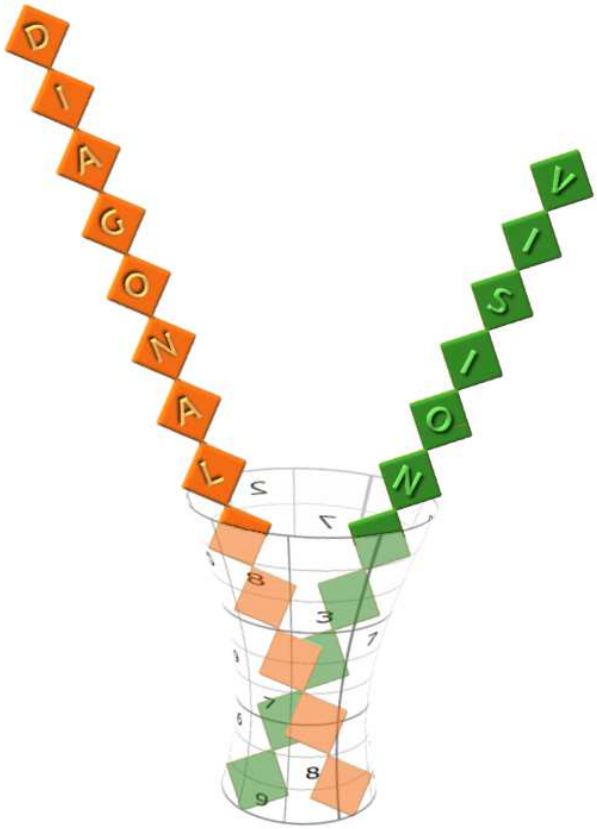
Diagonal Vision
LMI March Sudoku Test

10th -12th March 2012



by Frédéric Stalder

http://sudokuvariante.blogspot.com/

Instructions booklet

About the test

From a very simple theme: diagonals, the idea was to create a set of grids requiring different skills to be solved. Over the grids, you will find some "great classics" (diagonal sudoku, little killer sudoku), some grids brought back into fashion (argyle sudoku, pointing evens sudoku, anti-diagonal sudoku, queen sudoku, diagonal consecutive sudoku). There are also some novelties: grids created from known variants adapted to the theme of the diagonals (diagonal creasing sudoku, diagonal outside sudoku, diagonal skyscrapers sudoku), twin grids (diagonal twin sudoku), and finally the grid "arrows battle sudoku", whose idea comes from a grid (Pfeile sudoku) of the 6th German sudoku championships. I hope you will enjoy your time in solving the grids that I prepared for this test.

What you need to know

- The duration of the test is 120 minutes;
- Answer key for all sudokus is one row (left-to-right) and one column (top-to-bottom), indicated by an arrow ➡. When submitting the answer key, ignore outside clues;
- It is expected that top players will be able to solve all sudokus earlier than 120 minutes.

Thanks

Thanks to **Deb Mohanty and all the LMI team** for hosting the test and the great work they do throughout the year. Thanks to **Bastien Vial-Jaime** for test solving and comments. Thanks to **distri** (miss météo) for creating the logo.

