## forfind $\boldsymbol{B}^{\boldsymbol{T}}$ TH <br> ANNIVERSARY CONTEST



## Instruction Booklet

All puzzles in this contest are crypted, meaning there are some numeric clues replaced by the letters. In every single puzzle the same letter corresponds to the same digit and different letters correspond to different digits. Each puzzle has its own cypher.
There are 9 puzzle types in a contest + the 10th type (Classic Sudoku) which gets some clues from the solutions of previous types: you should put the number hidden by $X$ from the puzzle $N$ to the grey cell in the Nth row.
There are two puzzles of each type, one is above and another is below. The clues from each one go to the corresponding Classic Sudoku.
The answer key for the grids will be the "cryptic sequence" and 2 rows/columns.
In puzzles 1, 2, 9, 10 - enter the content of the marked rows/columns as is.
In puzzles 3, 4, 5, 7-replace filled/blackened cells by " $X$ ", empty cells by "-".
In puzzle 6-replace the cells inside the loop by " $X$ ", cells outside the loop by "-".
In puzzle 8 - replace each cells with the number it is connected to.
If both puzzles of the same type are solved, the participant is awarded with an additional bonus.
Duration of the contest is 130 minutes. There will be no extra time. The standard tie-breaking rule applies: the participant with the earlier last correct submission time will be higher in the table of results.

1. Sudoku difference
2. Futoshiki
3. First Seen Coral
4. Thermometers
5. All-seeing Snake
6. Slitherlink
7. Minesweeper
8. Four Winds
9. ABC-Box
10. Classic Sudoku

135 points (55 + $60+$ Bonus: 20)
160 points ( $65+75+$ Bonus: 20)
80 points ( $25+40+$ Bonus: 15$)$
60 points (20 $+30+$ Bonus: 10)
100 points ( $35+50+$ Bonus: 15 )
85 points ( $25+45+$ Bonus: 15 )
60 points ( $25+25+$ Bonus: 10 )
60 points ( $25+25+$ Bonus: 10)
100 points ( $35+50+$ Bonus: 15 )
160 points ( $65+75+$ Bonus: 20)

My sincere thanks go to:
Andrey Bogdanov for testing the puzzles
LMI for hosting the contest

## 1. Sudoku difference - $\mathbf{1 3 5}$ points ( $\mathbf{5 5}+\mathbf{6 0}+$ Bonus: 20)

Fill in the grid with the numbers 1 through 8/9 (8 in the example). Numbers should appear in each row, column and outlined area exactly once. Numbers between the cells show the difference of the adjacent numbers.


| $X$ | $A$ | $B$ | $C$ | $D$ | $E$ | $F$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |


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



Answer key: 2453167; 76315428; 45678312

## 2. Futoshiki - $\mathbf{1 6 0}$ points ( $\mathbf{6 5 + 7 5 + B o n u s : ~ 2 0 ) ~}$

Fill in the grid with the numbers 1 through 6/7 (5 in the example). Numbers should appear in each row and column exactly once. Comparison signs between the cells show which number is greater/less.


## 3. First Seen Coral - $\mathbf{8 0}$ points ( $\mathbf{2 5}+\mathbf{4 0}+$ Bonus: 15 )

Select a connected set of squares - the coral - so that it does not touch itself, not even diagonally. Numbers outside the grid indicate the lengths of the first seen consecutive parts of the coral in the given row or column. No $2 \times 2$ area may be covered by the coral. The coral can have no island inside itself.



| $X A$ | $B$ | $C$ | $D$ |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| $X$ | $A$ | $B$ | $C$ | $D$ |
| :---: | :---: | :---: | :---: | :---: |
| 2 | 4 | 1 | 5 | 3 |

Answer key: 24153; X----X; XXX--X

## 4. Thermometers - $\mathbf{6 0}$ points ( $\mathbf{2 0}+\mathbf{3 0 + B o n u s : ~ 1 0 ) ~}$

Fill in all, some or none of each thermometer. Numbers outside the grid indicate how many cells are filled in the corresponding row or column. Each thermometer is filled from the bulb upwards - you may not have empty cells between two filled cells in any thermometer.


