Enter the digits 1, 2, 3 into the grid so that each row and column contains each digit exactly once. Some cells will remain empty. Numbers outside the grid denote the first digit found in the corresponding row or column from that direction.


## 2. TENTS

Attach a tent to each tree, in a horizontally or vertically adjacent cell. Cells with tents do not touch each other, not even diagonally. Digits outside the grid indicate the number of tents in that row or column.

Answer: For each marked row from top to bottom, enter the number of tents in that row.


Place the given set of ships into the white cells. Ships cannot touch each other, not even diagonally. Clues outside the grid show the number of cells occupied by ships in the corresponding row or column. Ignore the pink/grey cells while solving.

4. WORDS

Place all of the given words in four 12-cell grids according to standard crossword rules - from left to right and top to bottom. Letters in the cells connected by the arrows must be the same.

Answer: Enter the contents of the marked diagonal A from top to bottom and then the marked


| AISA | OPOR |
| :--- | :--- |
| ALA | OULU |
| ALIC | PUNA |
| ALS | RUA |
| ASO | SAS |
| CUP | SASA |
| ISOS | SOS |
| LIS | STAR |
| NAV | TAR |
| NAVO | TVA |
| OCD | VAl |
| OCOT | VAIO |
| ONO | VII |
| IPO | VLAS | diagonal $B$ from bottom to top.



## 5. MASYU WITH TIPS

Draw a single loop using only horizontal and vertical lines between the centres of some cells such that the loop does not visit any cell more than once. At every cell containing a white circle the loop must pass straight through that circle and make a $90^{\circ}$ turn in at least one of the cells adjacent to the circle. At every cell containing a black circle the loop must make a $90^{\circ}$ turn and travel straight through both cells adjacent to the circle. The number in a white circle shows the length of a segment crossing it. The number in a black circle denotes the length of at least one of the segments that make up the corner in a black circle.

## Answer: Starting at A

 and traveling clockwise around the loop, enter the order in which the letters are passed.
## 6. XO

Place either an ' X ' or an 'O' into each empty cell such that four consecutive 'X's or 'O's do not appear horizontally, vertically or diagonally.

Answer: Enter the contents of the marked rows from left to right.


61 pt


Place either an ' $X$ ' or an 'O' into each empty cell such that four consecutive ' $X$ 's or 'O's do not appear horizontally, vertically or diagonally. In each marked region must be the same number 'X's and 'O's.

Answer: Enter the contents of the marked rows from left to right.


## 8. ROMAN XO

Place either an ' $X$ ' or an ' $O$ ' into each empty cell such that four consecutive ' $X$ 's or 'O's do not appear horizontally, vertically or diagonally. According to the Roman system of numbers $X=10$. Each number outside the grid represent the sum of all ' $X$ 's in the corresponding direction.

Answer: Enter the contents of the marked rows from left to right.


## 9. COOL-L-L

Write a letter C, O or L in each empty cell so that there never occur two consecutive C , three O or four L in any row, column or diagonal.

Answer: Enter the contents of the marked row A from left to right and then the marked column B from top to bottom.

|  |  |  |  |  | L |  |  |  | $\sqrt{8 /}$ |  |  | $\begin{gathered} 173 \\ c \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | 0 |  | O | L |  |  |  |  |  |
|  | L |  |  |  |  |  | 0 |  |  | C |  |  |  |
| 0 | 0 |  | 0 |  | 0 |  |  | L |  | L | 0 |  |  |
|  |  |  |  | L |  | C |  |  |  |  |  | L | 0 |
|  | 0 |  | 0 | L |  |  |  | C |  |  | C |  |  |
|  |  |  |  |  |  |  |  |  |  | L |  |  |  |
|  |  |  | 0 |  | C |  | L | 0 |  |  |  | 0 |  |
|  | L |  |  |  |  |  | L |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |  |  |  | 0 | L | L |  |
|  | 0 | 0 |  | L |  | C | 0 |  | C |  |  | L | L |
|  |  |  |  |  | L | L |  |  |  |  |  | C |  |
|  | C |  |  | C |  | C |  | 0 | C |  |  |  |  |
|  |  |  |  |  |  | 0 |  |  |  |  |  |  |  |

