



UK Sudoku Championship 2014

&

World Sudoku Championship Qualification

2 hours

Friday 9th May - Monday 12th May

INSTRUCTION BOOKLET

Introduction. These are the instructions for the 2014 UK Sudoku Championship, hosted and organised by the UK Puzzle Association. This is an online Sudoku competition to be printed out and solved against the clock. Any questions related to these instructions should be raised and discussed in the competition discussion thread: <http://forum.ukpuzzles.org/viewtopic.php?f=5&t=1048>.

UK Sudoku Championship. Results of participants eligible for a British passport will be considered for the UK Sudoku Championship. The highest scoring British participant will be the UK Sudoku Champion for 2014. Additionally, the top two scoring participants will qualify to represent the UK team at the World Sudoku Championships in London. For more information on the qualifying process, see [CHANGELINK](#).

International participation is warmly welcomed.

Registration. To participate in the championship, you will need to be registered online at the UKPA forums if you haven't already done so: <http://forum.ukpuzzles.org/ucp.php?mode=register>. During the registration process, you will be required to enter your real name and your nationality.

Schedule. Shortly before the championship starts, the password protected PDF file will be made available at <http://www.ukpuzzles.org/contests.php?contestid=34>. It is recommended you download the PDF before you retrieve the password.

The championship will start at **12:00 BST (GMT+1), Friday 9th May 2014**, 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 not be able to submit any answers after your two hours are up. The championship will end at **23:55 BST (GMT+1), Monday 12th May**; as such it is highly recommended that you retrieve the password and start solving before **21:55 BST (GMT+1), Monday 12th May**.

Answer Entry & Submission. To submit your answers, you will need to go to the answer submission page: <http://www.ukpuzzles.org/answers.php?contestid=34>. This is a form with entries corresponding to each puzzle. In each puzzle there are two rows and/or columns indicated by arrows labelled "A" and "B". The answer key is given by the contents of A, then the contents of B, separated by a comma with no spaces. Rows should be read from left to right, and columns from top to bottom.

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

The correct key for this solved puzzle is: **724156398,786145329**.

Participation is anticipated to be very high and appeals will only be upheld in exceptional circumstances. Therefore it is **VERY IMPORTANT** that you check that each answer key submitted is correct. 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.

Urgent matters arising during the contest should be directed towards chairman@ukpuzzles.org. In the event of the web hosting service failing during your participation, e-mail your answer keys before your 2 hours is completed. Answers submitted this way will only be accepted if a hosting failure, or equivalent, has occurred.

Scoring and Bonuses. Points for successfully solved puzzles will be awarded according to the following table.

Puzzle	Points	Puzzle	Points
Linked 6×6 Sudoku	18	Killer Sudoku	66
Classic Sudoku	20	Windoku Sudoku	40
Deficit Sudoku	14	Palindrome Sudoku	63
Surplus Sudoku	19	Thermo Sudoku	66
Odd-Even-Big-Small Sudoku	27	XV Sudoku	79
Irregular Sudoku	57	Odd Sudoku	39
Consecutive Sudoku	45	Classic Sudoku	65
Diagonal Sudoku	42	Arrow Sudoku	60
		TOTAL:	720

Participants who submit error free entries to all of the puzzles before the allotted 2 hours are up will be awarded **6 points** for each minute saved, as recorded by the last submission time to the server. Late submissions will not be accepted, so it is recommended that answers are submitted as you solve, rather than waiting until time is running out.

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.

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.

It is strictly forbidden to discuss any details of the championship puzzles, or make their contents known to others via any medium whilst the contest is live.

The championship organisers reserve the right to disqualify any participant judged to have acted with improper conduct. The decisions made by the organisers are final.

Acknowledgements. The championship has been organised, coordinated and authored by Tom Collyer. Example puzzles have been provided by Tom Collyer and Gareth Moore. We thank Hns Eendebak, Zuzana Hromcova, Rajesh Kumar, Yuhei Kusui, Bram de Laat and Prasanna Seshadri for helping to test the puzzles.

Rules and Example Puzzles

N.B. The example puzzles are a true reflection in quantity, grid dimension and format of the corresponding competition puzzles. The competition puzzles will appear at a significantly larger size - one per page. The difficulty of an example puzzle may not be reflective of the difficulty of the corresponding competition puzzle.

It is recommended that both example and competition puzzles are printed from a PDF viewer, and not directly from a web browser.

