

Sudoku Xtra 20TM

August 2012

>> The Logic Puzzle Brain Workout

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Packed with
Puzzles!

>> Daffodil Samurai Sudoku

Full instructions on page 2.

2 Sudoku Xtra

Welcome to **Sudoku Xtra 20**, containing 151 top-quality logic puzzles of a wide range of types, with a particular focus on Sudoku variants. All of the puzzles are language-neutral and have a unique solution which can be found via sensible logical deduction, with guessing never required.

This issue I've introduced several new Sudoku variants, from the daffodil design on the cover onwards! There's **Arrow Sudoku**, **Anti-King Sudoku**, **Quad Clue Sudoku**, **Argyle Sudoku**, **Frame Sudoku**, **Little Killer Sudoku**, **Extra Region Pointers Sudoku**, **Offset Sudoku**, a huge **Odd/Even Samurai 13-grid Sudoku** and even more – plus most of the new varieties introduced in Sudoku Xtra 19 are back too, including **Sudoku XV**, **Kropki Sudoku**, **Non-Consecutive Sudoku** and others. **Tapa** and **LITS** puzzles also return this issue, along with many existing favourites.

If there's anything you'd like to see in a future issue, just let me know - for example this issue **Inequality Sudoku** returns following requests on the www.SudokuXtra.com forum. There are also links on the website to other issues, as well as details of how to subscribe to the PDF version. All issues are also on all Amazon stores worldwide.

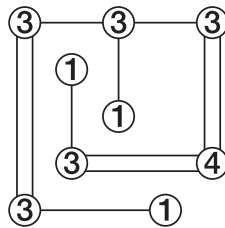
Dr Gareth Moore

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>> Hashi

Join circled numbers with horizontal or vertical lines.

- > Each number must have as many lines connected to it as specified by its value.
- > No more than two lines may join any pair of numbers.
- > No lines may cross.
- > The finished layout must allow you to travel from any number to any other number just by following one or more lines.

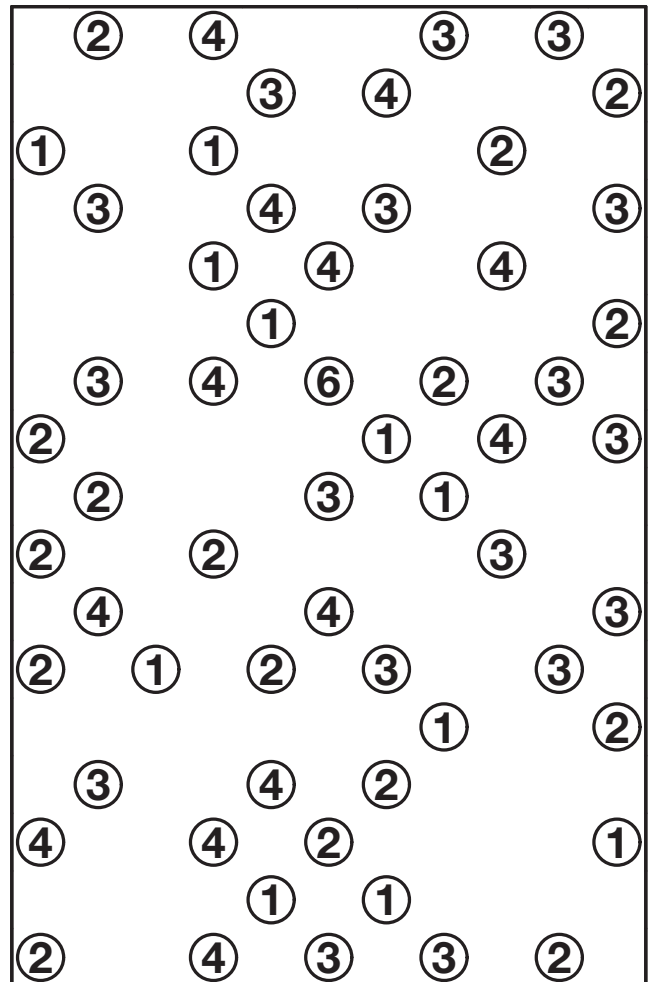


>> Daffodil Samurai Sudoku

Place 1 to 9 once each into every row, column and marked 3x3 box of each of the five underlying 9x9 grids.

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

- > The value of the digits along each shaded thermometer must increase cell by cell from the bulb (lowest value) to the head (highest value). This also means that digits cannot be repeated in a thermometer.
- > The example shows how the thermometers work on a single grid.

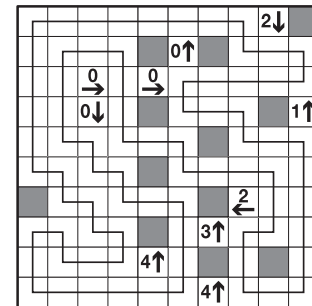
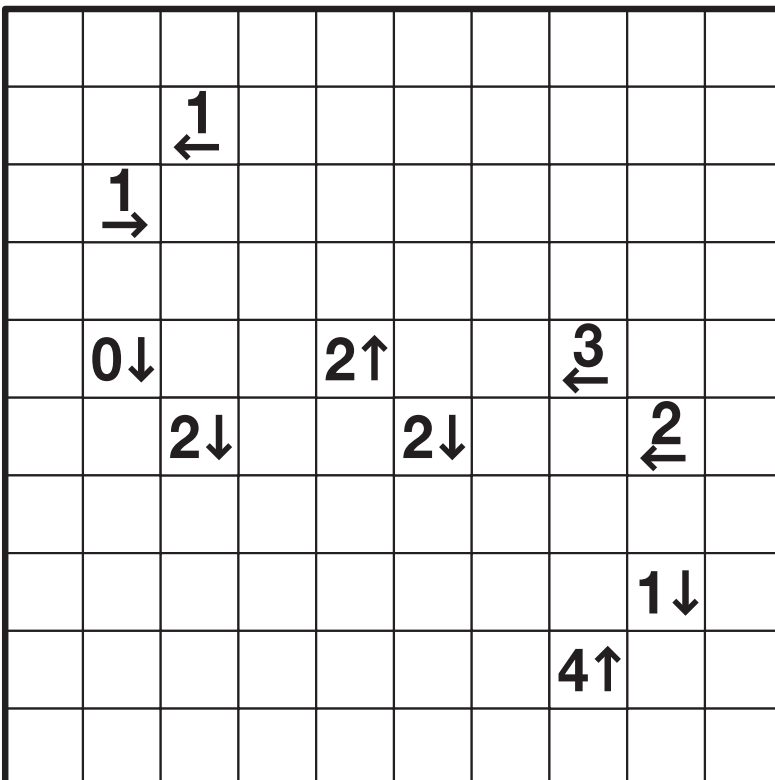
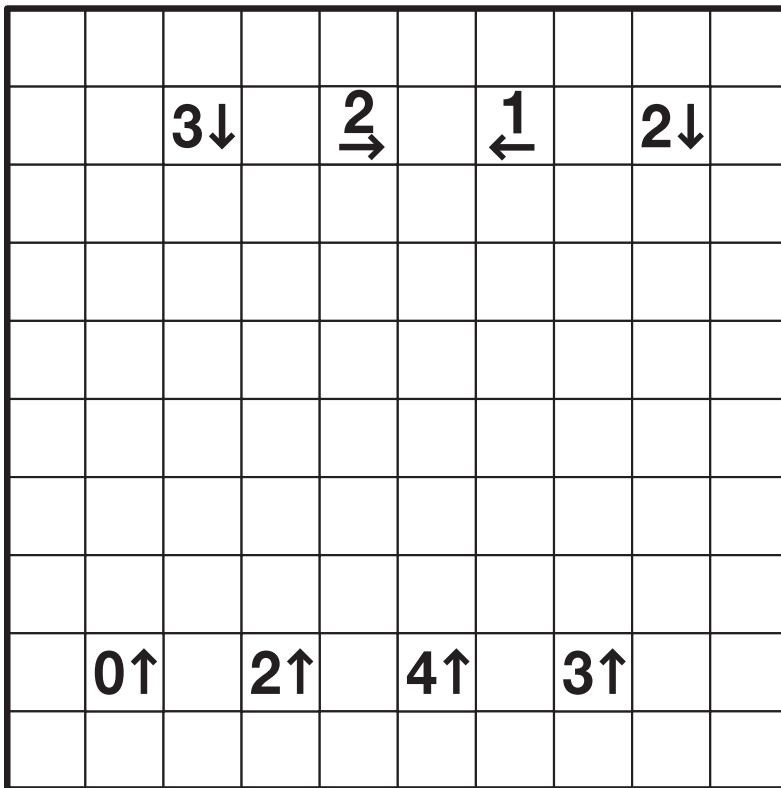


Sudoku Xtra 3

>> Yajilin

Draw a single loop using only horizontal and vertical lines such that the loop does not pass through any cell more than once.

- > Any cells which the loop does not visit must be shaded, but none of these shaded cells can touch in either a horizontal or vertical direction.
- > Numbers with arrows indicate the exact number of shaded cells in a given direction in a specific row or column, but not all shaded cells are necessarily identified with arrows.



