



World Sudoku Championship 2014 Instruction Booklet

MONDAY 11th AUGUST

Round 1	20m	09:00-09:20	200 points
Round 2	45m	09:30-10:15	575 points
Round 3	45m	10:35-11:20	510 points
Round 4	45m	11:40-12:25	560 points

LUNCH

Round 5	45m	14:30-15:15	555 points
Round 6	45m	15:35-16:20	525 points
Round 7 (TEAM)	30m	16:50-17:20	
Round 8 (TEAM)	30m	17:30-18:00	

TUESDAY 12th AUGUST

Round 9	90m	09:30-11:00	940 points
Round 10	20m	11:20-11:40	100 points
Round 11 (TEAM)	45m	12:10-12:55	

LUNCH

Round 12 Individual Play-off	15:00		
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Introduction. These are the instructions for the 2014 World Sudoku Championship, hosted and organised by the UK Puzzle Association. Any questions related to these instructions should be raised and discussed in the competition discussion thread: <http://forum.ukpuzzles.org/viewforum.php?f=24>.

Scoring and Bonus

Points will be awarded only for 100% correctly solved puzzles. There will be no partial credit.

Individual Rounds. A bonus of 10 points for each full minute remaining will apply to any competitor who correctly solves every puzzle in a round. At the judge's discretion, $0.75\times$ bonus will be awarded in the case of a single minor mistake: at most two incorrectly placed numbers in at most one puzzle.

Team Rounds. A bonus of 40 points for each full minute remaining will apply to any team who correctly solves every puzzle in a round. If there are any mistakes, no bonus will be awarded.

Competition Hall Rules

1.1. Each competitor must sit at their pre-allocated desk to take part in individual rounds. Teams must work at their pre-allocated desks/areas for team rounds.

1.2. Competitors should ensure that they are at their desk ready for the start of each round. Late arrivals may not be permitted to enter the competition hall to take part in a round (at the discretion of the organisers).

1.3. Prior to the start of each round competitors should clearly write their name, team and reference number on the front of their competition booklet. If this information is not completed the organisers reserve the right not to award any points to that competitor for that round. Competitors must not open their booklet.

1.4. Once the signal to start a round is given competitors may open their booklet and begin solving the puzzles.

1.5. During each individual round competitors must remain silent, unless declaring completion of a round.

1.6. During team rounds team members may talk amongst themselves, but should do this with respect to other teams that may be near them.

1.7. If declaring a round complete, close your booklet, clearly state 'finished' and raise your arm. Keep your arm raised until your paper has been collected.

1.8. Competitors that complete a round with more than five minutes left will be allowed to quietly leave the competition hall.

1.9. Competitors that complete a round with five minutes or less left will not be allowed to leave their desk so as not to cause unnecessary disruption to fellow competitors.

1.10. If any competitor needs to leave the competition hall prior to the end of a round, they will not be allowed to take any further part in that round.

1.11. Once the signal to finish a round is given, competitors must immediately stop solving, close their booklet and put their pen/pencil down and be ready to hand their booklet in for marking.

1.12. At the end of a round you must remain seated until all puzzle booklets have been collected. You will be told when you can get up and leave.

1.13. Mobile phones are not permitted to be used in the competition hall and must be turned off.

1.14. Only team captains and official observers will be allowed access to the competition hall whilst either individual or team rounds are taking place. Other non-competing people must stay outside the competition hall at all times as there is no space for spectators.

1.15. Competitors may not use cameras or other recording devices during rounds. Only official observers may do so, at the discretion of the organisers. They must respect the competitors and not use flash photography or cameras with excessive sounds.

1.16. If you believe that there is a problem with any puzzle, leave that puzzle and continue with another. This will be investigated upon completion of the round.

1.17. Puzzles can be completed in any order. The points value of a puzzle is an indication of its anticipated difficulty, although your solving experience may differ.

1.18. The boxed area at the bottom of each puzzle booklet page is reserved for markers' notes - do not write in this area.

Permitted Items

2.1. Unless specifically stated for any round permitted items which may be taken into the competition hall and used are: Pens, pencils, erasers, rulers, instruction booklets (optionally annotated with notes regarding puzzle instructions and preparation notes) and blank paper. Drinks and snacks will also be allowed so long as they don't disturb other competitors (e.g. rustling a crisp packet, or a very strong smell).

