | | | | |
| | 1 | | | | 7 | | | | |
| | | 8 | | | | | | | |
| | | 4 | | | | 2 | | | |
| | | | | | | | | | |
| | | | | 3 | | | | | |
| | | 6 | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Answer

A = Write down the length of all vertical segments of the line in the 3rd column.

B = Write down the length of all vertical segments of the line in the 5th column.

C = Write down the length of all vertical segments of the line in the 8th column.

8) Yajilin (15 points)

Colour some cells so that you can draw a closed loop through all remaining white cells. The numbers in the grid tell you how many coloured cells can be seen in the direction of the arrow. No coloured cells are allowed to share an edge. No black bordered square can be used by the loop.

A ▷

B ▷

| | | | | | | | | |
|--|----|----|----|----|----|----|---|----|
| | | | | | | | 2 | |
| | | | 2↓ | | | | | |
| | | | | | | | | |
| | | | | | 1← | | | |
| | 1→ | | | | | | | |
| | | | | | | | | 0↓ |
| | | | | 2↑ | | | | |
| | | | | | | | | |
| | | | | | | 4↑ | | |
| | | 2↑ | | | | | | |

Answer

A = Write down the length of all horizontal segments of the loop in the 4th row.

B = Write down the length of all horizontal segments of the loop in the 8th row.

9) The Wall (22 points)

The grid is separated into two connected areas by a wall whose segments only use the boundaries of unit squares. A cell is „visible” from another cell if they are either in the same row or in the same column (irrespective of the wall). A number in a cell indicates how many cells on the opposite side of the wall are visible from there.

A ▷

B ▷

| | | | | | | | | |
|--|---|---|--|--|---|---|---|---|
| | 1 | 5 | | | | 2 | 6 | |
| | 7 | | | | | | | |
| | | | | | | | | 3 |
| | | | | | | | | 2 |
| | 6 | | | | | | | |
| | 2 | | | | | | | |
| | 8 | | | | | | | |
| | | | | | 4 | | | |

Answer

A = Write down the length of all horizontal segments divided by the wall in the 3rd row.

B = Write down the length of all horizontal segments divided by the wall in the 5th row.

10) Tapa Restoration (19 points)

Standard Tapa rules apply: shade some empty cells black to create a single connected wall. Numbers in a cell indicate the length of consecutive shaded blocks in the neighbouring cells. If there is more than one number in a cell, then there must be at least one white (unshaded) cell between the black cell groups. Cells with numbers cannot be shaded, and the shaded cells cannot form a 2×2 square anywhere in the grid.

Answer

A = Write down the length of all horizontal segments of the wall in the 3rd row.

B = Write down the length of all horizontal segments of the wall in the 7th row.

C = Write down the length of all horizontal segments of the wall in the 10th row.

A ▷

B ▷

C ▷

| | | | | | | | | | |
|--|---|---|---|---|---|--|---|---|---|
| | 2 | | | | | | | | |
| | | 2 | | | | | | | 2 |
| | | | | | 2 | | | 2 | |
| | | | | | | | 2 | | |
| | 2 | 2 | | | 2 | | | | |
| | 2 | | | 2 | | | 2 | | |
| | | | | | | | | | 2 |
| | | 2 | 2 | | | | | 2 | |
| | | | | | 2 | | | | |
| | | 2 | | 2 | | | | | |

11) Tapa Restoration (28 points)

Standard Tapa rules apply: shade some empty cells black to create a single connected wall. Numbers in a cell indicate the length of consecutive shaded blocks in the neighbouring cells. If there is more than one number in a cell, then there must be at least one white (unshaded) cell between the black cell groups. Cells with numbers cannot be shaded, and the shaded cells cannot form a 2×2 square anywhere in the grid.

Answer

A = Write down the length of all horizontal segments of the wall in the 2nd row.

B = Write down the length of all horizontal segments of the wall in the 6th row.

C = Write down the length of all horizontal segments of the wall in the 10th row.