The next **Sudoku Xtra**, issue 21, is due out in October 2012. Issues are available immediately on www.SudokuXtra.com (download), then on Amazon (printed) in the following days.

The latest download or pre-printed links are always available at www.SudokuXtra.com/magazines.php

4 Sudoku Xtra

⁹⁺ 2	^{18×} 6	3	⁰⁻ 5	1	4
3	^{4÷} 4	1	⁵⁺ 2	^{30×} 6	⁶⁺ 5
4	⁴⁻ 2	6	3	5	1
⁴⁻ 1	²⁻ 5	^{8×} 2	²⁻ 6	4	¹⁻ 3
5	3	4	³⁺ 1	2	6
¹²⁺ 6	1	5	⁷⁺ 4	3	2

>> Calculudoku

Place the numbers 1 to 6 (or 1 to 8) once each into every row and column of the grid, while obeying the Calculudoku region totals.

- > The value at the top-left of each bold-lined region must be obtained when all of the numbers in that region have the given operation (+, -, ×, ÷) applied between them. For - and ÷ operations start with the largest number in the region and then subtract or divide by the other numbers.
- > Remember that you **can** repeat a number within a bold-lined region, unlike in Killer Sudoku, so long as you obey the row/column restraints.

90×	12+			7+	
	15×			8×	
	12×	4÷	2÷	7+	
9+					14+
		300×	2×		
3-					

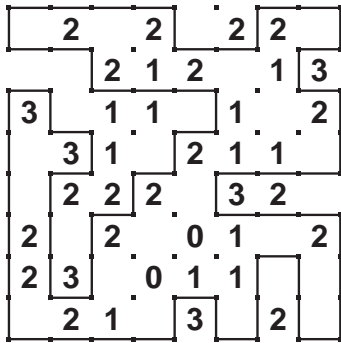
10×		17+			20×
1-			8+		
	5+	4÷	7+	3×	
8+					2÷
	3÷		19+		
				3÷	

15+		18×		6+	
	24×		2×		9+
	45×			0-	
3-		5÷			17+
			1-		
4÷		7+			

8+	7÷	14+			6×	32×	
		2÷		56×		90×	9+
	10+		4-		280×		
1-		60×					15+
	96×			7+		84×	
56×			1-				2-
		15+		2÷		3-	
2÷			140×				

2×		2-	4-		1260×	3-	
160×							3×
	3-		3÷	20+			
14×	30×						2-
	288×		25×		11+		
2-					16×		168×
	180×				35×		
4-			2÷			2÷	

Sudoku Xtra 5

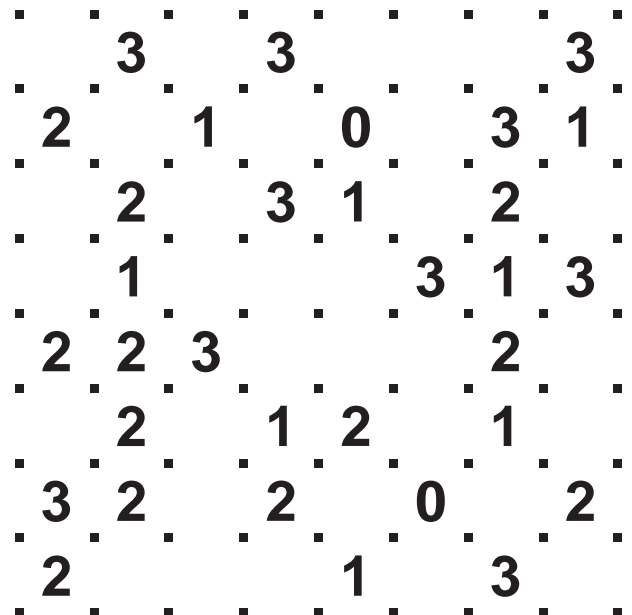
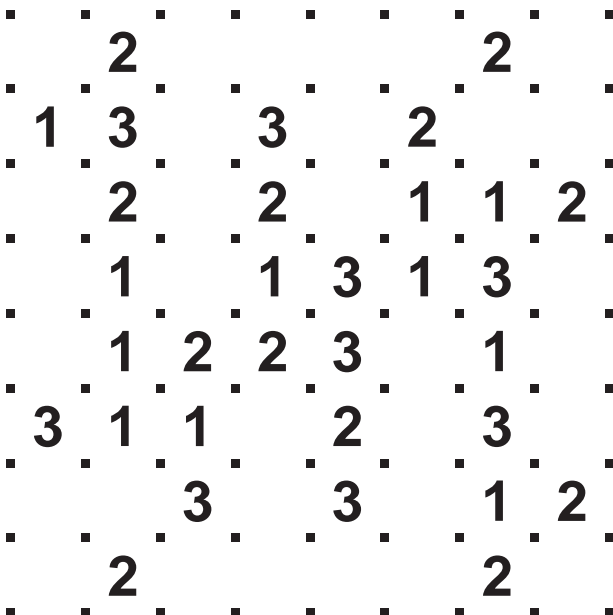
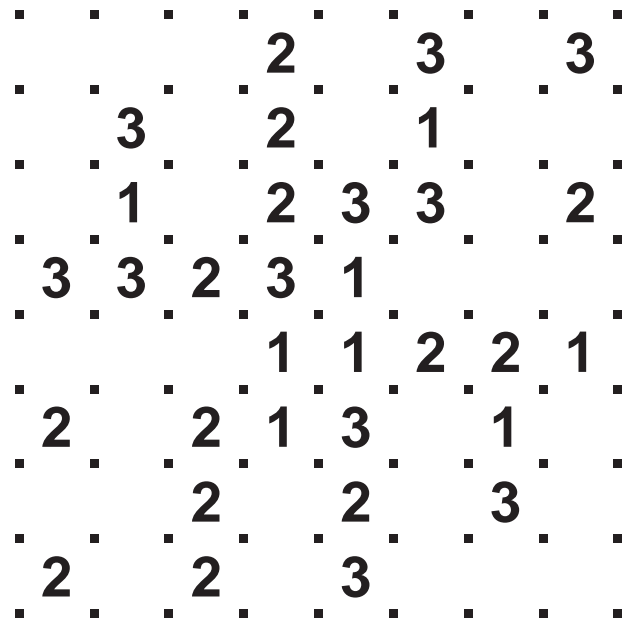
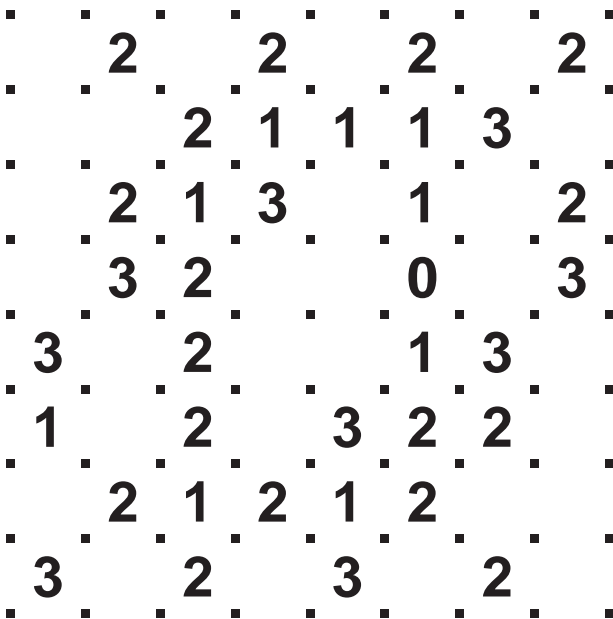


>> Slitherlink

Draw a single loop by connecting together the dots so that each numbered square has the specified number of adjacent line segments.

> Dots can only be joined by straight horizontal or vertical lines.

> The loop cannot touch, cross or overlap itself in any way.