Points and bonus

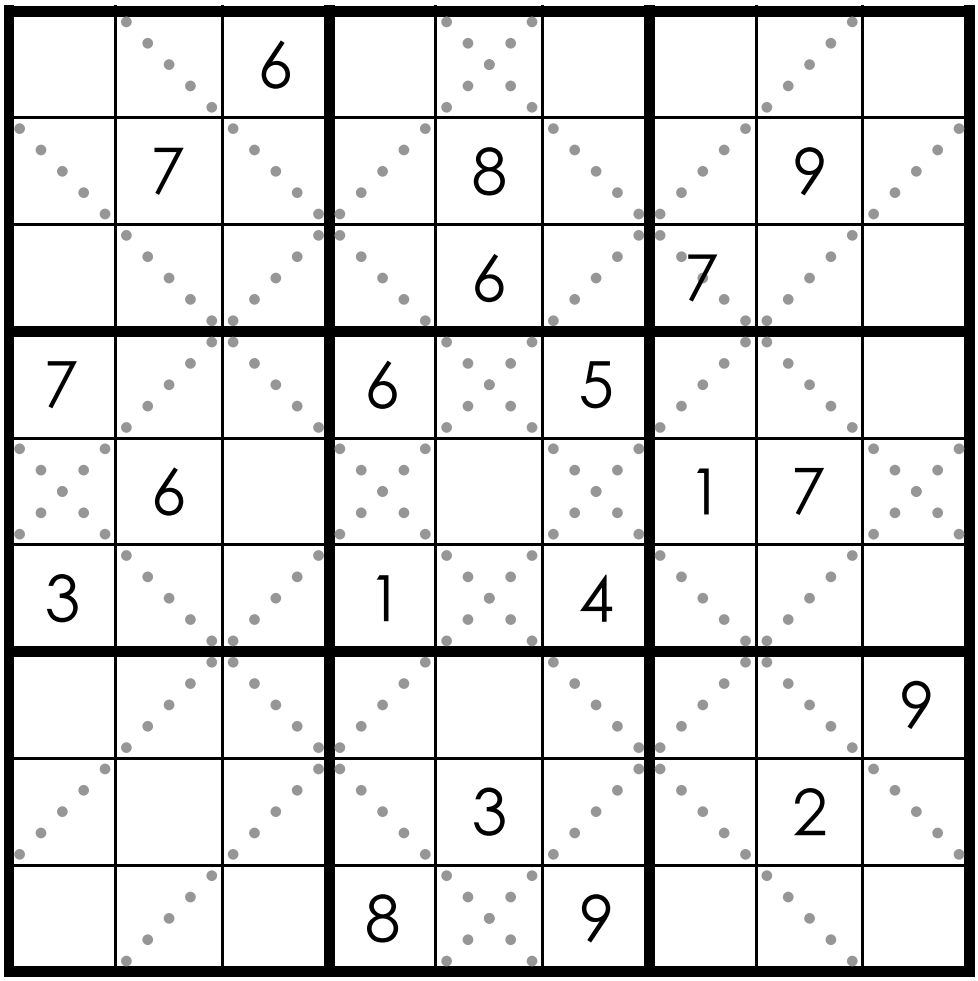
	Grid	Points
1	Argyle sudoku	40
2	Diagonal sudoku	45
3	Pointing evens sudoku	50
4	Creasing diagonal sudoku	65
5	Little killer sudoku	70
6	Diagonal outside sudoku	75
7	Anti-diagonal sudoku	80
8	Queen sudoku	85
9	Diagonal twin sudoku (partial points if only one grid solved)	95 (40)
10	Diagonal consecutive sudoku	105
11	Diagonal skyscrapers sudoku	140
12	Arrows battle sudoku	150
TOTAL		**1000**

Time Bonus: If you submitted all grids and there is at most one false grid (with maximum 4 wrong digits), you can have bonus points. Your final score is then calculated using the formula:

Final Score = Total Points / Claim Time * 120 minutes

1. Argyle sudoku 40 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. Digits cannot repeat on any of the marked diagonals.