2.2. It is strictly forbidden to use electronic devices such as music players and headphones of any type or any type of calculator. Use of such equipment may lead to the competitor being disqualified from the competition.

2.3. Any other items brought into the hall must be left in a bag on the floor under your desk, so as not to block the aisles.

Marking and Queries

3.1. Once a round has been fully marked booklets will be returned to team captains at a specified location.

3.2. In the event of any query once a booklet has been marked and returned to a competitor then the query must be raised through the captain with the organisers. The booklet should be left with the organisers for investigation.

3.3. Some puzzles may be photographed during the marking phase to confirm that no subsequent alteration has been made to the puzzle.

3.4. Team captains are responsible for ensuring that any information given to them relating to the competition is effectively relayed to their team.

3.5. The decision of the tournament director is final.

Breach of Rules

4.1. Any breach of these rules may lead to a competitor or team being disqualified from the competition.

Play-offs

Overview. The top 10 competitors from the individual competition will qualify for the play-offs. This is broken down into three rounds. The format of each round is a set of well-known Sudoku variants, to be solved in a fixed order. See the examples later for details of the puzzles.

The first round features competitors 7-10, with staggered starts determined by points differences. See below for details.

The winner of the first round (A) will progress into the second round, along with competitors 4-6. A will have a staggered start as determined by 7th place.

Similarly, the winner of the second round (B) will progress into the third and final round, with competitors 1-3. B will have a staggered start as determined by position 4th place. This round will determine the podium places for the 2014 World Sudoku Championship.

Staggered starts. Let S_1, S_2, \dots, S_{10} be the points scores of the top 10 competitors. Define

$$B = \frac{600}{S_1 - S_{10}}.$$

The staggered start, in seconds, for competitor i in the first round is: $B(S_7 - S_i)$.

The staggered start, in seconds, for competitor i in the second round is: $B(S_4 - S_i)$.

The staggered start, in seconds, for competitor i in the third round is: $B(S_1 - S_i)$.

Solving and submission. When a competitor completes a puzzle, they must raise their hand to indicate to a judge to enter the submission period.

The entire grid will then be judged over the next minute. After one minute, if the puzzle is correct, the judge will allow the competitor to begin the next puzzle. If the puzzle is incorrect, the judge will return the incorrect puzzle to the competitor with one incorrectly placed number indicated. The competitor can resubmit a returned sudoku at any time, and will again enter the submission period.

Puzzle Rules and Examples

Important. The example puzzles are a true reflection in quantity, grid dimension and format of the corresponding competition puzzles wherever possible. Some irregularly shaped grids may have different geometric layouts. The competition puzzles will appear at a significantly larger size - one per page. The difficulty of an example puzzle is not necessarily reflective of the difficulty of the corresponding competition puzzle.

Puzzle Credits. Authors will remain anonymous individually until the solutions are distributed. The organisers would like to collectively thank Shinichi Aoki, Tom Collyer, Yousuke Imai, Noaki Inaba, Masahiro Kaneko, Masatoshi Kengo, David Millar, James McGowan, Gareth Moore, Tetsuya Nishio, Ko Okamoto, Puzzler Media, Minako Sakai, Richard Stolk, Trevor Truran and the World Puzzle Federation for the example and competition puzzles.

Round 1

Monday 11th August 2014, 09:00 - 09:20

20 minutes - 200 total points

Classic Sudoku (×10)

15 - 25 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

Round 2

Monday 11th August 2014, 09:30 - 10:15

45 minutes - 575 total points

Surplus Sudoku

40 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

Deficit Sudoku

15 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

Irregular Sudoku

45 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

Diagonal 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. 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

Windoku

50 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

Odd Sudoku

55 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 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

Non-Consecutive 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. Numbers placed in adjacent cells must not be consecutive.

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

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

Killer 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. 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			

20	6	3	9	2	7	9	9	8	1	20	5	4
	4	7	8		1	6	2	5	3		9	2
8	1	9	5	3	2	4	7	8		1	6	
	7	2	4	6	3	9	8	1	5			
12	8	1	3	4	5	2		22	6	7	9	
8	5	30	6	9	8	1	17	7	2	4	1	3
	3	11	4	6	5	7	1	16	9	2	8	
24	9	8	1	2	4	3	5		17	6	7	
	2	5	16	7	9	8	16	6	4	3	1	

Thermo Sudoku

50 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	

Arrow Sudoku

50 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

Classic Sudoku (×2)

2× 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.