A ▷

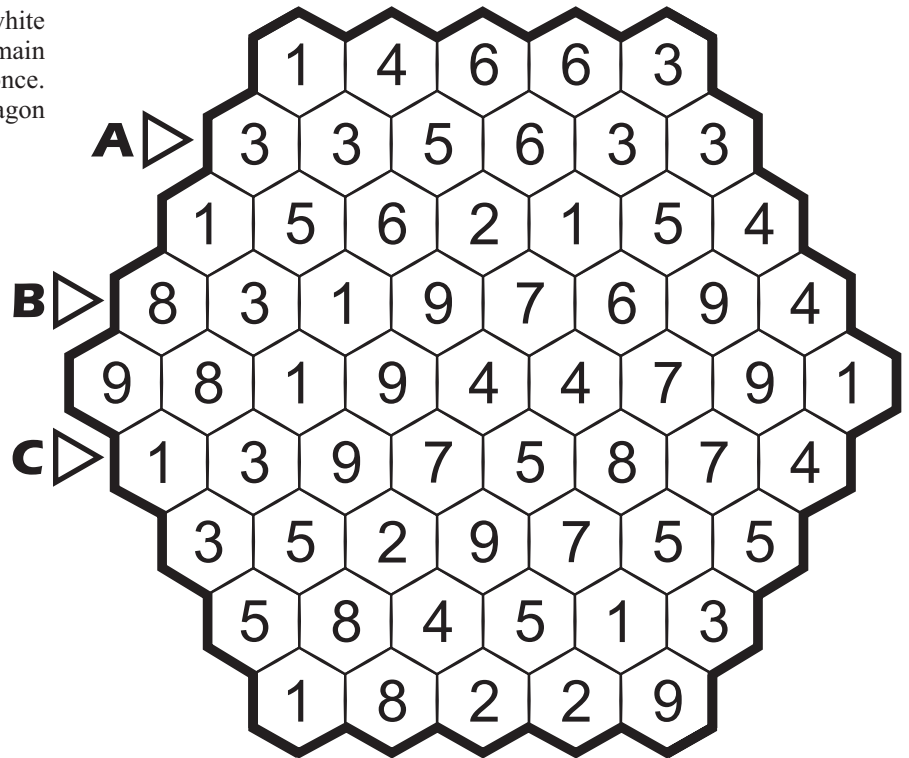
B ▷

C ▷

| | | | | | | | | | |
|---|---|--|---|---|---|---|---|--|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | 3 | | | 3 | | 3 | 3 | | |
| | 3 | | | | | 3 | | | 3 |
| | | | 3 | | | | | | |
| | | | | 3 | | | 3 | | |
| | | | 3 | | | | 3 | | |
| 3 | | | | 3 | | | | | |
| | | | | | 3 | | 3 | | |
| | | | | | | | | | |

12) Hexa hitori (25 points)

Blacken some hexagons so that the remaining white hexagons form a continuous area and in all the 3 main directions there cannot be one number more than once. There cannot be any point where 3 blackened hexagon meets.



Answer

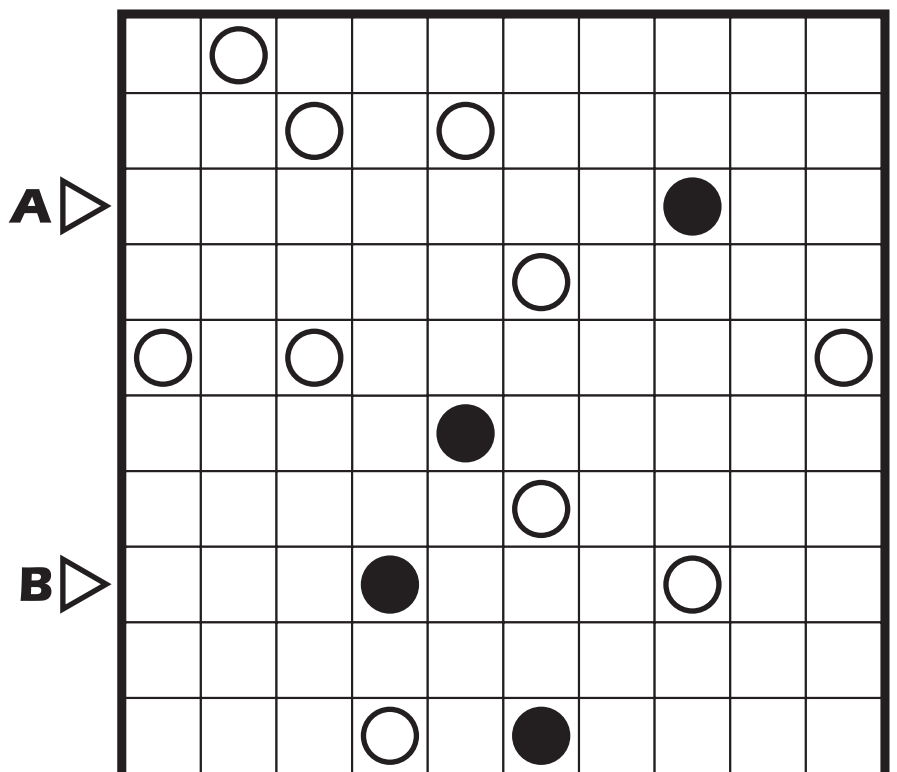
A = Write down all unshaded digits in the 2nd row.

