UK Sudoku Championship 2011

INSTRUCTION BOOKLET

Saturday 11th – Sunday 12th June 2011

Competition Rules & General Information

REGISTRATION

To participate in the championship, you will need to register online at the UKPA forums – http://forums.ukpuzzles.org. During the registration process, you will be required to enter your real name, and your nationality.

PREPARATION

In order to participate in the championship, you will need access to a printer to print out the puzzle booklet. To solve the puzzles you will need a pen or a pencil, and possibly an eraser.

COMPETITION SCHEDULE

- The password protected puzzle booklet will be made available online at http://www.ukpuzzles.org on Friday 10th June. It is recommended that you download this pdf before you start the competition.

- The competition will start at **21:00 BST (20:00 GMT) on Friday 10th June**, when the password for the pdf will be made available. Upon retrieving the password, you will have **2 hours** to solve the puzzles, and submit your answers via the entry page. You will be able to submit answers until **03:00 BST (02:00 GMT) on Monday 13th June**; as such it is highly recommended that you retrieve the password and start solving before 01:00 BST (00:00 GMT).

- The results will be publicly announced at http://www.ukpuzzles.org on **Monday 13th June**. The highest scoring UK participant will be declared the UKPA UK Sudoku Champion!

ENTERING & SUBMITTING ANSWERS

To submit your answers, you will need to go to the answer entry page found at http://www.ukpuzzles.org. Here, for each puzzle, you will be required to enter the relevant answer keys into the form on the page. The answers keys are generally rows and/or columns of the completed puzzle. The answer keys are marked clearly in the puzzle booklet, and the form will also detail the relevant information. You should only enter digits in the answer keys; any delimiter characters will invalidate the answer, e.g. 123456 would be valid, but 1,2,3,4,5,6 or 1 2 3 4 5 6 would not.

Upon hitting the submit button, your answers will be sent to the server. You may submit answers as many times as you like, but only the last received keys will be subject to scoring.

Scoring & Bonuses

The puzzle types and the points attached to them are detailed below.

#1 – Skyscraper	3pts	#11 - Futoshiki	14pts
#2 - Calcudoku	6pts	#12 – Consecutive Sudoku	14pts
#3 - Consecutive Sudoku	7pts	#13 – Killer Sudoku	16pts
#4 - Kid Sudoku	8pts	#14 – Diagonally Non-Consecutive Sudoku	16pts
#5 - Classic Sudoku	8pts	#15 – Palindrome Sudoku	20pts
#6 - Classic Sudoku	8pts	#16 – Top Heavy Sudoku	20pts
#7 - Classic Sudoku	10pts	#17 – Frameless Sudoku	24pts
#8 - Classic Sudoku	10pts	#18 – Killer Sudoku	30pts
#9 – Five Pair Sudoku	10pts	#19 – No3 Consecutive Sudoku	30pts
#10 – No-Donkey Step Sudoku	12pts		
		Total:	**266pts**

Participants who submit error free entries to all of the puzzles before the allotted two hours are up will be awarded 2 points for each complete minute saved, as recorded by the last submission time to the server.

N.B. – although the points allocated to a particular puzzle are a general indication of its difficulty and the time expected to solve it, it is possible that your individual experience may vary greatly.

Puzzle Authors

We are indebted to the following authors for designing the puzzles used in this contest:

Deb Mohanty
Gareth Moore
Vladimir Portugalov
Rishi Puri
Puzzler Media Ltd
Rakesh Rai

We also thank Tom Collyer for one of the examples.

RESULTS

Results will be made available at http://www.ukpuzzles.org after the championship is finished.

CODE OF CONDUCT

All participants are expected to solve the puzzles honestly and fairly. You are not permitted to use any external solving aids of any form or receive assistance from any other individual.

The Championship organisers reserve the right to disqualify any participant judged to have acted with improper conduct.

Puzzle Examples

The remainder of this instruction booklet gives example puzzle types. The examples are credited to the appropriate authors, and all rights are reserved to the authors. Note that some of the puzzles in the competition may be by different authors.

#1 SKYSCRAPER

Place a digit from 1-6 in each cell such that each digit appears exactly once in each row and column. The digits outside the grid indicate the number of cells in that row/column that can be 'seen' from that point, where cells with higher values obscure all lower cells. For example, a '6' in the nearest cell obscures all other cells, so the digit outside would be '1'.

Example: *Solution:*

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#2 CALCUDOKU

Place a digit from 1-6 in each cell such that each digit appears exactly once in each row and column. Each bold-lined cage must result in the value at the top-left when the stated operation is applied between all digits in the cage. For subtraction and division start with the largest number in the cage. **Digits may repeat within a cage**.

Example: *Solution:*

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#3 AND #12 CONSECUTIVE SUDOKU

Place a digit from 1-6 (1-9 for #12) in each cell such that each digit appears exactly once in each row, column and marked 3×2 (3x3 for #12) box. A white bar between two cells indicates that the digits are consecutive. Where there is no white bar between two cells the digits are not consecutive.