Round 3

Monday 11th August 2014, 10:35 - 11:20

45 minutes - 510 total points

Odd-Even-Big-Small Sudoku

40 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}.

	1				8		
		2					
			3				
				4			
					5		
		7				6	

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

X-Sums Sudoku

75 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 clues outside the grid indicate the sum of the first X numbers placed in the corresponding direction, where X is equal to the first number placed in that direction.

	1	10	18	15	20	33	35	36	45	
1										45
34										21
22										6
45										36
33										15
12										3
38										28
35										10
5										1
	7	18	17	30	30	36	38	45	1	

	1	10	18	15	20	33	35	36	45	
1	1	2	3	4	5	6	7	8	9	45
34	7	8	9	1	2	3	4	5	6	21
22	4	5	6	7	8	9	1	2	3	6
45	9	1	2	3	4	5	6	7	8	36
33	6	7	8	9	1	2	3	4	5	15
12	3	4	5	6	7	8	9	1	2	3
38	8	9	1	2	3	4	5	6	7	28
35	5	6	7	8	9	1	2	3	4	10
5	2	3	4	5	6	7	8	9	1	1
	7	18	17	30	30	36	38	45	1	

Outside Sudoku

50 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 outside the grid must appear within the first three cells in the corresponding direction.

Clues: 9 4, 8 2, 7 5 2, 3 8, 6 8, 2 4 9, 2 7, 8, 7, 4 1 5 1 3 4 5 6

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

Clues: 9 4, 8 2, 7 5 2, 3 8, 6 8, 2 4 9, 2 7, 8, 7, 4 1 5 1 3 4 5 6

Next to 9 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. The clues outside the grid indicate the numbers to be placed in the cells before and after the cell containing 9 in the corresponding direction.

Clues: 7 8, 2 3, 1 5, 1 5, 6 8, 5, 1 8, 5 7, 5, 4 3 3 1 1 1 2 7 6 5 8 4 3 8 4 6

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

Clues: 7 8, 2 3, 1 5, 1 5, 6 8, 5, 1 8, 5 7, 5, 4 3 3 1 1 1 2 7 6 5 8 4 3 8 4 6

90 points

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

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

75 points

	18	21			19	17		23
	7			9				5
			9					3
18		8					7	
	3					4		
23					1			
18				2				1
21			8					5
		6					2	
20	9					2		3

	18	21		19	17		23		
	7	3	1	9	2	8	4	6	5
	6	2	9	7	4	5	1	3	8
18	5	8	4	1	6	3	7	2	9
	3	1	2	5	9	4	8	7	6
23	8	9	6	3	1	7	5	4	2
18	4	5	7	2	8	6	3	9	1
21	2	7	8	6	3	1	9	5	4
	1	6	3	4	5	9	2	8	7
20	9	4	5	8	7	2	6	1	3

Even Sandwich Sudoku

75 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 clues outside the grid indicate all numbers in the corresponding direction whose two neighbouring cells in that direction both contain even numbers.

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

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

Classic Sudoku (×2)

2× 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.

Round 4

Monday 11th August 2014, 11:40 - 12:25

45 minutes - 560 total points

Consecutive 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. 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

Non-Consecutive 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. Numbers placed in adjacent cells must not be consecutive.

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

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

No Nines Sudoku

50 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 in adjacent cells must not sum to 9.

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

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

Odd/Even Count Sudoku

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. An even number placed in a cell with a circle indicates the number of even numbers placed in the surrounding 8 cells. An odd number placed in a cell with a circle indicates the number of odd numbers placed in the surrounding cells. Numbers placed in cells without a circle may have either of these properties.

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

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

Consecutive Sequences Sudoku

70 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 sequences must form an arithmetic progression whose common difference is 1.

	2							
								7
				8				
			1	2	9			
				7				
3								
								8

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

95 points

A 10x10 grid with letters and arrows. The letters are: Row 1: A, V, V, V, V, V, V, V, V, V; Row 2: A, V, V, V, V, V, V, V, V, V; Row 3: A, V, V, V, V, V, V, V, V, V; Row 4: A, V, V, V, V, V, V, V, V, V; Row 5: A, V, V, V, V, V, V, V, V, V; Row 6: A, V, V, V, V, V, V, V, V, V; Row 7: A, V, V, V, V, V, V, V, V, V; Row 8: A, V, V, V, V, V, V, V, V, V; Row 9: A, V, V, V, V, V, V, V, V, V; Row 10: A, V, V, V, V, V, V, V, V, V. Arrows are placed in the grid cells, pointing in various directions (up, down, left, right, and diagonally).

