## INSTRUCTION BOOKLET

| 1. DARTS SUDOKU | 44 pt |
| :--- | ---: |
| 2. POSITION SUDOKU | 68 pt |
| 3. THREEVISION SUDOKU | 46 pt |
| 4. DRAW CROSSNUMBER SUDOKU | 71 pt |
| 5. MAP SUDOKU | 64 pt |
| 6. TRIMINOES SUDOKU | 55 pt |
| 7. MAZE SUDOKU | 122 pt |
| 8. FLOWER | 99 pt |
| 9. FENCES SUDOKU | 31 pt |
|  |  |
| TOTAL | 600 pt |

TIME
120 minutes

## BONUS

5 points per each saved minute if all the puzzles are solved correctly

## ANSWER KEY

In DARTS SUDOKU is 9 digits, indicated by an arrow.
For all other sudokus is numbers or letters in two rows (left-to-right), indicated by an arrows.
When submitting the answer key, ignore outside clues.

Thanks to Deb Mohanty, Georgiy Kassabli, Rakesh Rai, Rishi Puri and Seungjae Kwak

## 1. DARTS SUDOKU

44 points
Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each ring (innermost to outermost), each 9-cell sector of the target and each circle part bordered by thick lines. The sum of the digits in all cells with darts (cells containing the arrow of the dart) is shown in the center of the target.


## 2. POSITION SUDOKU

68 points
Fill the grid with digits from 1 to 9 ( 4 in the example). Digits must be different in every row, column and outlined $3 \times 3$ ( $2 \times 2$ in the example) box. Cells of each box are numbered row by row from left to right. Some of the digits will be equal to the number in the cell, that is, would be in their positions. Near the eight outside boxes are shown the number of cells containing "their number". Similar information is provided for the two main diagonals.


## 3. THREEVISION SUDOKU

46 points
Fill the grid with digits from 1 to 9 . Digits must be different in every row, column and outlined $3 \times 3$ box. The sum of all digits in each dotted box must be divisible by 3 .

|  |  | 2 |  | 9 |  | 1 |  |  | 7 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7 |  | 9 |  |  |  | 5 |  |  |  |
|  | 5 |  |  |  | 8 |  |  |  |  |  |
| - |  |  |  |  |  |  | 4 |  |  |  |
|  | 4 |  |  | 2 |  |  |  |  | 6 | 6 |
| B $\rightarrow$ |  |  | 3 |  |  |  |  |  |  |  |
|  |  |  | 5 |  | 3 |  |  |  | 4 | 4 |
|  |  |  | 8 |  |  |  | 2 |  | 5 |  |
|  | 2 |  |  | 5 |  | 7 |  | 9 |  |  |

## 4. DRAW CROSSNUMBER SUDOKU

71 points
Paint some cells of the grid to get a connected crossword area. All painted cells should be connected like a crossword. Digits outside the grid show lengths (from top to bottom, or left to right) of all shaded cell groups in corresponding directions. There should be at least one empty cell between two shaded cell groups. Into the crossword, place all the given numbers from left to right and top to bottom. Other numbers cannot be formed in the crossword. Finally fill the grid with digits from 1 to 9 (4 in the example). Digits must be different in every row, column and outlined $3 \times 3$ ( $2 \times 2$ in the example) box.


## 5. MAP SUDOKU

Fill the grid with letters A, B, C, D, E, F, G, H and I (A, B, C, D in the example). Letters must be different in every row, column, outlined $3 \times 3$ ( $2 \times 2$ in the example) box and nine (four in the example) coloured cells. Coloured cells are points on a map: the shortest distance between some of them are given.


A~B 3
A~C 4

No text, only example.

## 7. MAZE SUDOKU

122 points
Place wall segments in the grid creating twelve 12-cell mazes (four 4-cell in the example). Wall segments must lie along gridlines. Digits outside the grid show lengths (from top to bottom, or left to right) of all wall segments in corresponding directions. There should be at least one empty space between two wall segments. It should be possible to continuously visit all cells of each maze from 1 to 12 ( 1 to 4 in the example). Numbers cannot repeat in rows and columns.


## 8. FLOWER

99 points
Fill the grid with digits from 1 to 9 . Digits must be different and form sets of consecutive numbers in every row, column and outlined area. For example, in the 7 -cell direction or area, we can have digits from 1 to 7 , or from 2 to 8 , or all the digits from 3 to 9 .


Place in the grid the given digits-fences without rotation or reflection. Each of the 6 -digit-fences appears once in every row, column and outlined 6-cell area. Each number in the grid shows how many of the four around segments belong to the digit-fence.