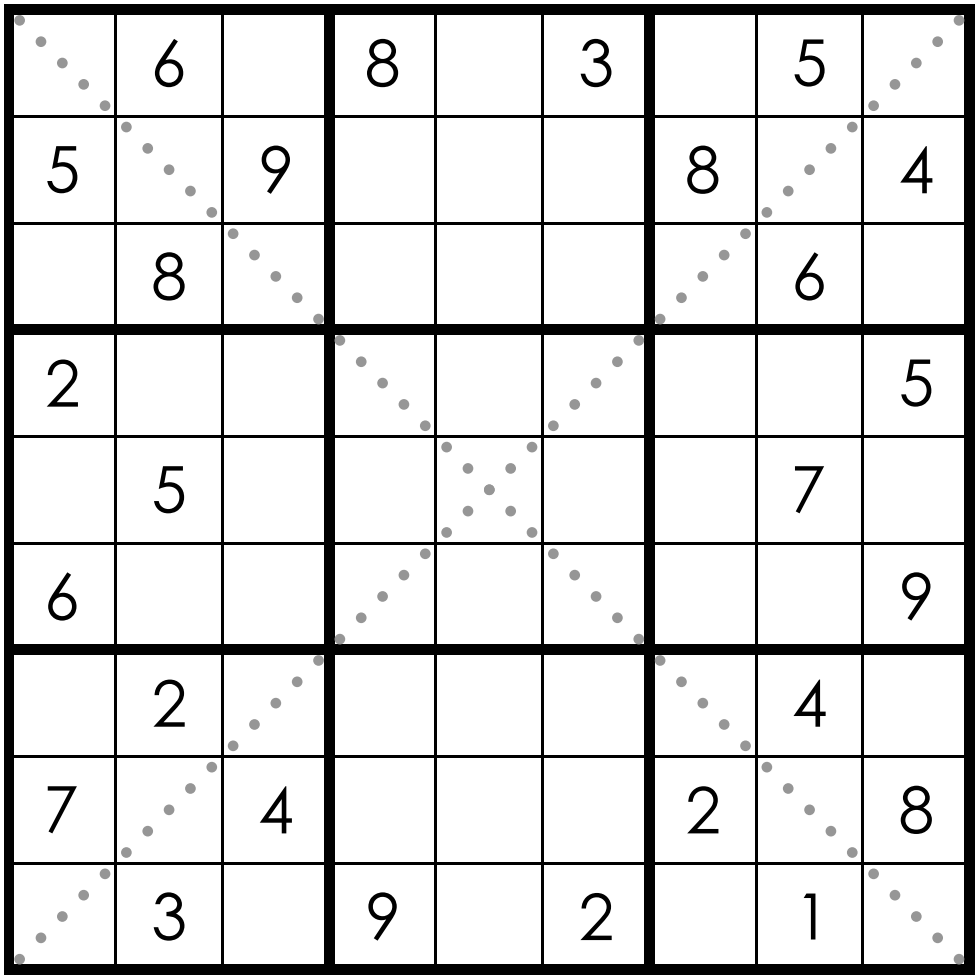


Grid by Rishi Puri

http://rishipuri.blogspot.com/

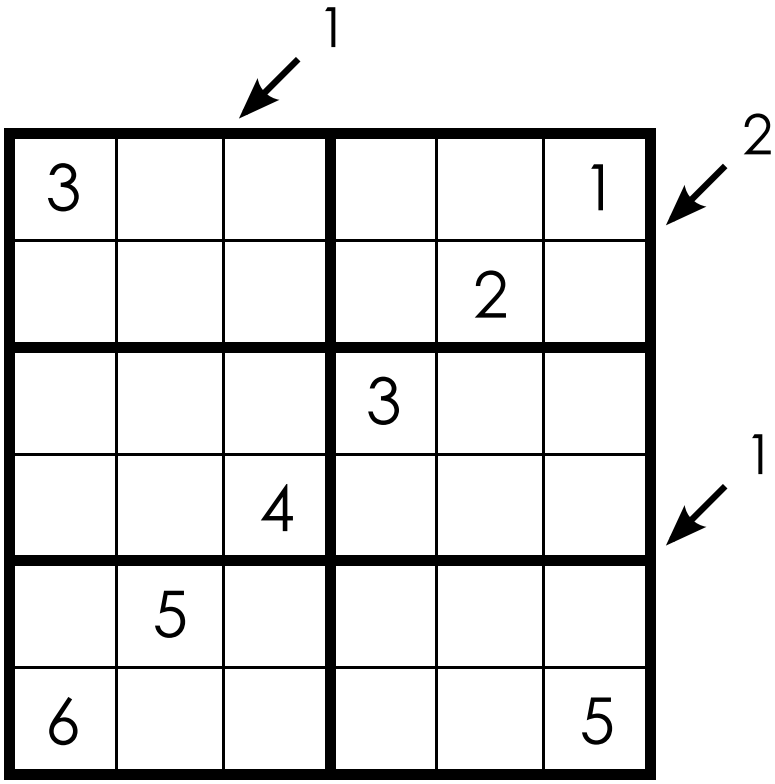
2. Diagonal sudoku 45 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column, outlined box and in each of the two main diagonals.