6 Sudoku Xtra

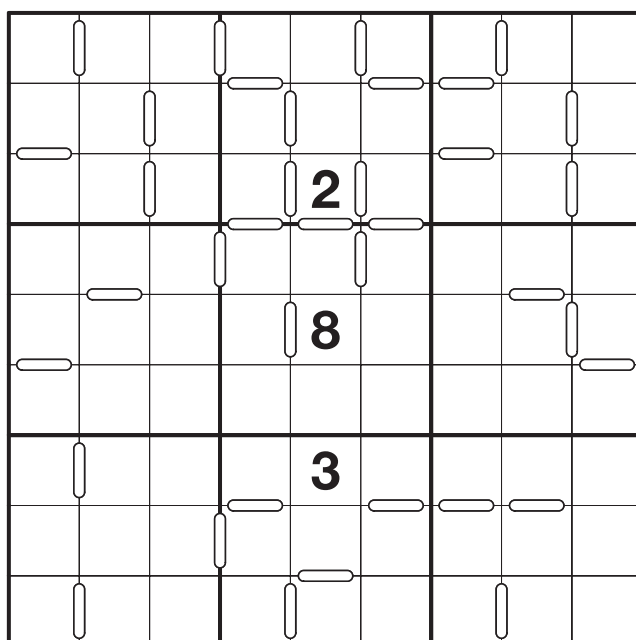
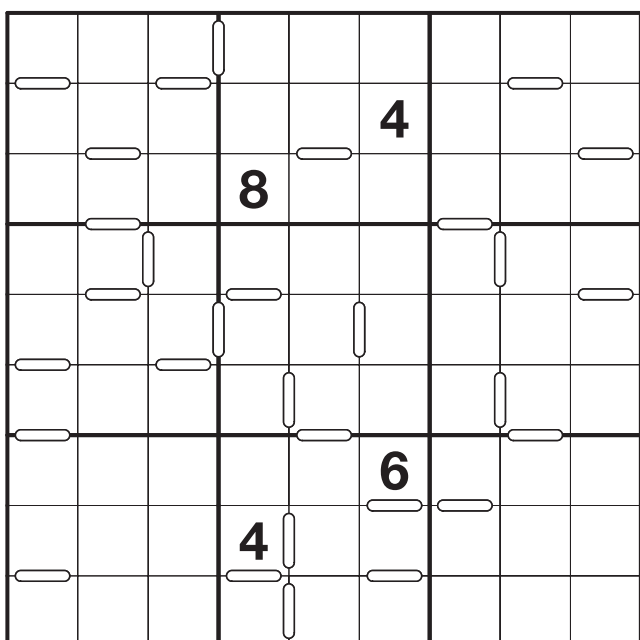
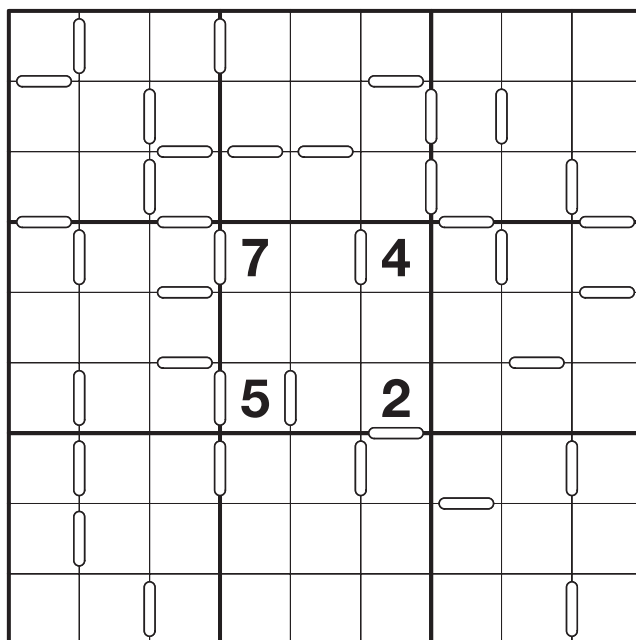
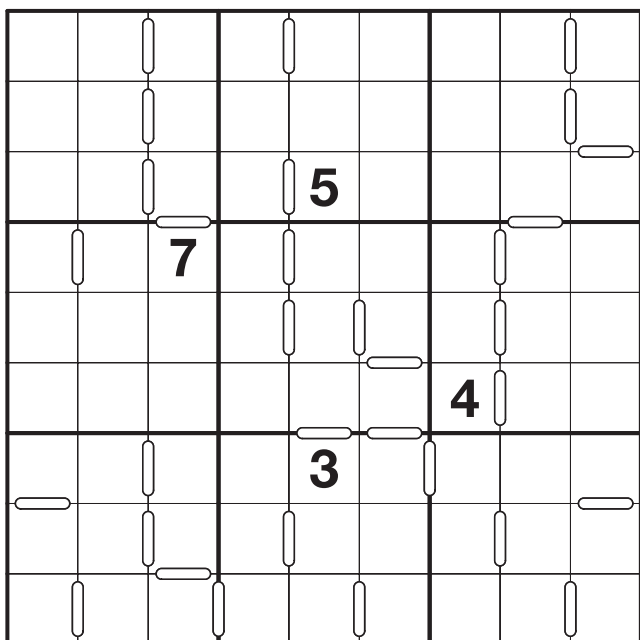
5	3	4	6	2	1	9	8	7
8	7	9	5	3	4	2	1	6
6	2	1	9	7	8	4	5	3
7	1	6	8	4	9	3	2	5
2	4	5	3	1	7	8	6	9
9	8	3	2	6	5	1	7	4
3	9	8	1	5	6	7	4	2
1	6	7	4	9	2	5	3	8
4	5	2	7	8	3	6	9	1

>> Consecutive Sudoku

Place 1 to 9 once each into every row, column and marked box, while obeying the white 'consecutive' markers between certain cells.

>Consecutive markers indicate **all** adjacent cells with consecutive numbers, such as 1&2, 2&3 or 7&8.

>Don't forget that cells **without** a white marker between are **not** consecutive.



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

>> Hitori

Shade in cells so that no number or letter occurs more than once per row or column.

> Shaded cells cannot touch in either a horizontal or vertical direction.

> All unshaded cells must form a single continuous area.

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

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

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

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

8 Sudoku Xtra

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

>> Sudoku XV

Place 1 to 9 once each into every row, column and 3x3 box.

- > All pairs of neighbouring cells which sum to 5 are marked with a 'v'.
- > All pairs of neighbouring cells which sum to 10 are marked with an 'x'.

			x					v
	7	x	v	2		x		x
		2						
	4			5			x	
								v
x					v		9	4
	x		x		x		5	8
		v			x			7
x						x	v	

			4	6			v	
		x						
	v		x			v		
7			x					6
	x			v				
		x		v			x	
1							x	5
	x	x						
		v				v		v
		x				x		
		x						
			5		v	2		

			x					x
							v	
v							x	
x		9	x				3	
			x		x		v	
					x			x
	v				x			
	x							
		7	x				x	
							6	
				v				v
			x					
				v				x

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

Sudoku Xtra 9

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

>> Samurai Star

Place 1 to 9 once each into every row, column and marked 3x3 box of each of the five underlying 9x9 grids.

> Don't forget the 'hidden' fifth 9x9 Sudoku grid in the centre of the puzzle.

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

10 Sudoku Xtra

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

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

>> Odd/Even 13-grid Samurai Sudoku

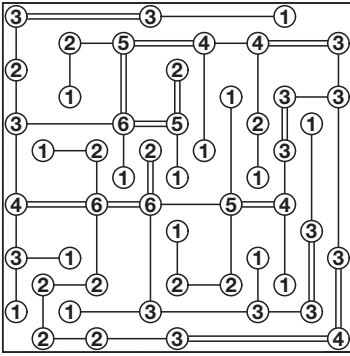
Place 1 to 9 once each in every row, column and 3x3 box of each of the thirteen 9x9 grids.

- > Shaded cells always contain even digits; unshaded cells always contain odd digits.
- > Note that, as in a regular Samurai, **only** the rows and columns within the 13 underlying 9x9 grids are guaranteed to contain all of 1-9. Any row or column not entirely within a single 9x9 grid has no restriction on its content.

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

The puzzle is a 13-grid Samurai Sudoku. It features 13 overlapping 9x9 grids. The grid is shaded such that shaded cells contain even digits (2, 4, 6, 8) and unshaded cells contain odd digits (1, 3, 5, 7, 9). The puzzle is partially filled with numbers, including:

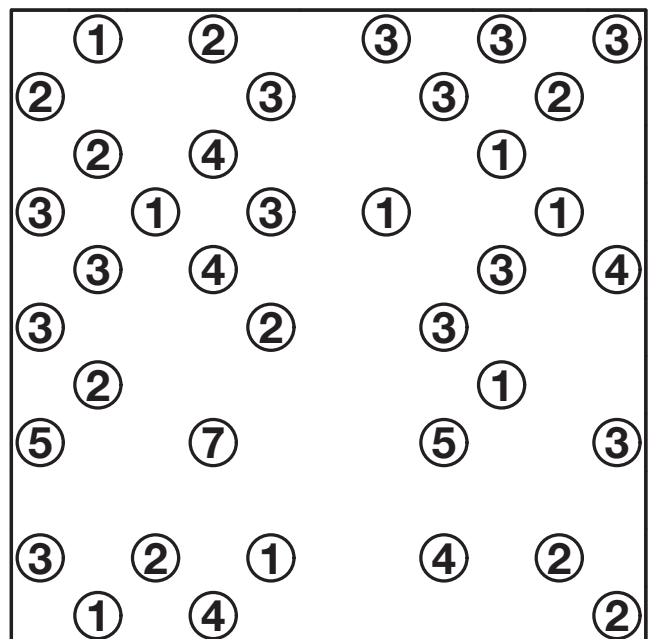
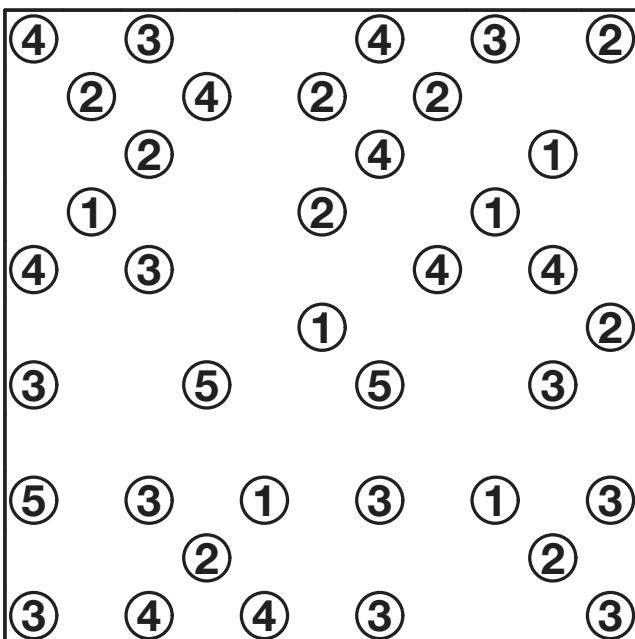
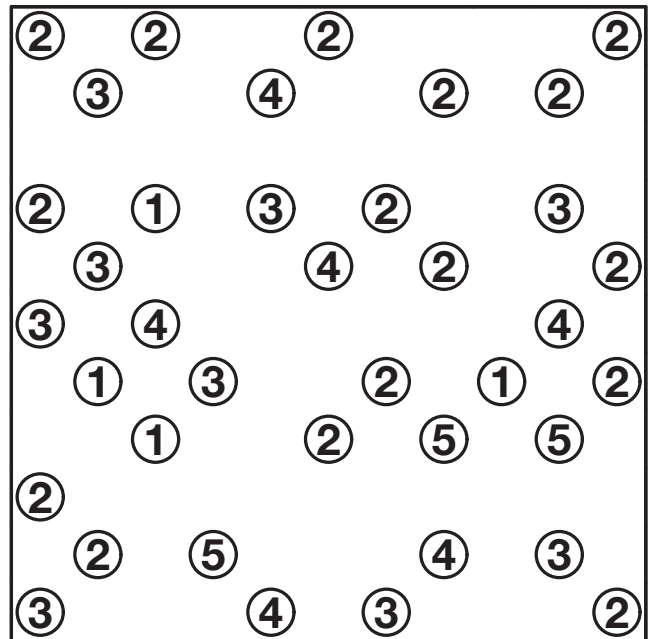
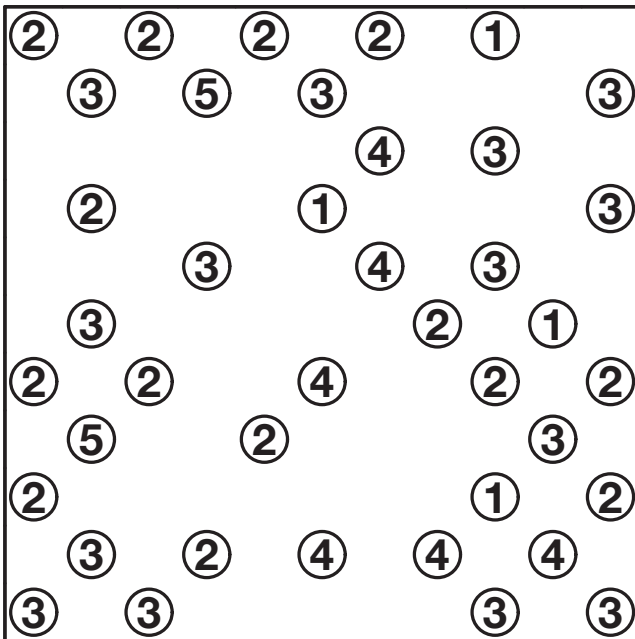
- Row 1: 9, 4, 1
- Row 2: 6, 7, 2, 6, 9
- Row 3: 5, 3, 5, 4, 2, 1
- Row 4: 8, 9, 4, 3, 5
- Row 5: 2, 7, 4, 8
- Row 6: 1, 4, 6, 2, 7
- Row 7: 1, 8, 5, 8
- Row 8: 7, 7, 7
- Row 9: 1, 2, 3, 5
- Row 10: 6, 9, 6, 6, 6, 8, 5
- Row 11: 5, 2, 3, 2, 9, 2
- Row 12: 7, 9, 6, 1, 4, 4, 8, 7, 8, 3, 5, 2
- Row 13: 3, 4, 1, 8, 2, 2, 9, 2, 4, 6, 1, 8
- Row 14: 3, 9, 6, 9, 9, 3, 8
- Row 15: 5, 4, 8, 8, 7, 2, 1
- Row 16: 8, 6, 5, 9
- Row 17: 9, 1, 1
- Row 18: 3, 7, 6, 1
- Row 19: 3, 1, 2, 8
- Row 20: 9, 8, 8
- Row 21: 8, 6, 4, 6
- Row 22: 3, 8, 2, 6, 6, 1, 6
- Row 23: 2, 5, 1, 5
- Row 24: 6, 4, 5
- Row 25: 2, 1, 8, 6, 4, 4, 5
- Row 26: 6, 8, 9, 7, 3, 4, 5
- Row 27: 9, 3, 4, 8, 1



>> Hashi

Join circled numbers with horizontal or vertical lines.

- > Each number must have as many lines connected to it as specified by its value.
- > No more than two lines may join any pair of numbers.
- > No lines may cross.
- > The finished layout must allow you to travel from any number to any other number just by following one or more lines.



12 Sudoku Xtra

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

>> Jigsaw Sudoku

Place 1 to 7, 8 or 9 once each into every row, column and bold-lined jigsaw region.

		3						
			5					
7								5
	2				5			
6								1
			2					
				3				

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

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

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

Sudoku Xtra 13

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

>> Arrow Sudoku

Place 1-9 once each into every row, column and bold-lined 3x3 box.

> Digits in circled cells must be equal to the sum of the digits along their attached arrows.

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

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

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

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

14 Sudoku Xtra

	5	16			17	16
7	1	6		17	8	9
13	4	9	19	3	9	7
	18	1	8	9	23	
	3	4	17	4	7	6
6	2	1	3	16	9	7
4	1	3		17	8	9

>> Kakuro

Place a digit from 1 to 9 into each white cell to solve the clues.

- > Each horizontal run of white cells adds up to the total above the diagonal line to the left of the run, and each vertical run of white cells adds up to the total below the diagonal line above the run.
- > No digit can be used more than once in any run.

	3	4				15	3
4			16	6		3	
10				14	16	7	
		16					
	3			11			
	6			10			
	19			4			
4						3	4
6				10			
7						4	

			6	11			16	9
		3			34		4	
	23				19			
	3			7			16	6
12				3			4	
5			19				6	
3			12				3	
	4	3	6			5	8	
6				10				
4					4			

				20	15			11	16
	4	22	4				17		
9			10			19			
35			17			16			
	13			22				29	8
	11								
4			24	3	28		11		
29						10			
						19			8
	36								
9	9	17							
16				17			16		
17									

			13	4	17			16	4	15	
		20				6	10				
	15	25				23				20	
6						14					
7				13					27	4	
4					12					10	
		23			24					17	
11				6	4			16		25	
	36							17			
							10				29
	12	15				18					10
25											
						11	13			4	
9				13					6	24	
17					34						
		26	4	8	7				17		
			11						12		

7	2	3	<	5	1	<	6	4
3	1	4	<	6	2	7	5	
1	5	7	2	4	3	6		
4	6	>	2	3	7	5	1	
5	3	>	1	4	6	2	7	
2	<	4	6	<	7	>	5	1
6	7	5	1	<	3	<	4	2

>> Futoshiki

Place 1 to 5, 6, 7 or 8 once each into every row and column while obeying the inequality signs.

> Less than ["<"] and greater than [">"] signs between some cells indicate that the values in these two cells must be greater than or less than one another as indicated by the sign. The sign always points towards the smaller number.

	<				
	<			<	
		<			
			>		

	<			>	
			>		

7			>		>		<		6
	<			>		>			
		<							
				<			<		
		<							
5		<		<					2

		<					<		
				7			<		
		7		>			>		
		<	<			4	<		
		>		5				>	
	>					>	>		
	>	>							

16 Sudoku Xtra

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

>> Killer Sudoku [Zero]

Place each of 1 to 9 into every row, column and 3x3 box while obeying the cage totals.

- > The contents of each dashed line cage must sum to the total given at the top-left.
- > You **cannot** repeat a number within a dashed line cage.
- > In the bottom-right 'Zero' puzzle not all cells are covered by cages.

r12		r16	r14	r8	r12		r10	
r11	r13				r11	r10		
			r3		r8		r16	
r22					r11		r10	
r6		r33						
r8		r10		r14	r20			
	r15		r14		r14	r15	r4	
r6	r7			r11	r11			
	r17					r13		

r15			r22		r10	r6	r5	r23
r13		r7						
r10			r6	r11		r11		
r10		r12		r21	r8		r22	
r19						r11		
		r13			r10		r9	
r15	r4		r17			r10	r12	
	r13	r13	r4	r20			r3	
						r20		

r10	r9	r14		r14	r10	r28	r4	
		r21	r7			r7		
					r6		r10	
r9		r14			r29	r13		
r9		r10				r7		
r10			r13		r9		r16	
	r16			r15	r18			
r12			r11	r6		r11	r14	
r15					r8			

r14		r6	r17	r9		r10	r8	
				r24				
r10			r17	r13				
					r4		r11	
r14			r22					
r6				r20	r13		r14	
r12			r7					

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

>> Skyscraper

Place each of 1 to 5, 1 to 6 or 1 to 7 into every row and column.