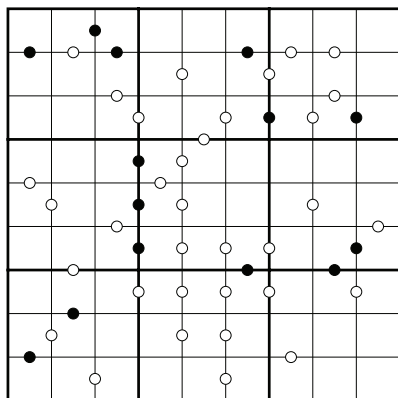
65 points

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

15

Kropki Sudoku**75 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 with a white dot. Adjacent cells containing numbers whose ratio is 2 are marked with a black dot. Adjacent cells with no marking must not contain numbers that are neither consecutive nor whose ratio is 2. Adjacent cells containing 1 and 2 can be marked by a dot of either colour.



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

Classic Sudoku ($\times 2$) **2×20 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.

Round 5

Monday 11th August 2014, 14:30 - 15:15

45 minutes - 555 total points

Killer Sudoku

95 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			

20	6	3	9	2	7	9	9	8	1	20	5	4
	4	7	8	1	6	5	3	9	2			
8	1	9	5	3	2	4	7	8	1	6		
	7	2	4	6	3	9	8	1	5			
12	8	1	3	4	5	2	6	7	9			
8	5	6	9	8	1	7	2	4	3			
	3	4	6	5	7	1	9	2	8			
24	9	8	1	2	4	3	5	6	7			
	2	5	7	9	8	6	4	3	1			

Arrow 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. 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

Star Product Sudoku

50 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 clues outside the grid indicate the product of the numbers to be placed in cells containing stars.

16	24	60	168	63	54	240	30	20	
*			*						18
	*	*	*						28
	*		*			*			240
	*	*	*						60
*				*				*	32
					*	*	*		90
		*		*		*			54
				*	*	*			48
				*				*	35

16	24	60	168	63	54	240	30	20	
2	7	6	5	9	4	1	8	3	18
5	1	4	7	3	8	9	6	2	28
3	8	9	6	2	1	5	4	7	240
9	3	5	4	6	7	2	1	8	60
8	6	2	9	1	5	3	7	4	32
7	4	1	2	8	3	6	5	9	90
6	5	3	8	4	9	7	2	1	54
4	9	7	1	5	2	8	3	6	48
1	2	8	3	7	6	4	9	5	35

Little Killer Sudoku

70 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 clues outside the grid indicate the sum of the numbers contained in the cells in the direction of the corresponding arrow.

Equality Sudoku

75 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. Rows and columns must satisfy the given equations of 3 digit numbers when read from left-to-right or from top to bottom.

	7	
2		
		8

 $+$

	4	

 $=$

	8	
		7
3		

	4	

 $=$

	1	
7	9	3
	6	

 $+$

	2	

		2
8		
	3	

 $=$

	2	

 $+$

4		
		9
	5	

4	7	3
2	1	9
6	5	8

 $+$

2	5	6
3	4	8
9	7	1

 $=$

9	8	1
5	6	7
3	4	2

9	2	5
1	4	6
3	8	7

 $=$

8	1	4
7	9	3
5	6	2

 $+$

6	7	3
8	2	5
1	9	4

5	9	2
8	6	4
7	3	1

 $=$

6	3	7
1	2	5
4	8	9

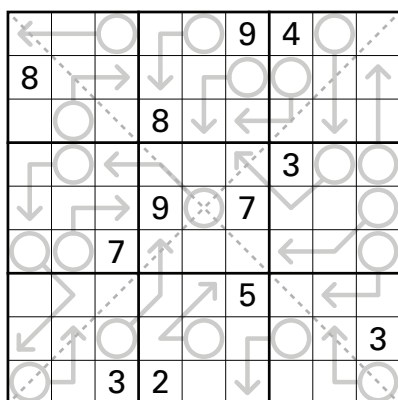
 $+$

4	1	8
7	3	9
2	5	6

Diagonal-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. Each marked diagonal must also contain each number from 1-9 exactly once.