3. Pointing evens sudoku 50 points

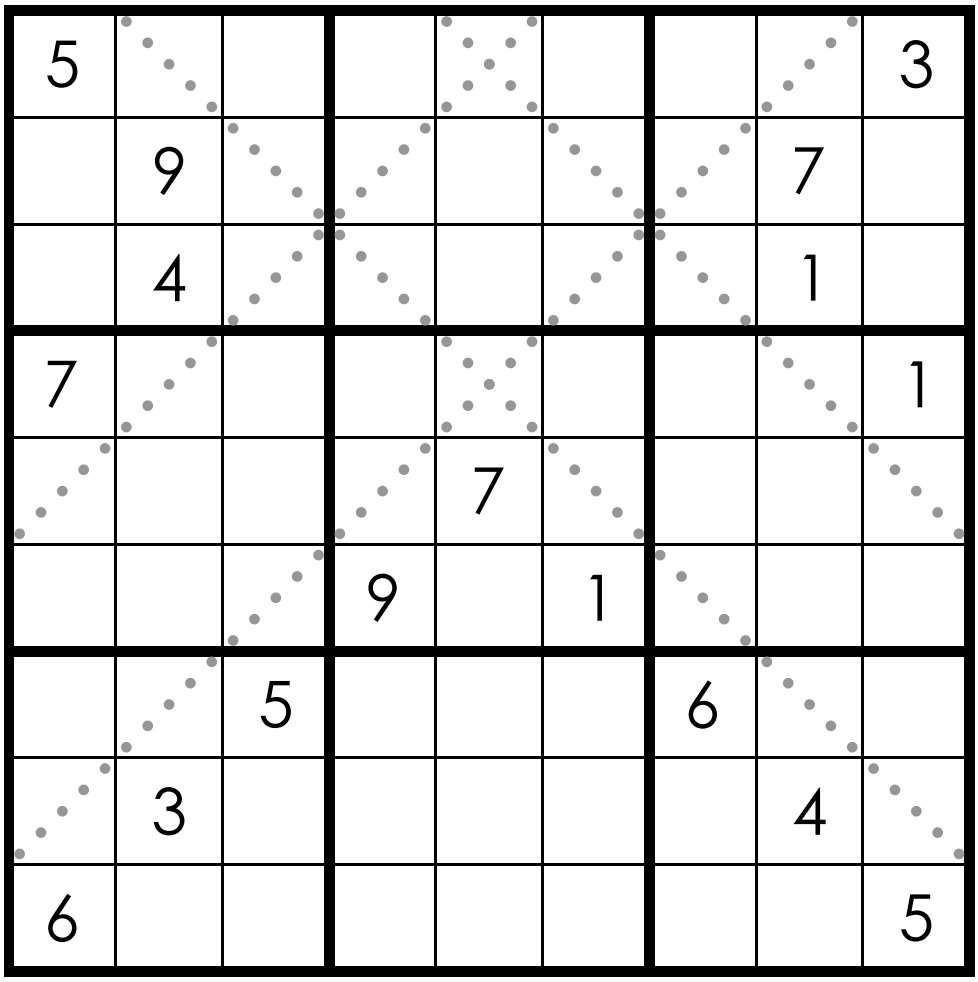
Fill the grid with digits from 1 to 9 (1 to 6 in the example), so that each digit occurs exactly once in every row, column and outlined box. Clues outside the grid correspond to the number of even digits in the diagonal indicated by the arrow.



Grid by Bastien Vial-Jaime
http://ile-logique.blogspot.com/

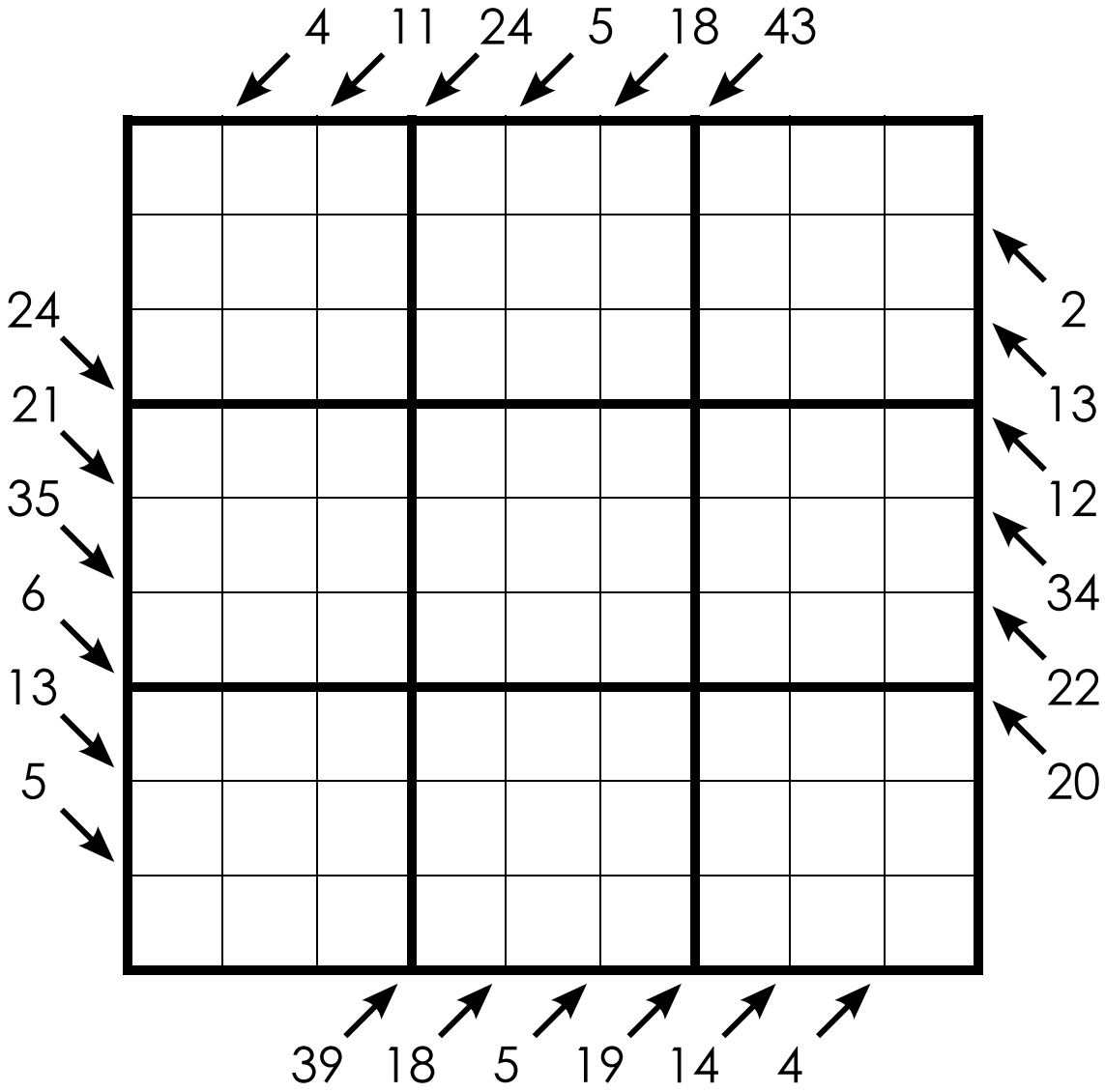
4. Creasing diagonal sudoku 65 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. Digits along each marked diagonal must be strictly increasing (or strictly decreasing according to the direction in which they are read).



