## $\rightarrow$ WPF SUDOKU/PUZZLE GRAND PRIX <br> 2014

# WPF suDOKUGP 2014 COMPETITION BOOKLET 

## ROUND 7

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Organised by

## 1 Classic Sudoku

(18 points)
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined $3 \times 3$ region.

Answer Key: Enter the $2^{\text {nd }}$ row of digits, followed by the $8^{\text {th }}$ row of digits.
$\left(1 A \rightarrow \begin{array}{|l|l|l|l|l|l|l|l|l|}\hline 5 & 9 & & & & & & 1 & 8 \\ \hline 8 & & & & 4 & & & & 9 \\ \hline & & 3 & & 7 & & 6 & & \\ \hline & & & 2 & & 7 & & & \\ \hline & 2 & 1 & & & & 5 & 3 & \\ \hline & & & 1 & & 3 & & & \\ \hline & & 9 & & 1 & & 8 & & \\ \hline 4 & & & & 8 & & & & 3 \\ \hline 3 & 5 & & & & & & 9 & 6 \\ \hline\end{array}\right.$

## 2 Classic Sudoku

(21 points)
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined $3 \times 3$ region.

Answer Key: Enter the $3^{\text {rd }}$ row of digits, followed by the $9^{\text {th }}$ row of digits.

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

## 3 Classic Sudoku

(24 points)
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined $3 \times 3$ region.

Answer Key: Enter the $2^{\text {nd }}$ row of digits, followed by the $5^{\text {th }}$ row of digits.

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

## 4 Classic Sudoku

(42 points)
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined $3 \times 3$ region.

Answer Key: Enter the $3^{\text {rd }}$ row of digits, followed by the $8^{\text {th }}$ row of digits.


## 5 Classic Sudoku

(57 points)
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined $3 \times 3$ region.

Answer Key: Enter the $3^{\text {rd }}$ row of digits, followed by the $9^{\text {th }}$ row of digits.

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

## 6 Irregular Sudoku

(24 points)
Apply Classic Sudoku rules. Additionally, instead of $3 \times 3$ regions, the regions have irregular shapes.

Answer Key: Enter the $2^{\text {nd }}$ row of digits, followed by the $6^{\text {th }}$ row of digits.

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

## 7 Anti-Knight Sudoku (39 points)

Apply Classic Sudoku rules. Additionally, no two identical digits can be a chess knight's move away from each other (as shown in the diagram).

|  | $x$ |  | $x$ |  |
| :---: | :---: | :---: | :---: | :---: |
| $x$ |  |  |  | $x$ |
|  |  | 1 |  |  |
| $x$ |  |  |  | $x$ |
|  | $x$ |  | $x$ |  |

Answer Key: Enter the $3^{\text {rd }}$ row of digits, followed by the $9^{\text {th }}$ row of digits.

## 8 Consecutive Sudoku (39 points)

Apply Classic Sudoku rules. Additionally, if a gray bar is given between two adjacent cells, then the two numbers in those cells must be consecutive. If a gray bar is not given, the two digits cannot be consecutive.

Answer Key: Enter the $6^{\text {th }}$ row of digits, followed by the $7^{\text {th }}$ row of digits.



## 9 Thermo-Sudoku (63 points)

Apply Classic Sudoku rules. Additionally, some thermometers are in the grid. Digits on a thermometer are strictly increasing from the round bulb.

Answer Key: Enter the $2^{\text {nd }}$ row of digits, followed by the $8^{\text {th }}$ row of digits.


## 10 Killer Sudoku

## (87 points)

Apply Classic Sudoku rules. Additionally, the sum of the digits in each cage must equal the value given in the upper-left corner of that cage. Digits cannot repeat inside a cage.

Answer Key: Enter the $5^{\text {th }}$ row of digits, followed by the $7^{\text {th }}$ row of digits.


## 11 Arrow Sequences Sudoku (33 points)

Apply Classic Sudoku rules. Additionally, there are circles and arrows in the grid. For a digit N in a circle, the digit $\mathrm{N}+1$ is at the end of the attached arrow. The digits along the arrow (not including the circle) must form a sequence of consecutive digits. (The digit in the circle can appear along the arrow itself.)

Answer Key: Enter the $2^{\text {nd }}$ row of digits, followed by the $6^{\text {th }}$ row of digits.

## 12 Palindrome Sudoku (42 points)

Apply Classic Sudoku rules. Additionally, the numbers formed by the digits on the gray lines are palindromes meaning they can be read equally in both directions.

Answer Key: Enter the $4^{\text {th }}$ row of digits, followed by the $8^{\text {th }}$ row of digits.


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


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

## 13 Repeated Neighbors Sudoku (54 points)

Apply Classic Sudoku rules. Additionally, all cells having the same digit(s) more than once as orthogonal neighbors are shaded. (If a cell is not shaded, it cannot have any digits repeated as orthogonal neighbors.)

Answer Key: Enter the $1^{\text {st }}$ row of digits, followed by the $7^{\text {th }}$ row of digits.


## 14 Point to Next Sudoku

 (57 points)Apply Classic Sudoku rules. Additionally, if a digit N is placed in a cell containing an arrow, then the digit $\mathrm{N}+1$ must be placed in a cell pointed at by the arrow.

Answer Key: Enter the $6^{\text {th }}$ row of digits, followed by the $7^{\text {th }}$ row of digits.