B = Write down all unshaded digits in the 4th row.

C = Write down all unshaded digits in the 6th row.

13) Every Second Masyu (40 points)

Draw a single, non-intersecting loop 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. Moreover every second masyu clue is given. In other words, between two circle along the line there is exactly one cell that could contain a black or white circle.



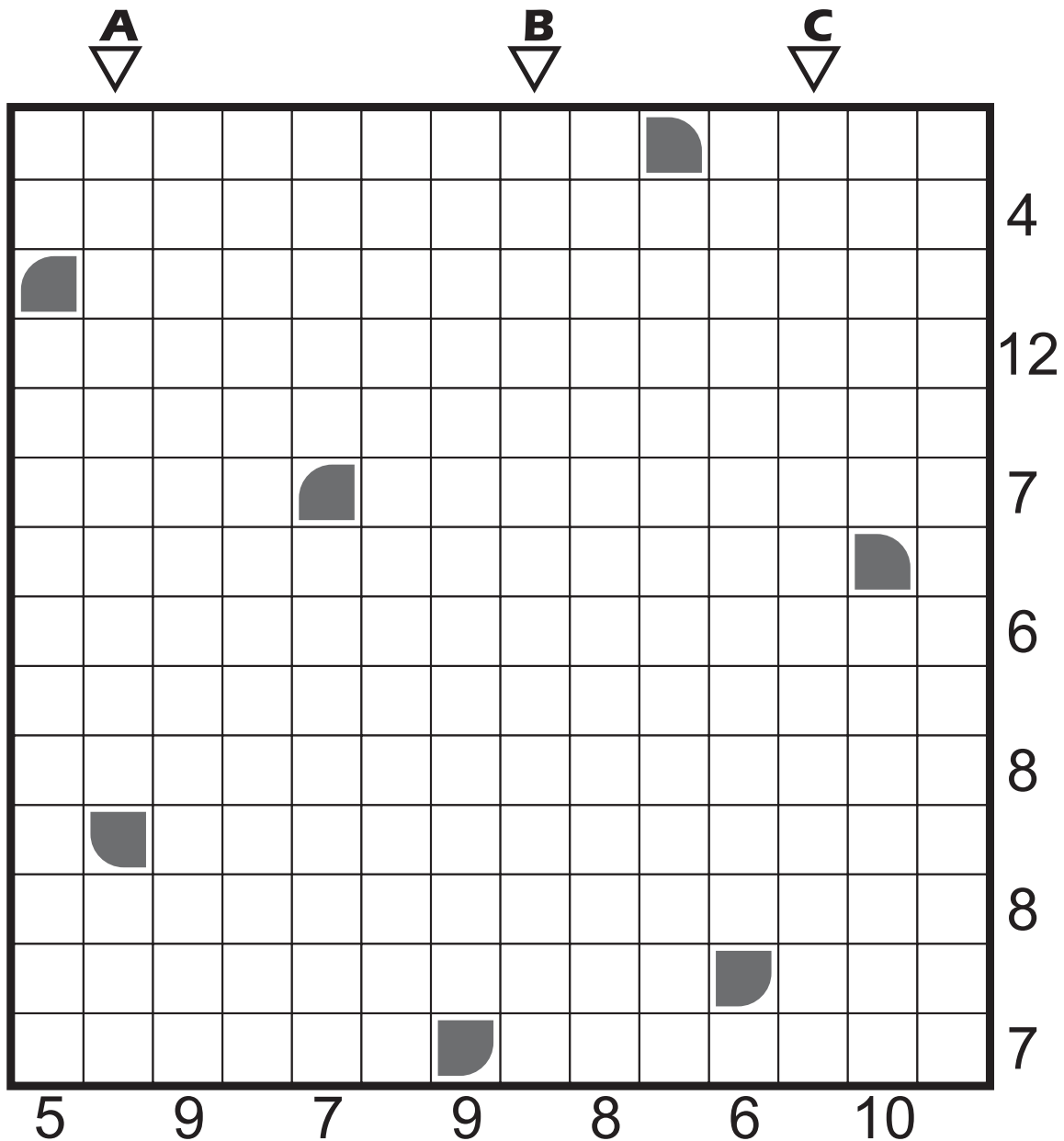
Answer

A = Write down the length of all horizontal segments of the loop in the 3rd row.

B = Write down the length of all horizontal segments of the loop in the 8th row.

14) Radar (33 points)

Shade some rectangular areas in the grid so that they do not touch each other, not even diagonally (in other words: if two cells are occupied by two different shaded areas, then those two cells cannot share even a single point). Numbers outside the grid indicate how many cells are shaded in that row/column.