1. Linked 6×6 Sudoku

18 points

Rules: In each grid, place a number from 1-6 in each empty cell such that each row, column and marked 3×2 box contains each number exactly once. The number placed in a cell in the left grid must be different from the number placed in the corresponding cell in the right grid.

			4		
		6		2	
	1				5
3				1	
	6		2		
		4			

				6	1
			2		4
		4		2	
	2		3		
2		6			
5	4				

1	2	3	4	5	6
4	5	6	1	2	3
6	1	2	3	4	5
3	4	5	6	1	2
5	6	1	2	3	4
2	3	4	5	6	1

4	3	2	5	6	1
1	6	5	2	3	4
3	5	4	1	2	6
6	2	1	3	4	5
2	1	6	4	5	3
5	4	3	6	1	2

2. Classic Sudoku

20 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once.

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

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

3. Deficit Sudoku

14 points

Rules: Place a number from 1-7 in each empty cell in the grid such that each row and column contains each number exactly once, and each marked 6-cell region contains each number at most once.

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

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

4. Surplus Sudoku

19 points

Rules: Place a number from 1-7 in each empty cell in the grid such that each row and column contains each number exactly once, and each marked 8-cell region contains each number at least once.

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

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

5. Odd-Even-Big-Small Sudoku

27 points

Rules: Place a number from 1-8 in each empty cell in the grid such that each row, column and marked 8-cell box contains each number exactly once. The clues outside the grid indicate that the first two cells in the corresponding direction must contain numbers matching the description.

Odd = {1, 3, 5, 7}; Even = {2, 4, 6, 8}; Big = {5, 6, 7, 8}; Small = {1, 2, 3, 4}.

			大 big	奇 odd	偶 even	小 small	
	1			8			
小 small		2					
			3				小 small
偶 even				4			
					5		大 big
		7				6	
	偶 even	小 small		奇 odd	小 small		

			大 big	奇 odd	偶 even	小 small			
2	8	3	7	5	6	4	1		
5	1	4	6	7	8	2	3		
小 small	1	4	2	8	6	3	7	5	
	7	5	6	3	8	4	1	2	小 small
偶 even	8	6	5	2	4	1	3	7	
	3	7	1	4	2	5	8	6	大 big
	4	3	7	5	1	2	6	8	
	6	2	8	1	3	7	5	4	
	偶 even	小 small		奇 odd	小 small				

6. Irregular Sudoku

57 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 9-cell region contains each number exactly once.

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

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

7. Consecutive Sudoku

45 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once. Adjacent cells containing consecutive numbers are marked. Adjacent cells with no marking must not contain consecutive numbers.

7								
			3					8
							2	
	2							
8			9					
								7

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

8. Diagonal Sudoku

42 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once. Each marked diagonal must also contain each number from 1-9 exactly once.

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

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

9. Killer Sudoku

66 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once. The numbers placed in each marked cage must sum to the total given in its top-left. Numbers must not repeat in cages.

20		9		17	9		20	
		22	16		27	18		
8								11
				15				
12						22		
8	30				17			11
	11			19		16		
24								17
		16			10			

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

10. Windoku

40 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once. Each of the four shaded 3×3 regions must also contain each number from 1-9 exactly once.

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

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

11. Palindrome Sudoku

63 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once. Numbers placed along marked lines must form a palindromic sequence, e.g. 1234321.

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

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

12. Thermo Sudoku

66 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once. Starting at the "bulb," numbers placed along each marked thermometer must form a strictly increasing sequence.

	2					4		
			5					
			1					
	9					5		

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

13. XV Sudoku

79 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each number exactly once. Adjacent cells containing numbers summing to 5 are marked with a "V"; adjacent cells containing numbers summing to 10 are marked with an "X". Adjacent cells with no marking must not contain numbers summing to 5 or 10.

x	3		1	x	x		v	
v		x	2			x		x
v	2		9					
		x		v				
v					2	x	9	
		v	x	x	9		8	x
		v				x	3	x
			v			v		

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

14. Odd Sudoku

39 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3x3 box contains each number exactly once. Numbers placed in shaded cells must be odd.

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

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

15. Classic Sudoku

65 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once.

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

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

16. Arrow Sudoku

60 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each row, column and marked 3×3 box contains each number exactly once. The number placed in a cell with a circle must be the sum of the numbers placed in cells the adjoining arrow passes through. Numbers may repeat on arrows.

	○	→	7	←	○			
4	↖	8	6	↗	↗			
7	↖		○	↗	8	↓		
1	2	○	○	○	9	7		
	↑	9	○	○	↘	5		
	↑	↖	3	8	↘	6		
	○	→	4	←	○			

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