- > Each number in the completed grid represents a building of that many storeys. Place the buildings in such a way that each given number outside the grid represents the number of buildings that can be seen from that point, looking only at that number's row or column.
- > A building with a higher value always obscures a building with a lower value, while a building with a lower value never obscures a building with a higher value.

	2	3	2	1	3	
3						2
1						4
2						2
2						4
4						1
	3	2	3	2	1	

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

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

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

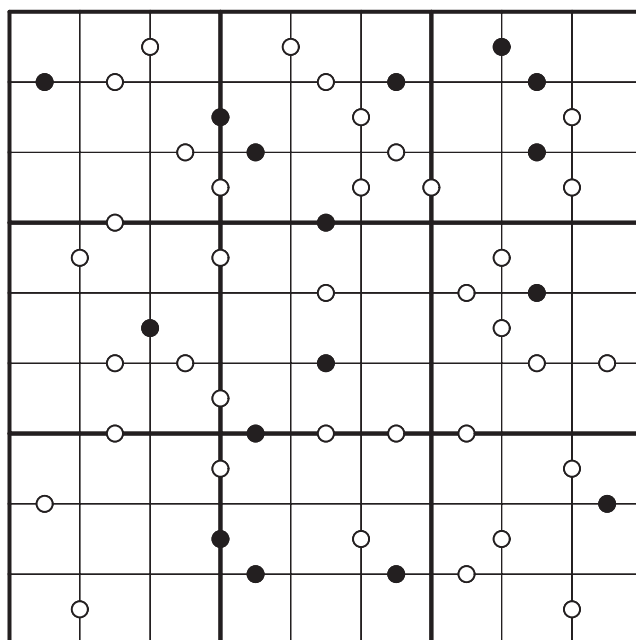
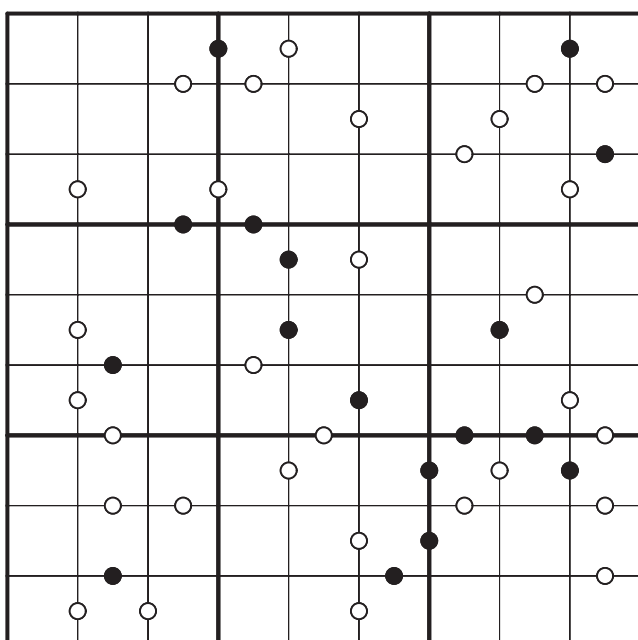
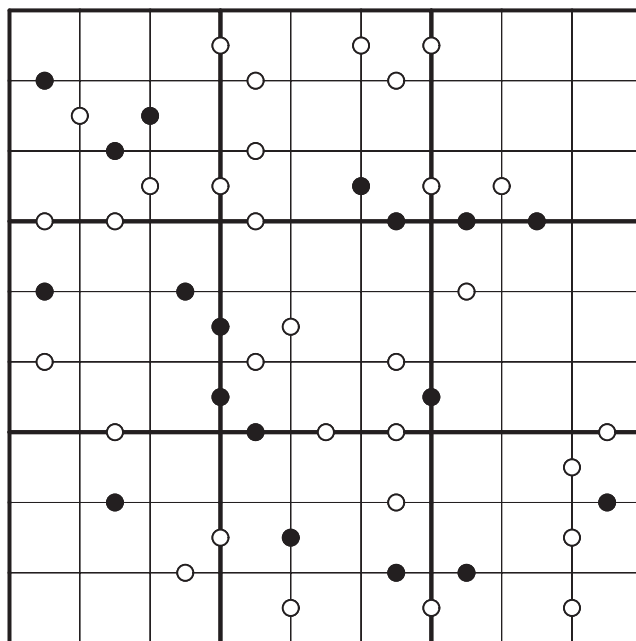
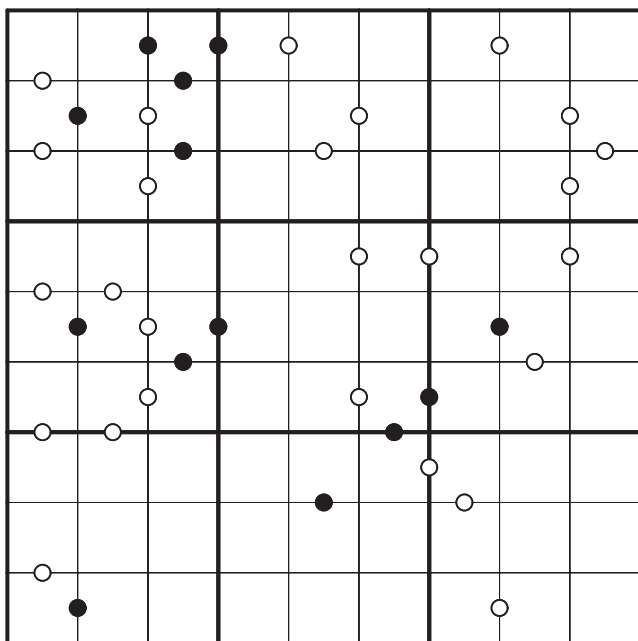
18 Sudoku Xtra

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

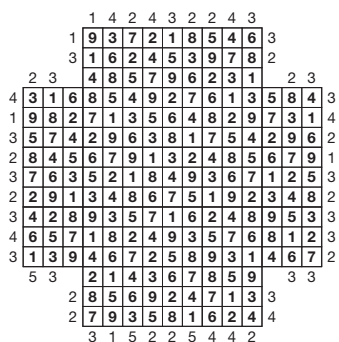
>> Kropki Sudoku

Place 1 to 9 once each into every row, column and marked 3x3 box.

- > Two cells with a black dot between contain numbers where one is twice the value of the other.
- > Two cells with a white dot between contain consecutive numbers, such as 2&3 or 5&6.
- > All possible black/white dots are given.
- > Between 1&2 either a white or a black dot is used.



20 Sudoku Xtra



>> SSSS: Skyscraper Samurai Star Sudoku

Place 1 to 9 once each into every row, column and marked 3x3 box of each the five underlying 9x9 grids, while obeying the Skyscraper clues.

- > Don't forget the 'hidden' fifth 9x9 Sudoku grid in the centre of the puzzle.
- > See page 17 for instructions on solving Skyscraper clues.

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

Sudoku Xtra 21

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

>> Quad Clue Sudoku

Place 1-9 once each into every row, column and bold-lined 3x3 box.

> Wherever four digits are given on the intersection of four cells then these four digits must be placed into those four cells in the given distribution. It is up to you to work out which digit goes into which cell.

				1278				
	1369	3789					2489	
					1237			
			1279					
		1256					4579	
	2346							
				1278		3789		
								1257

		1389					2689	
	1567	1237			2469			
			4455					
	2789			3468			1259	
								2579
					3578		2478	
								1349

			2489					
		2346					1468	
		3467						
					2567	2578		
		1359		2457				
						1569		
	4689			1349				
			5677	4678				

	2469		2569					
	1479							
	1359						2458	1478
			1247	2456				
					2345			
	1458						2678	
							2479	

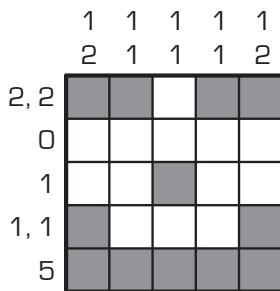
22 Sudoku Xtra

>> Hanjie

Shade in cells in the grid to reveal a picture while obeying the clue constraints at the start of each row or column.

> Numbers outside provide, in order, the length of every run of consecutive shaded cells in each row or column.

> There must be a gap of at least one empty cell between each run of shaded cells in the same row or column.



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

3														
1, 7														
2, 4, 4														
5, 2														
1, 2, 2														
1, 2, 1														
6														
0														
6														
1, 2, 1														
2, 2, 1														
2, 5														
4, 4, 2														
7, 1														
3														

1 2 1
 2 4 2 1 2 2
 3 3 3 2 3 2 2 1 7 6 4 10
 2 2 1 12 1 1 3 1 1 2 1 4 1 2

2														
3, 1														
2, 4														
1, 2, 3														
5, 2, 1														
3, 2, 1														
2, 1, 2, 1														
2, 3, 2, 1														
3, 3, 1, 1														
2, 1, 2, 1, 1, 2														
1, 4, 4														
3, 2														
4, 2														
1, 2, 1, 1														
5, 2, 1, 2														

Clue (top):
 Round and round

Clue (bottom):
 Black and white pals

>> Dominoes

Can you place a full set of dominoes into each grid?