Example: *Solution:*
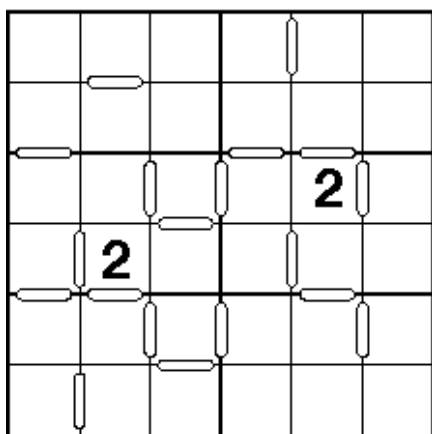
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#4 KID SUDOKU

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. The clues outside the grid have been provided by a kid who cannot count beyond 9, so each digit in the clue indicates the sum of (one or more) continuous digits in the row/column up to a maximum of 9. For example, if the digits in a row are 123456789, the clue will be 696789.

Example: *Solution:*

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#5-8 CLASSIC SUDOKU

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box.

Example:

9								
	7					6	1	
				4		9	7	
				6				
	9		7		5	8		
5	6	3		2				
	4		6					
		1	5	9			2	
6			8					3

Solution:

9	8	6	1	5	7	2	3	4
4	7	2	3	8	9	6	1	5
3	1	5	2	4	6	9	7	8
7	2	8	4	6	1	3	5	9
1	9	4	7	3	5	8	6	2
5	6	3	9	2	8	1	4	7
2	4	9	6	7	3	5	8	1
8	3	1	5	9	4	7	2	6
6	5	7	8	1	2	4	9	3

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#9 FIVE PAIR SUDOKU

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. Each 10-cell grey area should contain two identical sets of 5 digits. The two grey areas may contain different sets.

Example:

	1			8			7	
8			2		4			1
		6				4		
	3			2			5	
2			5		1			3
	5			6			2	
		1				5		
9			8		6			2
	8			3			4	

Solution:

4	1	3	6	8	9	2	7	5
8	9	5	2	7	4	6	3	1
7	2	6	3	1	5	4	9	8
6	3	4	7	2	8	1	5	9
2	7	9	5	4	1	8	6	3
1	5	8	9	6	3	7	2	4
3	6	1	4	9	2	5	8	7
9	4	7	8	5	6	3	1	2
5	8	2	1	3	7	9	4	6

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#10 NO-DONKEY STEP SUDOKU

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. A digit cannot repeat within two cells in a diagonal line.

Example:

					9			7
		7						6
				4				
	3	4						
	6						2	
					5	8		
			2					
2						1		
4		9						

Solution:

8	4	5	2	6	9	3	1	7
3	9	7	8	1	5	2	4	6
6	1	2	3	4	7	8	5	9
5	3	4	7	8	2	9	6	1
1	6	8	5	9	4	7	2	3
7	2	9	6	3	1	5	8	4
9	8	3	1	2	6	4	7	5
2	5	6	4	7	3	1	9	8
4	7	1	9	5	8	6	3	2

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#11 FUTOSHIKI

Place a digit from 1-6 in each cell such that each digit appears exactly once in each row and column. The digits must obey the inequalities between adjacent cells – the arrow always points to the smaller digit.

Example:

Solution:

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#13 AND #18 KILLER SUDOKU

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. Additional cages are marked with the total sum of the digits they contain. Digits may not repeat within cages.

Example:

Solution:

© Tom Collyer 2010

#14 DIAGONALLY NON-CONSECUTIVE SUDOKU

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. Diagonally adjacent cells cannot contain consecutive digits.

Example:

Solution:

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#15 PALINDROME SUDOKU

Place a digit from 0-9 in each cell such that each digit appears exactly once in each row, column and marked irregular, 10-cell region. The digits must also be placed with 180 degree symmetry around the centre.

Example:

		2							
								6	
5									4
	3					0	5		
1									
	0				9				
2			1						
				3					8

Solution:

8	4	2	6	0	3	5	1	7	9
3	5	7	4	1	2	9	8	6	0
7	9	0	3	5	6	1	4	8	2
5	1	6	2	9	8	7	3	0	4
6	3	9	8	7	4	0	5	2	1
1	2	5	0	4	7	8	9	3	6
4	0	3	7	8	9	2	6	1	5
2	8	4	1	6	5	3	0	9	7
0	6	8	9	2	1	4	7	5	3
9	7	1	5	3	0	6	2	4	8

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#16 TOP HEAVY SUDOKU

Place a digit from 1-6, or a blank in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. There will be 3 blanks in each row, column and 3x3 box. Wherever two vertically adjacent cells are occupied by digits, the top digit must always be greater than the bottom one.
When submitting your answer, enter 0 (zero) for each blank in the answer key.

Example: *Solution:*

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#17 FRAMELESS SUDOKU

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. Each number outside the grid represents the sum of the first X digits closest to the edge. X may be any amount of digits and may be different for each sum.

Example: *Solution:*

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#19 No3 Consecutive Sudoku

Place a digit from 1-9 in each cell such that each digit appears exactly once in each row, column and marked 3×3 box. No 3 adjacent cells in a row or column can contain a set of 3 consecutive digits, in any order (for example, '756' is not allowed).

Example:

1	3		7		6			4
								1
		4	2			3		
6						4		7
				7				
7		1						3
		2			7	1		
5								
3			4		5		7	9

Solution:

1	3	5	7	9	6	8	2	4
2	6	9	8	3	4	7	5	1
8	7	4	2	5	1	3	9	6
6	9	3	5	2	8	4	1	7
4	5	8	1	7	3	9	6	2
7	2	1	6	4	9	5	8	3
9	8	2	3	6	7	1	4	5
5	4	7	9	1	2	6	3	8
3	1	6	4	8	5	2	7	9