

## Puzzle Booklet

LMI November Sudoku Tes $\dagger$

## 

Fill the grid with digits from 1 to 9 , so that each digit occurs exactly once in every row, column and bolded $3 \times 3$ box.
$\Rightarrow \Rightarrow\left\langle\begin{array}{|l|l|l|l|l|l|l|l|l|}\hline & & & 4 & 5 & 6 & & & \\ \hline & & 3 & & & & 7 & & \\ \hline & & 2 & & & & 8 & & \\ \hline & & 1 & & & & 9 & & \\ \hline & & & 8 & 4 & 2 & & & \\ \hline & & & 1 & & 9 & & & \\ \hline & 5 & 9 & 2 & & 7 & 4 & 1 & \\ \hline 7 & & & & & & & & 5 \\ \hline 4 & & & & & & & & 6 \\ \hline\end{array}\right.$

CHASSMC

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Apply classic Sudoku rules.
The numbers 1,2 and 3 indicate criminals, and the numbers 8 and 9 indicate cops.
If two or more criminals share an edge, they form a syndicate. A single criminal, who is not in a syndicate, can't touch a cop horizontally or vertically.

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

Apply classic Sudoku rules.
The number given at the top left of each cage is the sum of all digits inside that cage. No digit is repeated inside a cage.



Apply classic Sudoku rules.
The number given at the top left of each cage is the sum of all digits in white cells plus DOUBLE of the sum of all digits in gray cells inside that cage. No digit is repeated inside a cage.


 are different. Moreover, digits in each cell of the shaded area are the same in both grids. In all other cells digits regions wrap around the grid from top to bottom and/or from left to right.


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Apply classic Sudoku rules.
If two same digits touch at a point, there is an $X$ mark at the point. All possible X marks are given.


Apply classic Sudoku rules.
The numbers 1,2 and 3 indicate criminals, and the numbers 8 and 9 indicate cops.
Each criminal has to share an edge with a cop.

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

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Apply classic Sudoku rules.
The numbers outside the grid provide the products of all digits in the indicated diagonal direction. Digits on those diagonals may be repeated.


## 8. $\operatorname{HTPM}$ 畧

## WITT

Apply classic Sudoku rules.
The numbers outside the grid provide the sums of all digits in the indicated diagonal direction. Digits on those diagonals may be repeated.
Each extra region must contain digits from 1 to 9.
The extra regions are of 9 cells each and are shaded with different colors in the grid.



|  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | --- $\vdots$ $\llcorner$ $\llcorner$ | ---- |  |  |  |
|  |  |  | $\begin{array}{\|r\|r\|} \hline--N \\ -N \\ 1 \\ \hline \end{array}$ |  | $\begin{array}{\|l\|l\|} \hline---- \\ 1 \\ 1 \\ L_{-} \\ \hline \end{array}$ | $\underline{-----1}$ |  |
|  |  |  |  |  |  | - |  |
|  |  | $\begin{array}{lll}1 & 1 \\ 1 & 1 \\ 1 & 1 \\ 1 & 1\end{array}$ |  |  |  | $1 \begin{array}{ll}1 & 1 \\ 1 & 1 \\ 1 & 1 \\ 1 & \\ 1\end{array}$ |  |
|  |  | $\left\|\begin{array}{rrr}1 & \\ 1 & \\ 1 \\ L_{-} & -\end{array}\right\|$ |  |  |  | $\|$1 1 <br> 1  <br> $L$  |  |
|  | $\square$ | $\square$ | $\qquad$ |  | $\square$ |  |  |
|  |  |  | $\left\lvert\, \begin{aligned} & \text {--- } \\ & 1 \\ & 1 \\ & \llcorner---\end{aligned}\right.$ |  |  |  |  |
|  | $\begin{array}{\|l\|} \hline \begin{array}{l} --- \\ 1 \\ 1 \\ L \\ \hline \end{array} \\ \hline \end{array}$ |  | $\square$ |  |  | $\square$ | $\square$ |

and outlined irregular region. Fill the grid with digits from 1 to 9 , so that each digit occurs exactly once in every row, column identical Two different grids are given-but the pattern of numbers entered in the left and right grids are inside that cage. No digit is repeated inside a cage. The number given at the top left of each cage is either the SUM or the PRODUCT of all digits


## 11. ©LUT (10PTT

Apply classic Sudoku rules.
Moreover, all inequalities must be respected.
The number in the shaded cell in the first $9 \times 3$ area is one of 1,2 and 3 and the following rule is applied in the cells with circles.
The number in the shaded cell in the second $9 \times 3$ area is one of 4,5 and 6 and the following rule is applied on the gray line.
The number in the shaded cell in the third $9 \times 3$ area is one of 7,8 and 9 and the following rule is applied in the cells with squares.
Also, an arithmetic sequence is a sequence of numbers such that the difference between the consecutive terms is constant. (ex: 1-3-5-7-9)


## 12. TM TCOMT M18PTM

Apply classic Sudoku rules.
Number in a grey cell is the sum of all digits inside the cage above. No digit is repeated inside a cage.
Moreover, all inequalities must be respected.


## 18. JAT

Apply classic Sudoku rules.
The numbers 1,2 and 3 indicate three types of criminals.
A cage(jail) can contain only one type of criminals. (It may contain no criminal.)
Every criminal should be in a jail.


## 14. PM M Oiv Bex

Apply classic Sudoku rules.
Additionally, four colored squares contain the digits from 1 to 9.
There are 12 pentomino pieces. For each pentomino, all numbers smaller than the given numbers inside it are given below. Moreover, pentomino pieces can NOT overlap given numbers in the grid and can NOT overlap each other but can touch each other. They can NOT be rotated or reflected. The borders of $3 \times 3$ boxes were not visible in the pentomino pieces.


WHMDOET

For example, 6 and 9 are given in a pentomino and 1 and 4 are listed below. Then, only known information about 14 is 'there can not be 2,3,5 in the pentomino'.
(1. can't say anything about 6, 7, 8 and 9
2. 1 and 4 appear at least once
3. don't know how many 1,4 are in there)


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