1	2	1	3	3	2	2	1
4	4	0	0	0	6	5	5
5	4	3	0	4	4	4	2
1	5	1	5	3	2	2	2
4	6	1	5	6	6	6	3
4	1	6	5	0	3	2	0
6	1	0	5	0	6	3	3

0	1	2	3	4	5	6	
							0
							1
							2
							3
							4
							5
							6

> Draw along the dashed lines to indicate where each domino is placed.

> Use the chart to check off dominoes you've already placed.

> 0 represents a blank on a domino.

> Each domino occurs exactly once in each grid.

1	4	1	4	3	3	6	1
1	6	1	6	6	6	2	5
0	5	6	5	2	1	3	0
2	4	3	4	2	5	2	0
4	0	4	6	6	1	2	3
3	2	4	0	5	4	0	0
1	3	3	5	5	0	5	2

0	1	2	3	4	5	6	
							0
							1
							2
							3
							4
							5
							6

3	5	0	1	2	3	3	6
1	3	4	4	1	2	4	2
4	4	4	2	3	1	0	6
2	1	0	4	5	1	0	5
5	5	5	0	5	1	6	6
0	2	4	6	5	6	3	3
0	6	1	3	2	2	6	0

5	3	5	0	6	4	0	4
5	0	3	5	2	2	2	3
4	4	4	4	4	6	3	3
3	2	6	1	2	1	1	2
1	6	5	5	1	5	5	2
1	6	1	0	6	0	3	0
0	6	3	2	1	0	6	4

0	1	2	3	4	5	6	
							0
							1
							2
							3
							4
							5
							6

24 Sudoku Xtra

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

>> Sudoku 6x6 Variety Pack

Place 1 to 6 once each into every row, column and bold-lined region.

- > Puzzle 1: Regular Sudoku 6x6
- > Puzzle 2: Obey the inequality signs: arrows points to smaller numbers
- > Puzzle 3: Toroidal jigsaw - regions wrap around the outside of the grid
- > Puzzle 4: No digit can repeat on either of the two grey main diagonals
- > Puzzle 5: White bars show **ALL** consecutive value neighbours (e.g.1&2)
- > Puzzle 6: Killer Sudoku Pro (see P.27; no digits repeat in any killer cage)

			5		
	1				6
				2	
	3				
5				3	
		6			

		>		>	
				>	>
^				<	
	>	>			
^	^	<			

			1		
	2			5	
3					
					6
	1			6	
		5			

		6			
			4		
	2				1
3				4	
		3			
			3		

		5			
				4	

r4-	r12x		r1-	r9+	
	r7+		r3÷	r5-	
r3x		r2÷	r20x		
r24x	r2-		r4+		
		r4-	r30x	r8x	
r4-		r2-			

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new puzzles online every day

Sudoku Xtra 25

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

>> Sudoku Extra Region [Points] [Squares]

Place 1 to 9 once each into every row, column, shaded area and bold-lined 3x3 box.

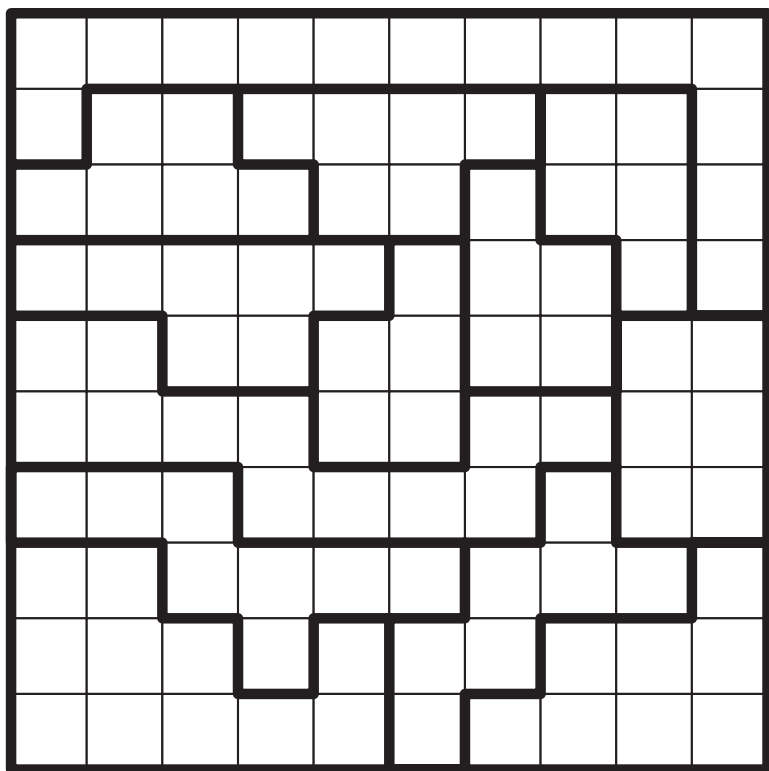
	1		2				8	
7							1	9
	3							
			5		2			4
8			7		1			
							7	
9		5						2
	8				5		6	

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

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

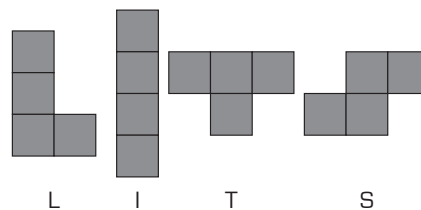
					7			
3					4	5		
8							4	
2				9				1
7				6				9
	4							6
		8	7					2
			3					

26 Sudoku Xtra



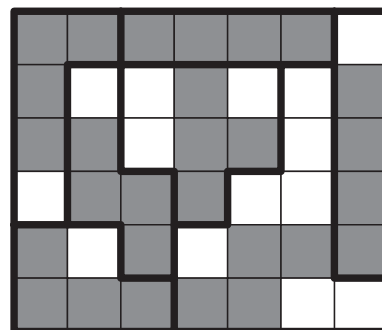
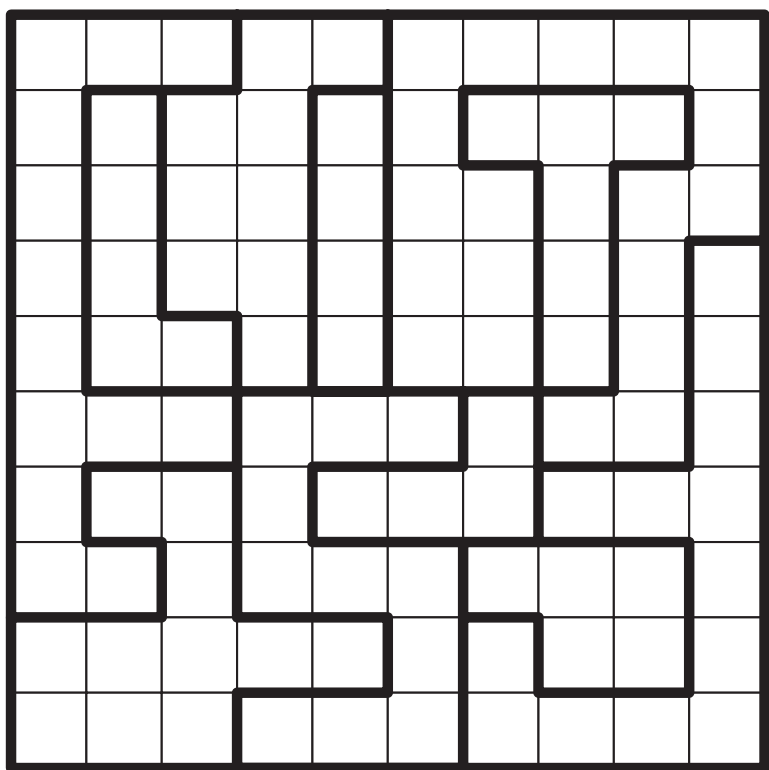
>> LITS

Shade four touching cells in each bold-lined region to form one of the four tetrominos: L, I, T or S.



- > Identical tetrominos cannot touch (share an edge). Tetrominos can be reflected or rotated, but different rotations/reflections still count as the same tetromino.
- > There can be no solid 2x2 area of shaded cells anywhere in the grid.
- > The shaded cells must form one continuous area.

"LITS"



For more Sudoku variants check out my puzzle blog at www.garethmoore.co.uk

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

>> Mystery Killer Sudoku Pro [Zero]

Place 1-9 once each into every row, column and bold-lined 3×3 box.