Answer key: 342; $X-X X X-$;- $X---X$

## 5. All-seeing Snake - 100 points ( $\mathbf{3 5}+\mathbf{5 0}+$ Bonus: 15)

Draw in the grid a snake of a given length. The body of the snake cannot touch itself, not even diagonally. Numbers indicate how many segments of the snake are "seen" from this cell, not counting the cell itself. Snake always makes a turn in the cells with numbers. The head and the tail are not given and are subjects to determine.


| $X$ | $A$ | $B$ |
| :--- | :--- | :--- |
|  |  |  |



Answer key: 362; XX-XX--X; -XXX---X

## 6. Slitherlink - 85 points ( $\mathbf{2 5}+\mathbf{4 5}+$ Bonus: 15)

Draw in the grid a single continuous loop that goes only horizontally and vertically and connects the dots. The numbers indicate how many of the edges around it are used by the loop. The loop cannot touch or cross itself.


Answer key: 1032; ---X-; $X X X X X$

## 7. Minesweeper - $\mathbf{6 0}$ points ( $\mathbf{2 5 + 2 5 + \text { Bonus: 10) }}$

Put some mines in the empty cells, one in each at most. Numbers in the grid indicate the number of mines in the surrounding cells.



Answer key: 3120; -X-X-; -X---

## 8. Four winds - $\mathbf{6 0}$ points ( $\mathbf{2 5} \mathbf{+} \mathbf{2 5}+$ Bonus: 10)

Draw one or more horizontal or vertical lines from each numbered cell. Lines cannot cross one another and other numbered cells. Each number indicates how many cells are connected by its lines, not counting the numbered cell itself. Each empty cell should be used by exactly one line.



## 9. ABC-Box - 100 points ( $\mathbf{3 5 + 5 0 + B o n u s : ~ 1 5 ) ~}$

Fill in the grid with the letters A, B, C. The letters outside the grid indicate the sequence of the letters appearing in that row or column, in the correct order. The same letter appearing consecutively is only specified once. A question mark or a number in the sequence indicates an unknown letter; a number indicates that the unknown letter fills that number of consecutive cells.


Answer key: 21; BBBBCC; AAAAAC

## 10. Classic Sudoku - 160 points ( $65+75+$ Bonus: 20)

Fill in the grid with the numbers 1 through 9 . Numbers should appear in each row, column and outlined area exactly once.

| Il) 2 |  | 3 |  | 6 |  | 9 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A |  | 7 |  |  |  |  |  | B |  |
| 3 |  | 6 |  |  |  |  | 9 |  |  | 8 |
| 4 | 8 |  |  |  |  |  |  |  | 6 |  |
| 5 |  |  |  |  |  | c |  |  |  | 7 |
| 6 | 7 |  |  |  | 9 |  |  |  | D |  |
| 7 |  |  | A |  |  |  | 7 |  |  |  |
| II) |  | 7 |  | A |  | D |  |  |  |  |
|  |  |  | 6 |  | 5 |  |  |  |  |  |



1) | 4 | 3 | 8 | 6 | 1 | 9 | 2 | 7 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 9 | 2 | 7 | 5 | 8 | 3 | 4 | 1 | 6 |
| 5 | 6 | 1 | 4 | 2 | 7 | 9 | 3 | 8 |
| 8 | 9 | 4 | 3 | 7 | 5 | 1 | 6 | 2 |
| 6 | 5 | 3 | 1 | 4 | 2 | 8 | 9 | 7 |
| 7 | 1 | 2 | 8 | 9 | 6 | 5 | 4 | 3 |
| 3 | 8 | 9 | 2 | 6 | 1 | 7 | 5 | 4 |
| 2 | 7 | 5 | 9 | 3 | 4 | 6 | 8 | 1 |
| 1 | 4 | 6 | 7 | 5 | 8 | 3 | 2 | 9 |