| $\xrightarrow{\text { a }} \rightarrow$ | $\because$ $\because$ $\because$ | 3 <br> 3 | 1. |  |  | $1$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\cdots \cdot \cdots$ | $\cdots$ | $\cdots \cdot \cdot$ | $\cdots$ | - | $\cdots$ |
|  | $\because .$. | $\because$ | $\because$ | $\because$ | $\because{ }^{\circ}$ |  |
|  | $\cdots{ }^{\circ} \cdot$ | $\cdots{ }^{\circ} \cdot$ | $\because$. | $\because$. | $\because .$. | $\cdots{ }^{-} \cdot$ |
|  | $\cdots$ | $\cdots$ | $\cdots \cdot$ | $\cdots \cdot$ | - | $\cdots \cdot \cdot$ |
|  | $\cdots{ }^{\circ} \cdot{ }^{\circ}$ | $\cdots$ | $\cdots \cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
|  | $\cdots$ | ! . . | $\cdots$ | $\cdots$ | !. . | $\cdots$ |
|  | $\cdots$ | . . | -•• | . . . . | . . | $\cdots \cdot$ |
|  | $\cdots$ | $\cdots$ |  | $\because$. |  | - . . |
|  | $\because \cdots$ |  | $\cdots{ }^{\circ} \cdot$ |  |  | -•• |
|  | $\cdots$ | - | $\cdots \cdot \cdot$ | . | $\cdots \cdot$ | $\cdots \cdot$ |
|  | . . . | . ${ }^{2}$. | . ${ }^{2}$. | . . . | . . . 2. | . . . . |
|  | $\cdots{ }^{\circ} \mathrm{O}$ | -•• | $\cdots{ }^{\circ} \cdot$. | $\cdots 3^{\circ}$ | -•• | $\cdots$ |
|  | -••• | -• | -••• | -•• | -•• | - • • |
|  | -• | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | . 2. |
|  | . . . . | . . . . | . | - | . . | . |
|  | $\cdots$ | $\cdots$ | $\because \cdot$. | -•• | -•• | -•• |
| $B \rightarrow$ |  | -••• | -•• |  | .2. | -••• |
|  |  | $\cdots$ | $\cdots \cdots$ | $\because \cdot$ | $\cdots 3$. | $\cdots$ |
|  | . . . . | . . . . | . . . . | . . . . | . . . . | . . . . |



3. THREEVISION SUDOKU

$\checkmark 内 \rightarrow$| 3 | 2 | 4 | 9 | 5 | 1 | 6 | 8 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 8 | 9 | 3 | 2 | 6 | 5 | 4 | 1 |
| 5 | 1 | 6 | 7 | 8 | 4 | 9 | 2 | 3 |
| 1 | 5 | 2 | 6 | 7 | 8 | 4 | 3 | 9 |
| 4 | 9 | 7 | 2 | 1 | 3 | 8 | 5 | 6 |
| 8 | 6 | 3 | 4 | 9 | 5 | 7 | 1 | 2 |
| 9 | 7 | 5 | 8 | 3 | 2 | 1 | 6 | 4 |
| 6 | 3 | 8 | 1 | 4 | 9 | 2 | 7 | 5 |
| 2 | 4 | 1 | 5 | 6 | 7 | 3 | 9 | 8 |

7. MAZE SUDOKU

|  | 2 | 3 | 1 | 4 |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 | 4 | 2 | 3 |
| $\xrightarrow{\text { A }} \xrightarrow{4}$ | 4 | 1 | 3 | 2 |
| B $\rightarrow$ | 3 | 2 | 4 | 1 |

2. POSITION SUDOKU
$A \rightarrow$

$B \rightarrow$ | $4^{1}$ | $3^{2}$ | $2^{1}$ | $1^{2}$ |
| :---: | :---: | :---: | :---: |
| $1^{3}$ | $2^{4}$ | $3^{3}$ | $4^{4}$ |
| $2^{1}$ | $4^{2}$ | $4^{1}$ | $3^{2}$ |
| $3^{3}$ | $4^{4}$ | $1^{3}$ | $2^{4}$ |

CROSSNUMBER

| 11 | 3 SUDOKU |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 4 | 3 | 2 | 1 |
|  | 1 | 2 | 3 | 4 |
| $\xrightarrow{\text { A }} \rightarrow 1$ | 2 | 1 | 4 | 3 |
| $\mathrm{B} \rightarrow 2$ | 3 | 4 | 1 | 2 |

5. MAP SUDOKU

| $\mathbf{D}$ | $\mathbf{C}$ | $\mathbf{B}$ | $\mathbf{A}$ |  |
| :--- | :---: | :---: | :---: | :---: |
| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ | $\mathbf{D}$ |  |
| $\mathbf{A} \rightarrow$ |  |  |  |  |
| $\mathrm{B} \rightarrow$ | B | $\mathbf{A}$ | $\mathbf{D}$ | $\mathbf{C}$ |
| C | O | $\mathbf{A}$ | B |  |

8. FLOWER

|  |  |  | 5 | 7 | 6 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\xrightarrow{\text { A }} \rightarrow$ | 8 | 7 | 6 | 5 | 2 | 4 | 3 |  |
|  | 5 | 3 | 7 | 4 | 9 | 8 | 2 |  |
|  | 2 | 8 | 3 | 6 | 5 | 7 | 1 |  |
|  | 3 | 4 | 9 | 2 | 8 | 6 | 7 | 1 |
| B $\rightarrow$ | 7 | 1 | 8 | 3 | 4 | 5 | 6 | 2 |
|  | 9 | 6 | 4 | 8 | 7 | 3 | 5 |  |
|  |  | 5 |  |  | 3 | 2 | 4 |  |
|  |  | 9 |  |  |  |  |  |  |
|  | 1 | 2 |  |  |  |  |  |  |
|  | 4 |  | 2 | 1 |  |  |  |  |
|  | 6 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

9. FENCES SUDOKU


A: 463125
B: 314256