## 10. ROMAN COOL-L-L

Write a letter $C$, $O$ or $L$ in each empty cell so that there never occur two consecutive $C$, three $O$ or four $L$ in any row, column or diagonal. According to the Roman system of numbers $C=100$, $\mathrm{L}=50$. Each number outside the grid represent the sum of all 'C's and 'L's in the corresponding direction.

Answer: Enter the contents of the marked row $A$ from left to right and then the marked column B from top to bottom.


Draw stars in some white cells, so that each row and column contains exactly one star. Cells with stars do not touch each other, not even diagonally. There should be a single loop going between the centres of all empty white cells. The loop consists of horizontal and vertical segments and cannot touch or cross itself.

Answer: Enter the number of turns of the loop.

12. XII

Place either an 'X' or an 'I' into each cell such that four consecutive 'X's or 'I's do not appear horizontally, vertically or diagonally. Each digit outside the grid indicates how many groups of 3 consecutive characters formed the number XII in the corresponding direction.

Answer: Enter the content of the marked diagonal from bottom to top.

13. MY LOOP

62 pt
Draw a single loop, visiting all white cells, using only horizontal and vertical lines between the centres of white cells such that the loop does not cross itself or visit any cell more than once. The loop makes a $90^{\circ}$ turn in each cell with a digit. This digit shows the length of each of the loop segments which form the turn.

Answer: Starting at A and traveling clockwise around the loop enter the letters.

## 14-15. DOMINOES

A set of 21 dominoes from $0-0$ to $5-5$ has been placed in the grid. Mark the position of each domino.

| 0 | 2 | 5 | 5 | 1 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 4 | 5 | 0 | 1 | 3 |
|  | 3 | 3 | 2 | 5 | 4 |
|  | 2 | 0 | 1 | 4 | 4 |
|  | 2 | 1 | 4 | 2 | 1 |
| Enter | 2 | 0 | 3 | 0 | 1 |
| the number | 3 | 1 | 4 | 0 | 5 |
| of horizontal dominoes. | 5 | 5 | 2 | 0 | 3 |


| Checking table |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 |
| 5 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |

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| Answer: | 0 | 4 | 5 | 2 | 1 | 1 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 3 |  |  |  |  |  |
| the number | 3 | 3 | 2 | 4 | 2 | 3 | 5 |
| of horizontal | 5 | 5 | 5 | 1 | 0 | 3 | 2 |

## 16. KILLER SUDOKU

98 pt
Place the digits 1 through 9 in empty cells so that each row, column and marked $3 \times 3$ box contains each digit exactly once. Digits in each dotted region must sum to the total given in its top-left. Digits can repeat in a dotted region.

Answer: Enter the contents of the marked rows from left to right.


## 17. BUILD A MAZE

Place some walls in the grid, creating a path going from one grey cell to another and visiting every cell exactly once. Walls are horizontal or vertical lines going along grid lines with their ends at grid nodes. Digits outside the grid sequentially show the lengths of all wall segments in corresponding direction. There should be at least one empty space between two segments.

Answer: Enter the lengths of all wall segments of the marked row A from left to right and then the marked column B from top to bottom.


Place some walls in the grid, creating a path going from one grey cell to another and visiting every cell exactly once. Walls are lines/arcs going along grid lines/arcs with their ends at grid nodes. All lines and arcs through which the path passes are the walls. Digits outside the grid sequentially show the lengths of all wall segments in the corresponding radius. There should be at least one empty space between two segments.


Answer: Enter in order the lengths of all wall segments, starting at A and traveling clockwise around the corresponding circle, and then starting at B and travelling clockwise around the corresponding circle.