- > No digit may be repeated in any dashed-line cage, and each dashed-line cage must result in the given value when a particular operation is applied between all of the digits in that cage. That operation may be addition, subtraction, multiplication or division – it is up to you to work out which.
- > For subtraction and division operations, start with the highest digit in the cage and then subtract or divide by the other digits in that cage.
- > In the final 'Zero' puzzle not all cells are covered by cages.

r12?		r9?		r72?	r11?		r23?	
	r21?	r9?			r15?		r3?	
		r5?		r120?	r16?			
r15?		r10?			r36?		r288?	
r72?			r56?		r15?		r2?	
	r10?	r14?			r22?	r280?		
			r13?					
r12?		r4?	r14?	r7?		r4?		
r48?						r12?		

r13?	r30?		r96?	r10?		r1?	r72?	
	r4?					r5?	r2?	
r4?			r1?	r15?				
r12?		r35?		r26?	r56?		r45?	
	r20?					r5?		r17?
			r1?		r2?			
r35?	r8?	r72?	r42?			r4?		
			r3?	r9?		r20?		r2?
r3?						r6?		

r4?		r4?	r10?	r40?	r11?	r35?	r13?	
r0?			r1?					
	r54?	r504?		r3?		r18?	r1?	
r19?				r5?	r10?	r12?		
		r15?	r2?			r32?		
r11?	r3?				r18?	r9?		
		r4?	r13?		r14?		r60?	
r8?	r40?		r2?			r7?		
				r6?		r15?		

		r336?		r16?		r18?		
		r144?						
r36?		r35?				r64?		
r22?								
						r3?		
r18?	r0?		r70?	r6?			r15?	
				r7?		r270?		

28 Sudoku Xtra

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

>> Argyle Sudoku

Place 1-9 once each into every row, column and bold-lined 3×3 box.

> No digit can be repeated along any marked diagonal line.

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

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

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

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

Sudoku Xtra 29

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

>> Anti-King Sudoku

Place 1-9 once each into every row, column and bold-lined 3×3 box.

> No two identical digits can touch diagonally.

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

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

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

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

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>> Sudoku 12x12

Place 1 to 9 and A to C once each into every row, column and 4x3 bold-lined box.

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

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

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

>> Sudoku 15x15

Place 1 to 9 and A to F once each into every row, column and 5x3 bold-lined box.

4	6	7	3	8	1	A	F	E	D	5	C	B	2	9
5	B	F	9	E	C	2	4	8	3	A	6	1	7	D
1	D	2	C	A	9	B	7	5	6	8	4	E	F	3
A	F	5	E	C	4	7	D	6	1	2	B	3	9	8
D	7	6	B	9	3	E	5	2	8	4	F	A	C	1
8	2	3	1	4	A	F	B	C	9	7	5	D	6	E
E	C	9	4	3	7	5	8	F	B	D	A	2	1	6
6	8	A	2	F	D	3	1	9	E	C	7	5	B	4
B	5	1	D	7	2	C	6	4	A	E	9	8	3	F
2	4	8	6	D	B	9	3	1	C	F	E	7	A	5
9	1	E	F	5	8	4	2	A	7	B	3	6	D	C
3	A	C	7	B	F	6	E	D	5	9	1	4	8	2
C	9	B	5	6	E	D	A	3	2	1	8	F	4	7
F	3	D	A	1	5	8	C	7	4	6	2	9	E	B
7	E	4	8	2	6	1	9	B	F	3	D	C	5	A

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>> Sudoku 16x16

Place 1 to 9 and A to G once each into every row, column and 4x4 bold-lined box.

3	2	4	D	C	F	G	9	E	B	A	6	1	7	8	5
C	B	5	E	1	3	6	7	9	2	G	8	4	A	D	F
A	G	1	9	5	E	2	8	D	7	F	4	6	3	B	C
6	7	8	F	A	4	D	B	3	C	1	5	E	2	9	G
2	D	C	7	4	B	8	F	5	1	3	G	9	6	E	A
E	1	B	6	G	9	7	3	2	A	4	C	D	5	F	8
F	9	G	4	2	5	C	A	8	D	6	E	7	1	3	B
8	5	3	A	6	1	E	D	B	F	7	9	G	C	2	4
5	C	D	3	B	G	A	2	7	6	9	F	8	E	4	1
G	E	9	1	7	6	5	4	C	8	2	3	B	F	A	D
B	F	7	8	E	D	3	1	4	G	5	A	2	9	C	6
4	6	A	2	F	8	9	C	1	E	B	D	5	G	7	3
7	A	F	C	9	2	1	G	6	4	8	B	3	D	5	E
9	8	2	G	D	C	B	5	F	3	E	1	A	4	6	7
D	3	E	5	8	A	4	6	G	9	C	7	F	B	1	2
1	4	6	B	3	7	F	E	A	5	D	2	C	8	G	9

			2			1			A					
	F			5	D	B		A	4	1			8	
		1			8		C		6			4		
B	4			9		3		F		6			2	A
	2			F			A			9			1	
3	D	5	A								8	E	4	F
			C	D	1		6		5		8	E	7	
2							9		1					4
			3	5	B		7		8		A	D	F	
6	1	B	7								2	8	5	3
	E			2			8			D			F	
8	5			C		D		6		E			A	7
		F			C		7		A			D		
3				8	F	2		D	9	4			7	
			4				6				B			

	E		2	8	6		C	A		B	1	3		4	
	G	D	B	2	3		5	6		E	9	A	1	8	
	3													G	
		4				B			G				E		
6	1		4	C		5			3		2	G		D	8
2							F	8							C
		A				7	B	F	5				2		
	8	5	7	D	9					C	6	4	B	F	
	B	1	D	7	4					2	E	C	G	3	
		2					9	3	4	B				8	
A							D	1							6
4	6		C	B		1			8		F	D		A	2
			6				3		7				C		
		5													9
	2	G	E	6	1		9	C		5	8	7	A	B	
	9		8	G	B		2	E		1	3	F		5	

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

>> Worm Sudoku

Place 1-9 once each into every row, column and bold-lined 3×3 box.

> The values of the digits along each worm must decrease by exactly 1 in each cell from the head (marked with eyes) to the tail. For example, 8765 is valid but 8754 is not.

				6		7		
					9			
9			1					
	7					5		
8							3	
		3					9	
				3			7	
			8					
		1		9				

						6		
		6		9				
7							5	
	6						7	
	7							2
				5		1		
		8						

				3				
					9			
	9		4					
4								
		3			7			
							8	
				1		7		
		9						
			7					

			7					
				9				
								5
		4					9	
6								
				5				
					8			

	10	19	16	13	19	13	10	16	19	
14	1	8	5	6	7	9	3	2	4	9
16	3	4	9	2	8	1	6	5	7	18
15	6	7	2	5	4	3	1	9	8	18
17	8	5	4	9	3	2	7	6	1	14
19	7	9	3	4	1	6	5	8	2	15
9	2	6	1	8	5	7	4	3	9	16
18	9	2	7	1	6	5	8	4	3	15
13	4	3	6	7	2	8	9	1	5	15
14	5	1	8	3	9	4	2	7	6	15
	18	6	21	11	17	17	19	12	14	

>> Frame Sudoku

Place 1-9 once each into every row, column and bold-lined 3×3 box.

> Values outside the grid reveal the sum of the first three cells in the adjacent row or column.

	20	12	13	12	14	19	8	18	19	
9								6		12
18										16
18					3					17
19									1	15
9										12
17	6									18
12					9					13
17										17
16		3								15
	14	18	13	19	12	14	14	11	20	

	16	15	14	19	15	11	12	15	18	
23										16
13										11
9										18
17										18
10				4	8					17
18										10
15	8								5	17
16										15
14			5				4			13
	19	12	14	16	14	15	15	18	12	

	11	17	17	12	21	12	14	15	16	
17										15
13					9					12
15									3	18
12										18
10										16
23										11
14	2									14
23				1						10
8										21
	14	16	15	18	9	18	13	21	11	

	14	16	15	18	16	11	22	11	12	
15					5					21
10	1							2		12
20										12
22										10
13	7								6	17
10										18
20										9
16	7							9		20
9					3					16
	14	17	14	14	16	15	10	19	16	

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

>> Offset Sudoku

Place 1-9 once each into every row, column, bold-lined 3×3 box and offset region

> There are nine offset regions, each one consisting of the set of nine cells that are in the same relative position in a 3×3 box. So, for example, the nine cells each in the top-left position of a 3×3 box together form one offset region, and the nine cells each in the centre of a box form another.

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

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

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

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

	5	16			17	16
7	1	6		17	8	9
13	4	9	19	3	9	7
	18	1	8	9	23	
	3	4	17	4	7	6
6	2	1	3	16	9	7
4	1	3		17	8	9

>> Kakuro

Place a digit from 1 to 9 into each white cell to solve the clues.

- > Each horizontal run of white cells adds up to the total above the diagonal line to the left of the run, and each vertical run of white cells adds up to the total below the diagonal line above the run.
- > No digit can be used more than once in any run.

				6	37		5	35		4	16		8	7
		16	21	5		5			10			4		
	12			14			12			3			9	
	10			6		8			22			6		
		10			14			16						
	6	16		4	8			6		13			17	10
30						21					19			
	3		4	19		6			25					
		4					16			10				
	9				11			11				3	17	
	8			3			16			9				
			18			21								
	8	15	20			16			28	10				10
26					13			12				17	26	5
	24			13				24						
			20				8							
		3			6			4			17			
		22											7	
	17				11			9			22			
	15			5			15		5					
13			8			7		13			5			
16			13			14			3					

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

>> Thermometer Sudoku

Place 1-9 once each into every row, column and bold-lined 3x3 box.