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

Killer Sudoku Pro

120 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 add, subtract, multiply or divide to give the total given in its top-left. In the case of subtraction or division, the operation is applied successively to all numbers in the cage, starting with the largest number. Numbers must not repeat in cages.

35	0			4	10		1	
	6	24				27		84
48			15	5		6		
	18	6		24	3			
						72	1	
216		42			15			3
	2		2			5	2	
	14		1		126			45
2		9						

35	0	1	9	3	2	10	6	4	1	7	8
	6	24		5	1	8	27		84		6
48			15	5		6					
	18	6		24	3						
						72	1				
216		42			15						3
	2		2			5	2				
	14		1		126						45
2		9									

Classic Sudoku (×2)

2× 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.

Round 6

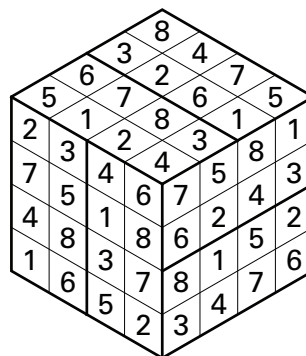
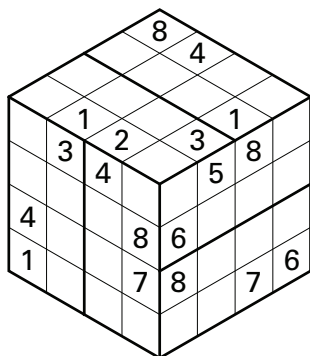
Monday 11th August 2014, 15:35 - 16:20

45 minutes - 525 total points

Isometric Sudoku

30 points

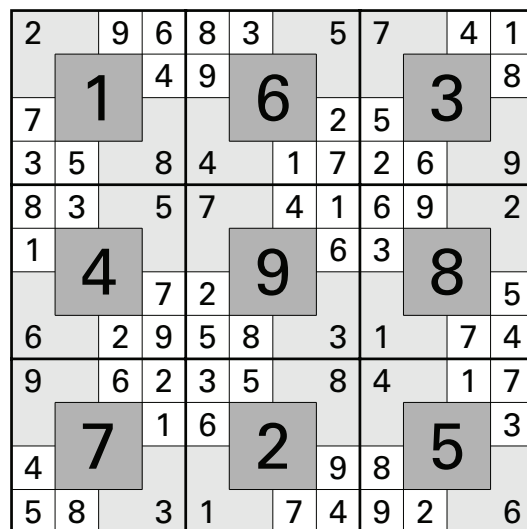
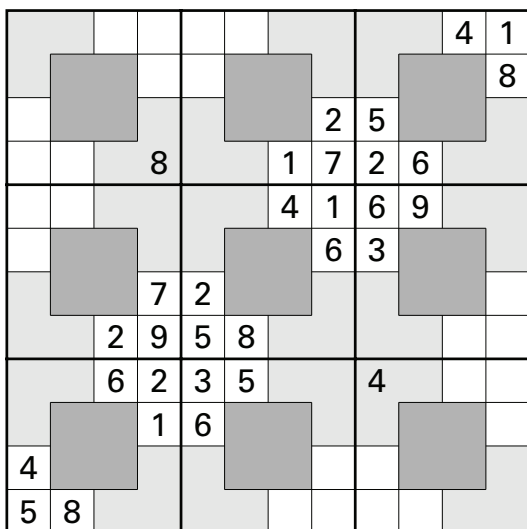
Rules: Place a number from 1-8 in each empty cell in the grid such that each generalised row, and marked 8-cell region contains each number exactly once. Note that generalised rows pass through parallel edges of adjacent cells.



Parquet Sudoku

75 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. Note that some cells are contained in multiple rows and/or columns.



Irregular Sudoku

40 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

Hex Sudoku

140 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each generalised row and marked 3×3 region contains each number at most once. Note that generalised rows pass through parallel edges of adjacent cells in three possible directions.

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

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

Sudokurve

85 points

Rules: Place a number from 1-9 in each empty cell in the grid such that each generalised row, and marked 3×3 box contains each number exactly once. Generalised rows are indicated by curved lines in the grid.