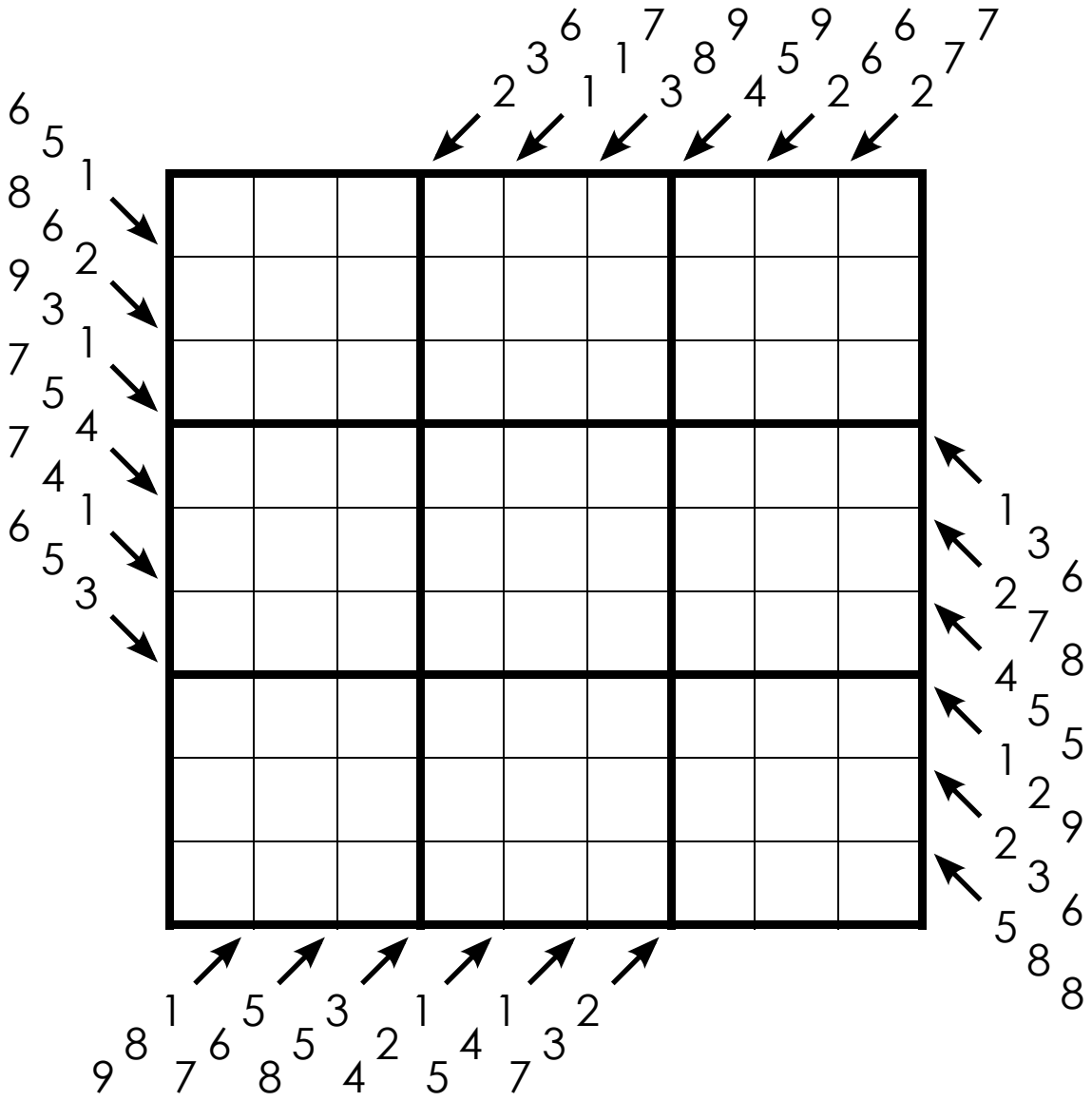
5. Little killer sudoku 70 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. The sums of the digits in the indicated diagonals is given on the outside of the grid; digits can repeat in these diagonals provided they don't violate other sudoku rules.