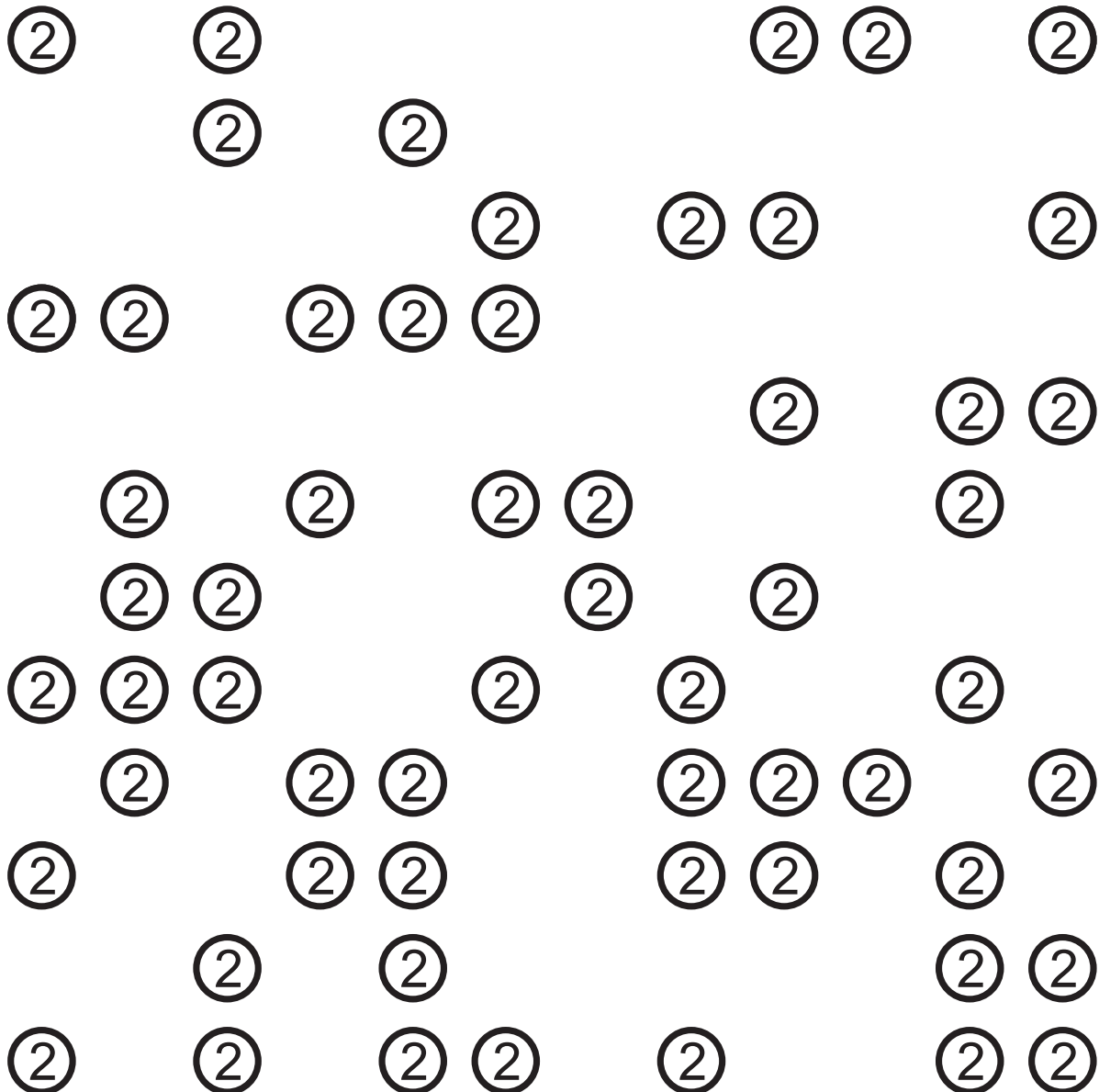


Answer

- A = Write down the length of all vertical shaded segments in the 2nd column.
- B = Write down the length of all vertical shaded segments in the 8th column.
- C = Write down the length of all vertical shaded segments in the 12th column.

15) Hashi (35 points)

Connect the circles with single or double bridges that can be horizontal or vertical. Bridges do not overlap or cross each other and do not go over another island. All circles must form a single connected network. Numbers in a circle indicate the number of bridges that are attached to that circle.