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

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

Toroidal Sudoku

75 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. Some marked regions wrap across the grid from left to right and/or from top to bottom.

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

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

Ten Box Sudoku

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. Some marked regions wrap across the grid from left to right and/or from top to bottom. No number should be placed in blackened cells.

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

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

Classic Sudoku (×2)

2× 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.

Round 7 - Team

Monday 11th August 2014, 16:50 - 17:20

30 minutes - 2880 total points

Rotation Sudoku (×6)

480 × 6 points

Rules: For this round, teams will not be permitted to use their own pens or pencils. Instead, teams will be handed out black, blue, green and red pens.

The puzzles for this round will be classic sudoku, with the grid split into 4 coloured regions. Each team member is only allowed to write numbers with their coloured pen in the correspondingly coloured region. Team members are not permitted to write in a differently coloured region. At the judges discretion, a team will score half, or even zero points for a particular puzzle if a mark of the wrong colour is in the wrong region.

Notes of any colour are not permitted to be made outside the grid.

Initially, four puzzles will be on the tables for teams to solve. After 90 seconds, a signal to rotate the puzzles clockwise will be announced. Failure to immediately rotate the puzzles may incur penalty points and/or disqualification, at the judge's discretion. There are a further two puzzles that will be circulated when a team wishes to submit a completed puzzle.

Each completed puzzle is worth 480 points. A correctly completed coloured region in a partially completed grid is worth 75 points.

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

Round 8 - Team

Monday 11th August 2014, 17:30 - 18:00

30 minutes - 1600 total points

Strip Sudoku (×4)

400 ×4 points

Rules: This round is a manipulative round. Each puzzle comes as a series of horizontal and vertical bands, to be placed on top of each other to give a solved sudoku grid. The bands must alternate, so that a horizontal band is placed on top of a vertical band, and a vertical band is placed on top of a horizontal band.

A blank grid is supplied to aid with solving, however all that is required to solve the puzzle is the order in which the bands are placed.

One puzzle will be on the table at any one time. When a team submits an answer to one puzzles, judges will then supply the team with the next puzzle to solve. The puzzles will be graded after the round is over. There are a total of 4 possible puzzles to complete.

A	B	C	D	E	F
3	5	3	6	5	2
5	4	1	3	2	6
1	2	6	5	4	3
4	3	4	4	1	1
6	1	5	2	3	5
2	5	2	1	6	4

G	2	6	3	4	2	1
H	5	2	1	3	4	6
I	4	2	3	5	1	6
J	3	4	5	6	1	2
K	5	1	4	2	3	6
L	3	6	2	1	5	4

	A	B	C	D	E	F
G						
H						
I						
J						
K						
L						

	A	B	C	D	E	F
G	2	6	3	4	5	1
H	5	4	1	3	2	6
I	1	2	6	5	4	3
J	4	3	5	6	1	2
K	6	1	4	2	3	5
L	3	5	2	1	6	4

The solution to this example is:

J C L D H F K A M B G E

Round 9

Tuesday 12th August 2014, 09:30 - 11:00

90 minutes - 940 total points

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

Diagonal Sudoku

50 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

Anti-Knight Sudoku

75 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 in cells related by a chess Knight's move must be different.

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

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

Palindrome Sudoku

50 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

Renban Groups Sudoku

70 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 shaded region must form a consecutive, non-repeating set.

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

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

Anti-Diagonal 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. Each marked diagonal must contain exactly three different numbers.

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

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

Search 9 Sudoku

50 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. Some arrows are marked in the grid. If a number n is placed in a cell containing an arrow, then a 9 must be placed in the n th cell in the corresponding direction.

			↓	↓				4
		↓				←		
	→	4				6	↓	
→			4					↑
				3				
→					1			←
	→	8				1	←	
		→				↑		
1			↑	↑				

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

Consecutive Circles 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. Numbers placed along marked circles must form an arithmetic progression whose common difference is 1.

		2						
			7					2
	9							
							6	
3					8			
						7		

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

Cylindrical Sudoku

75 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. Some marked regions wrap across the grid from top to bottom.

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

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

Between Sudoku

50 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 values of the numbers placed along marked lines must be strictly between the two numbers placed in the corresponding circles.

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

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

Clone Sudoku

35 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. In each shaded region of the same shape, the numbers placed in corresponding cells of the regions must be the same.