6. Diagonal outside sudoku 75 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. Digits are given outside of the grid, and each digit must appear in the first three cells in that direction.



7. Anti-diagonal sudoku 80 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. Each main diagonal must contain only three different digits.

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

8. Queen sudoku 85 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. The number 9 in the grid is a chess Queen. Two Queens cannot be placed along the same row, column or diagonal of any length.

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

9. Diagonal twin sudoku 95 points

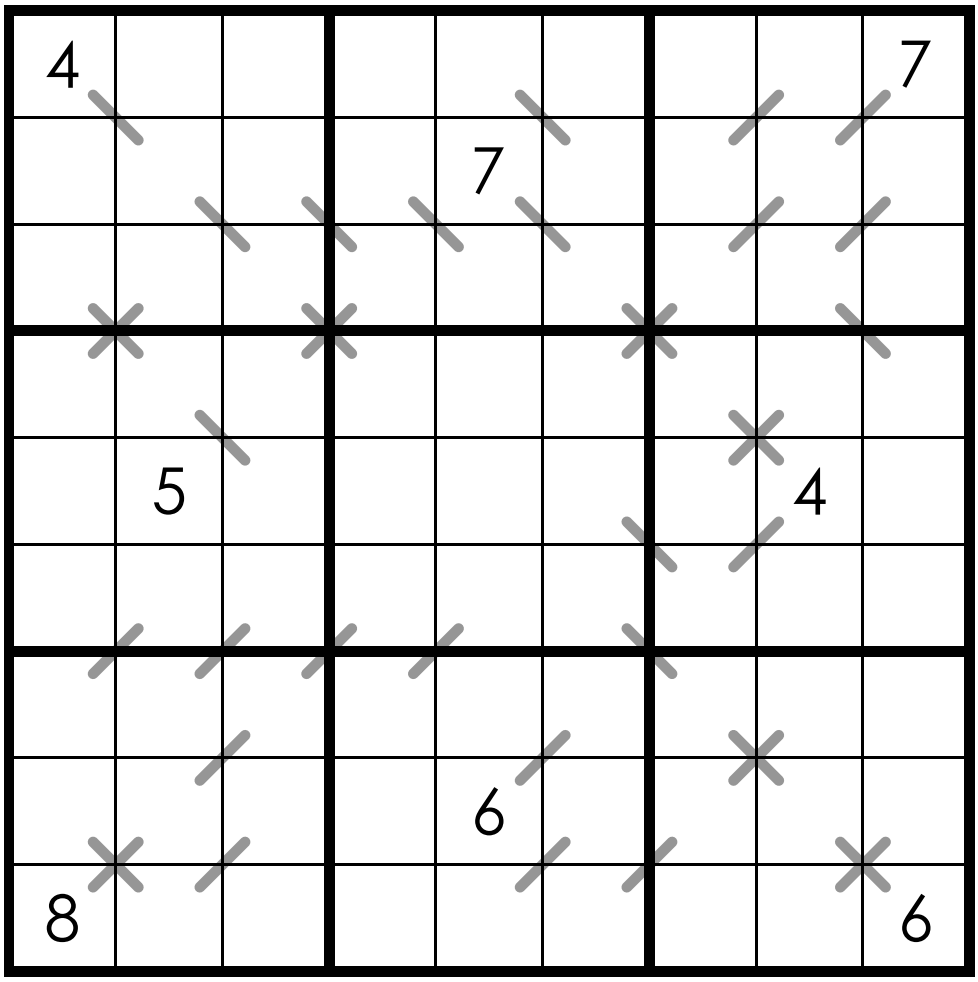
Fill both grids with digits from 1 to 9 (1 to 6 in the example), so that for each grid each digit occurs exactly once in every row, column and outlined box. Digits in each cell of the two main diagonals are the same in both grids. In all other cells digits are different.