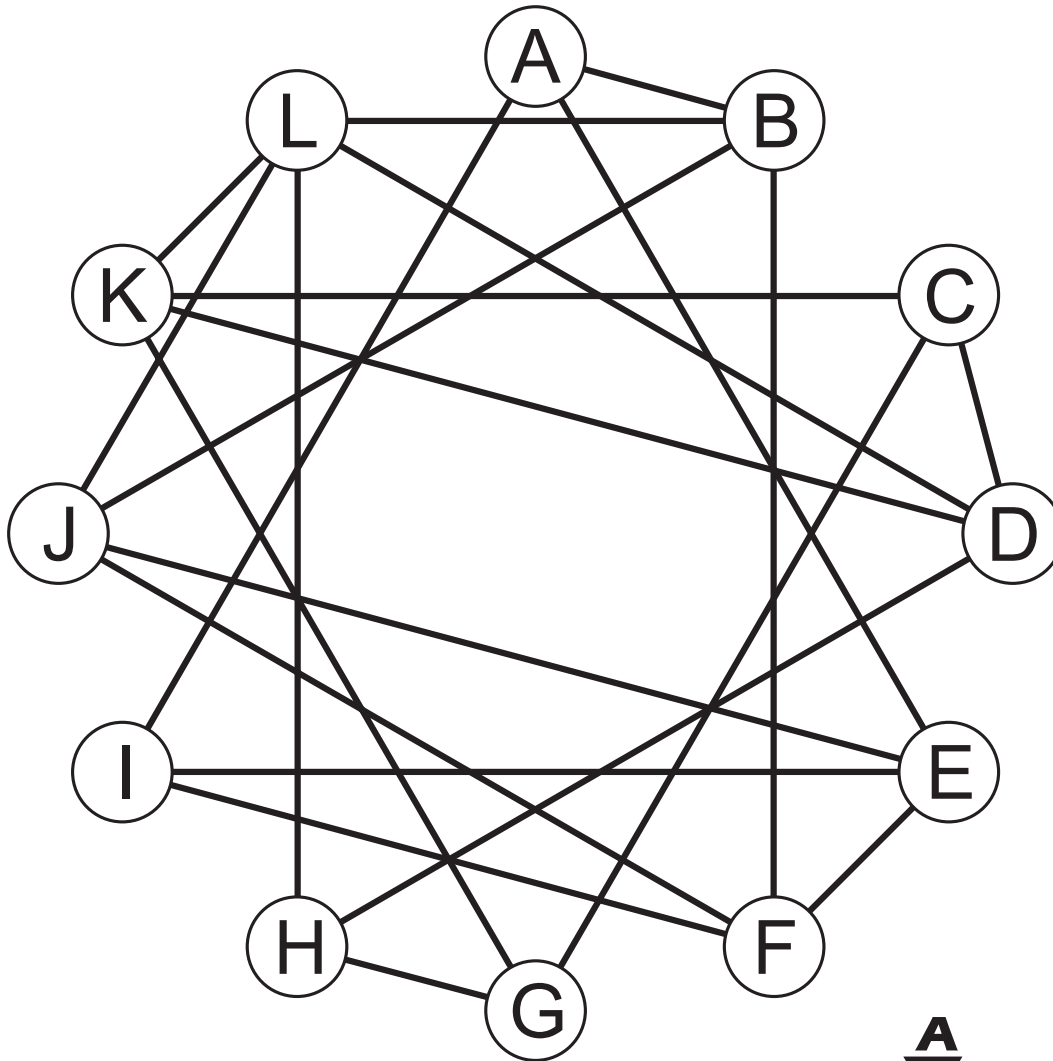


Answer

A = Write down the number of horizontal bridges in each row of islands from top to bottom.
B = Write down the number of vertical bridges in each column of islands from left to right.

16) Zodiac connections (46 points)

In a graph structure the vertices are marked with letters. Each letter stands for one chinese animal horoscope zodiac sign. All triplets of animals are given where the three corresponding vertices form a connected triangle. Identify which letter stands for which animal.



- | | | | | |
|--------|---|---------|---|---------|
| DOG | - | HORSE | - | TIGER |
| DOG | - | RABBIT | - | PIG |
| DOG | - | RABBIT | - | TIGER |
| DRAGON | - | MONKEY | - | RAT |
| DRAGON | - | MONKEY | - | SNAKE |
| GOAT | - | PIG | - | RABBIT |
| OX | - | PIG | - | ROOSTER |
| OX | - | ROOSTER | - | SNAKE |
| DRAGON | - | SNAKE | - | ROOSTER |

| | |
|--------|--|
| DOG | |
| DRAGON | |
| GOAT | |
| HORSE | |
| MONKEY | |
| OX | |



| | |
|---------|--|
| PIG | |
| RABBIT | |