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

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

Eliminate Sudoku

90 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 in cells with arrows must not repeat in the corresponding direction.

			1	2	3
				3	4
		4			5

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

Hex Sudoku

100 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. Place a number from 1-9 in each empty cell in the grid such that each generalised row and marked 3×3 region contains each number at most once. Note that generalised rows pass through parallel edges of adjacent cells in three possible directions.

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

Quad Max Difference Sudoku

70 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 clues marked at the intersection of a 2×2 block of cells indicate the maximum difference between numbers placed in these blocks. This difference must be realised.

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

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

No Touch Sudoku**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. Numbers placed in cells that meet diagonally at a point must be different.

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

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

Classic Sudoku (×2)**2× 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.

Round 10

Tuesday 12th August 2014, 11:20 - 11:40

20 minutes - 100 total points

N.B. a partial score of 40 points will be awarded for correctly solving exactly one of the two overlapping grids.

Overlapping Scattered Sudoku

100 points

Rules: Place a number from 1-9 in each empty cell in the two overlapping grids such that each row, column and marked 9-cell region contains each number exactly once. The 9 shaded cells should collectively be viewed as a 9-cell region.

[illegible]

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

Round 11 - Team

Tuesday 12th August 2014, 12:10 - 12:55

45 minutes - 3000 total points

Linked Sudoku

5 × 600 points

Rules: For this round, Teams will be given 5 different puzzles to solve. Each puzzle is very difficult, but uniquely solvable in isolation from the other 4 puzzles.

Across the 5 grids, there will be 20 pairs of marked cells, labelled with letters A, B, ... ,T. The same number must be placed in each of these cells, and the links will make the 5 puzzles easier to solve.

The puzzles to solve in this round are:

Killer Sudoku Pro. 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 add, subtract, multiply or divide to give the total given in its top-left. In the case of subtraction or division, the operation is applied successively to all numbers in the cage, starting with the largest number. Numbers must not repeat in cages.

35	0			4	10		1	
	6	24				27		84
48			15	5		6		
	18	6		24	3			
					72	1		
216		42			15			3
	2		2			5	2	
	14		1		126			45
2		9						

35	0	1	9	3	2	6	4	7	8
7	2	4	5	1	8	3	9	6	
48	8	3	6	7	9	4	1	5	2
6	9	3	8	4	2	5	1	7	
4	5	2	1	7	9	8	6	3	
21	1	8	7	6	3	5	9	2	4
9	2	7	5	4	6	3	2	8	1
3	6	8	2	5	1	7	4	9	
2	4	1	9	8	7	6	3	5	

Diagonally Non-Consecutive Sudoku. 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 in cells that meet diagonally at a point must not be consecutive.

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

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

Toroidal Sudoku. 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. Some marked regions wrap across the grid from left to right and/or from top to bottom.

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

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

Sum Skyscrapers Sudoku. 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 number represents the height of a building. The clues outside the grid indicate the sum of buildings visible from the corresponding direction. A taller building will hide any shorter buildings behind it.

23	16		33					10	23	
20										16
				1						22
24				4						
										21
										26
15		24				17		12		

23	16		33					10	23	
2	7	9	4	8	3	1	6	5		
4	6	5	2	7	1	9	8	3		
20	3	1	8	5	9	6	2	4	7	16
	8	3	4	7	1	9	6	5	2	22
	5	9	1	6	3	2	4	7	8	
24	7	2	6	8	4	5	3	1	9	
	9	5	3	1	6	7	8	2	4	21
	1	8	2	3	5	4	7	9	6	
	6	4	7	9	2	8	5	3	1	26
15		24				17		12		

Musketry Sudoku. Place a number from 1-9 in each empty cell in each of the five overlapping grids such that each row, column and marked 3×3 box of each underlying grid contains each number exactly once.

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

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

Play-offs

Tuesday 12th August 2014, 15:00 -

The lists of puzzles for the three rounds of the play-offs, in order, are as follows:

Play-off 1

- Diagonal Sudoku
- Thermo Sudoku
- Classic Sudoku

Play-off 2

- Arrow Sudoku
- Diagonal Sudoku
- Irregular Sudoku
- Classic Sudoku

Play-off 3

- Outside Sudoku
- Non-Consecutive Sudoku
- Diagonal Sudoku
- Irregular Sudoku
- Classic Sudoku