		2	6		
6					1
4					2
		4	1		

	5			2	
		3			
			3		
	4			5	

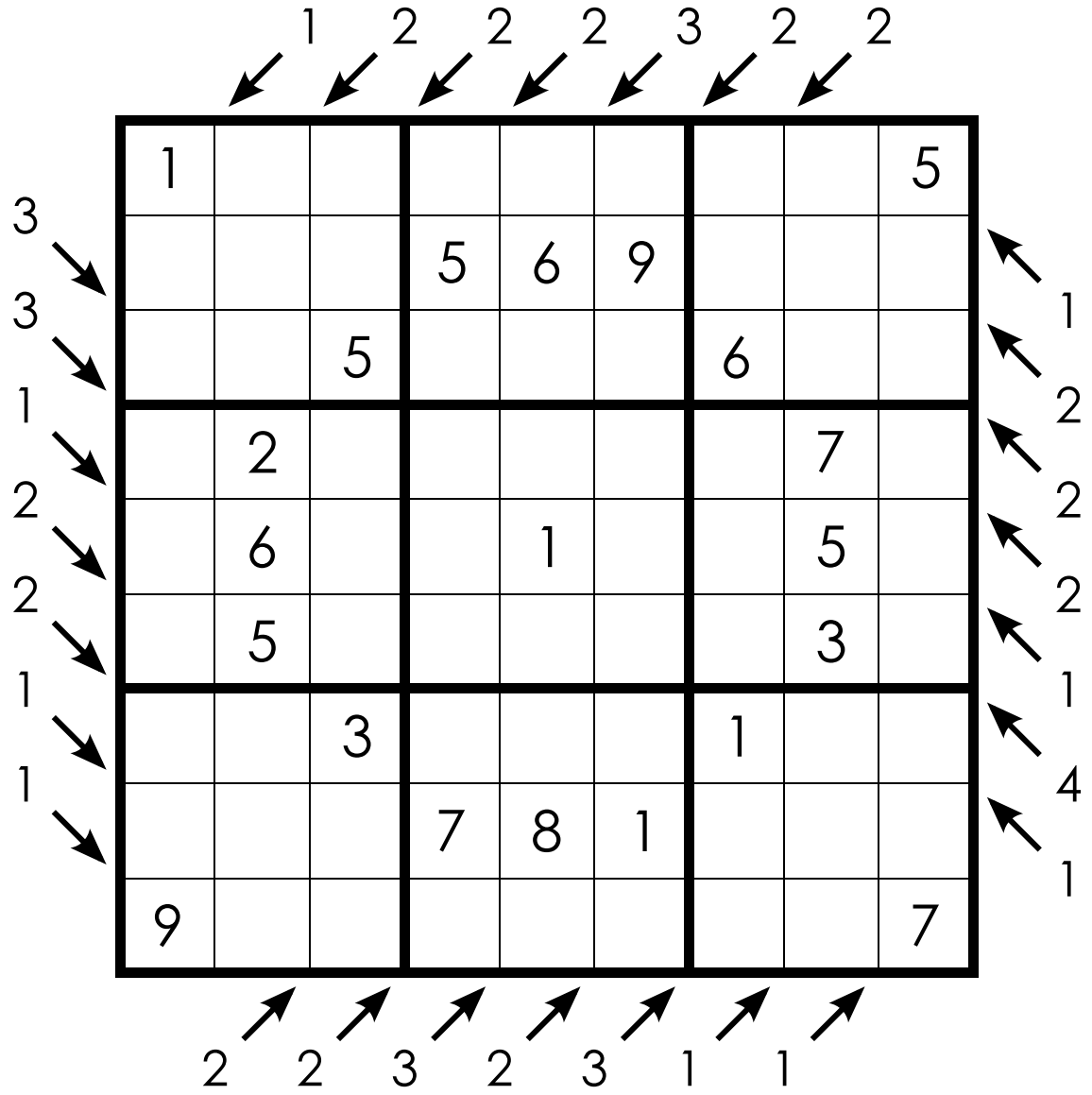
10. Diagonal consecutive sudoku 105 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. All diagonally adjacent cells having consecutive digits are marked by a line. If there is no line, those two diagonally adjacent cells cannot have consecutive digits.