| RAT | |
| ROOSTER | |
| SNAKE | |
| TIGER | |



Answer

A = Write down the sequence of letters corresponding to the given (alphabetical) list of the animals.

17) Binaire (46 points)

Place digits 0 or 1 into every empty cell so that each row and each column contains an equal number of both digits. Three horizontally or vertically consecutive cells cannot all have the same digit.

| | | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | | | 1 | | 0 | | | | |
| A ▷ | | 0 | | | | | | | | 1 | | | 1 |
| | 1 | | | | | | | | | | | | 1 |
| | | 0 | | | | | | 1 | 1 | | | | |
| | | | | | 1 | | 0 | 1 | | | | | |
| | 0 | | | | | | | | | 1 | | | 0 |
| | | | | 1 | | | | 1 | | | | 1 | |
| | 1 | | | | | | 0 | | | 1 | | 1 | |
| | 1 | | | | | | | | | | | | |
| | | | 1 | | | 0 | | | | 0 | | | 1 |
| | 1 | | | 1 | | | 1 | | | | 1 | | 1 |
| | | | | | | | | 0 | | | | | |
| | | 0 | | | | | | | 1 | 1 | | | |
| | 1 | 0 | | 0 | | 1 | | | | | | 1 | |

Answer

A = Write down the content of the 2nd row.

B = Write down the content of the 6th column.