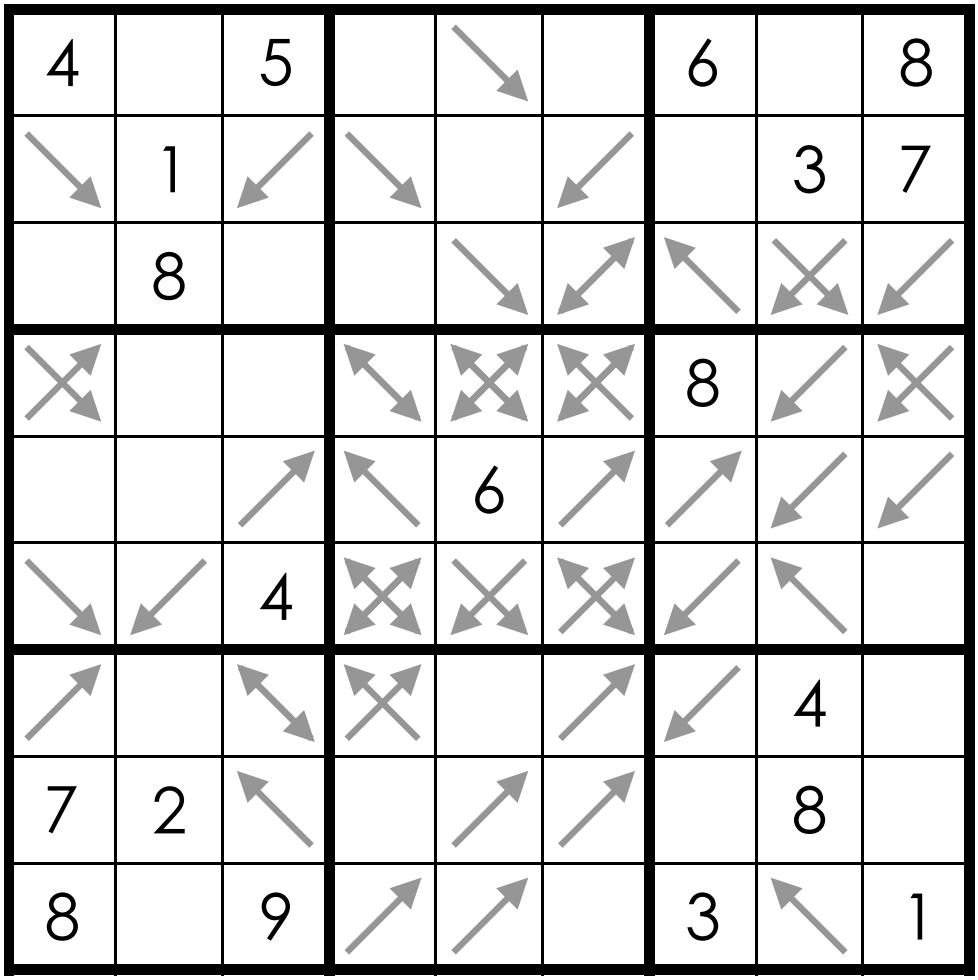
11. Diagonal skyscrapers sudoku 140 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. Consider each number inside the grid to be the height of a building. The numbers outside the grid indicate how many buildings can be seen when looking in that direction (taller buildings conceal smaller buildings **and buildings of similar size** behind them).



12. Arrows battle sudoku 150 points

Fill the grid with digits from 1 to 9, so that each digit occurs exactly once in every row, column and outlined box. An arrow in a cell means that the digit in that cell repeat **exactly once** in the direction of the arrow. **All possible arrows are drawn.**



Solutions

Argyle sudoku

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

Diagonal sudoku

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

Pointing evens sudoku

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

Creasing diagonal sudoku

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

Little killer sudoku

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

Diagonal outside sudoku

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

Anti-diagonal sudoku

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

Queen sudoku

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

Diagonal twin sudoku

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

Diagonal consecutive sudoku

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

Diagonal skyscrapers sudoku

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

Arrows battle sudoku

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