> The value of the digits along each shaded thermometer must increase cell by cell from the bulb (lowest value) to the head (highest value). This also means that digits cannot be repeated in a thermometer.

7		●	—	9		8
				1		
9		●	—		●	●
●		●		5		●
	2		1		4	7
				2		
●		●	—	●		7
				8		
1		5	—	●		9

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

			9	●	—	●		
			8		5		9	
	4	9		●	—	●		
		5						
	7	●		●	—	●	6	
							4	
		●		●	—	●	7	8
	6		4		9			
●		●		●	—	●	8	

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

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

>> Non-consecutive Sudoku

Place 1-9 once each into every row, column and bold-lined 3×3 box.

> No two adjacent cells may contain consecutive numbers, such as 1&2 or 5&6.

6								8
			5		9			
		4				9		
		1				8		
			8		7			
8								9

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

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

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

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

3									
		1 ₁ 1 ₁			1 ₁ 1 ₁		1 ₁ 1 ₁		
1 ₁ 1 ₁				1 ₁ 1 ₁		3 ₃			
				1 ₁ 1 ₁				1 ₁ 1 ₁	
		1 ₃							

>> Tapa

Shade some empty cells to create a continuous region that obeys the clues.

- > The clues reveal the count of neighbouring shaded cells: considering the 8 cells (or less at the edges) around a clue as a circular region, the clues give the length of all shaded sets of cells in that region. If there are multiple numbers in a clue cell then the different shaded sets of cells must have at least one unshaded cell between them.
- > Tapa clues cannot themselves be shaded, and there can be no 2x2 shaded regions.

		1 ₁ 1 ₁			3 ₃			3 ₃	
		1 ₁ 1 ₁			4			3 ₃	
		3 ₂			2			3 ₃	
		2			3			3 ₃	

				5				
		4						
6	3		2					
			2		3		4	
					4			
			3					

4								
							4	
7								2
7								1
7								1

1								
	6				2			
2							8	
6							5	
	2					6		
								1

>> Nurikabe

Shade in cells so that every number in the puzzle remains as part of a continuous unshaded area of precisely the given number of cells.

- > There can be only one number per unshaded area.
- > Shaded cells cannot form any solid 2x2 (or larger) areas.
- > All the shaded cells must form one continuous area.

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

Check out the discussion forums at www.SudokuXtra.com/forum to chat about these and other puzzles with fellow readers!

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

>> [Jigsaw] Sudoku Inequality

Place 1 to 8 or 9 into each row, and column and bold-lined region while obeying the inequality signs.

- > Less than (" $<$ ") and greater than (" $>$ ") signs between some cells indicate that the values in these two cells must be greater than or less than one another as indicated by the sign. The sign always points towards the smaller number.
- > In the right-hand two puzzles irregular jigsaw shapes replace the boxes.

>> Little Killer

Place 1-9 once each into every row, column and bold-lined 3x3 box.

> The sum of some diagonals is given, with an arrow pointing to the diagonal the sum applies to.

> Note that numbers **are** allowed to repeat in a diagonal sum, subject to the usual rules of Sudoku.

				7				
6							5	
8	4				6			
15		6		9				
17								
25				5			4	
29			3					7
47		7						
45				4				

52, 33, 29, 24, 19, 14, 13, 2

33, 19, 38, 20, 23, 16, 15, 3, 37

8, 8, 18, 18, 18, 32, 32, 37

		9		8		7		
5								
10	1			6				3
13								
20	2		8			6		5
19								
31	9			5				4
46								
47			5	1		3		

45, 31, 32, 38, 13, 11, 14, 2

33, 40, 23, 18, 22, 12, 16, 6, 40

8, 5, 20, 25, 14, 28, 38, 40

9								
11								
10								
21								
24								
27								
30								
53								

31, 23, 37, 36, 16, 14, 10, 4

32, 37, 27, 34, 22, 14, 9, 3, 50

5, 9, 19, 18, 18, 31, 38, 50

>> Feedback

If there are certain puzzles you'd like to see - or even not see! - in a future issue of Sudoku Xtra then why not send me an email and let me know? Just write to Gareth@SudokuXtra.com. Alternatively head on over to the Sudoku Xtra discussion forums at www.SudokuXtra.com/forum and join in the puzzle discussion. For example if you're stuck on a puzzle, why not ask for help? There are also announcements posted periodically giving details of future issues or related content, such as the Sudoku Xtra Specials books of particular Sudoku variants.

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>> Xtra Calcudoku

Place 1 to 8 once each into every row and column.

> **Calcudoku cages** are given, where as usual there is **no restriction on repeating a number within a cage** but the given value must result when the stated operation is applied between all the numbers in that cage.

> **Circled multiplication symbols** indicate **all** adjacent cells where one cell is an integer multiple of the other, such as 1&2 or 2&8 for example.

^{1680x} 6	7	4	^{15x} 5	3	¹⁰⁺ 2	³²⁺ 1	8
2	5	^{672x} 6	^{18x} 3	³³⁺ 4	8	7	1
^{1920x} 1	4	8	6	2	5	3	7
5	3	7	1	6	²⁰⁺ 4	²⁷⁺ 8	2
4	8	2	7	1	3	6	5
³⁰⁺ 7	1	3	8	^{40x} 5	6	2	4
3	2	⁶⁺ 1	4	8	7	^{360x} 5	6
8	6	5	⁵⁻ 2	7	1	4	3

280x	630x		384x		25+		24x
		⊗	⊗				⊗
			⊗	⊗			⊗
	⊗			⊗		⊗	
		⊗	^{1008x}	³³⁺		¹⁻	⊗
	⊗		⊗	⊗	⊗	⊗	⊗
⁵⁺		⊗		⊗	⊗	⊗	¹⁵⁺
		⊗		⊗	⊗	⊗	
	²⁵⁺	⊗	⊗	⊗	⊗	³⁴⁺	
		⊗		⊗	⊗	⊗	
⊗		⊗		⊗	⊗		^{30x}
⊗	⊗		⊗	⊗	⊗		
		⊗		⊗		⊗	
		⊗		⊗		⊗	
			^{378x}				
		⊗	⊗		⊗	⊗	
		⊗		⊗		⊗	
						⊗	
							⊗

44 Sudoku Xtra

Puzzles by Elliott Line

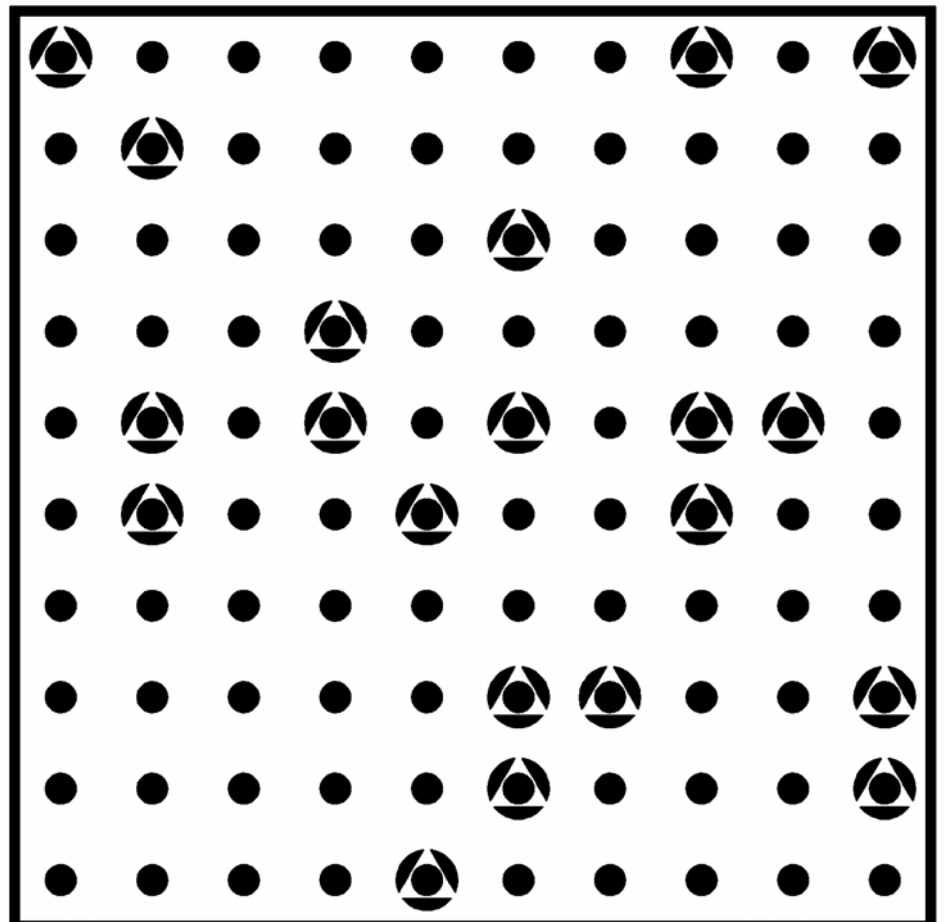
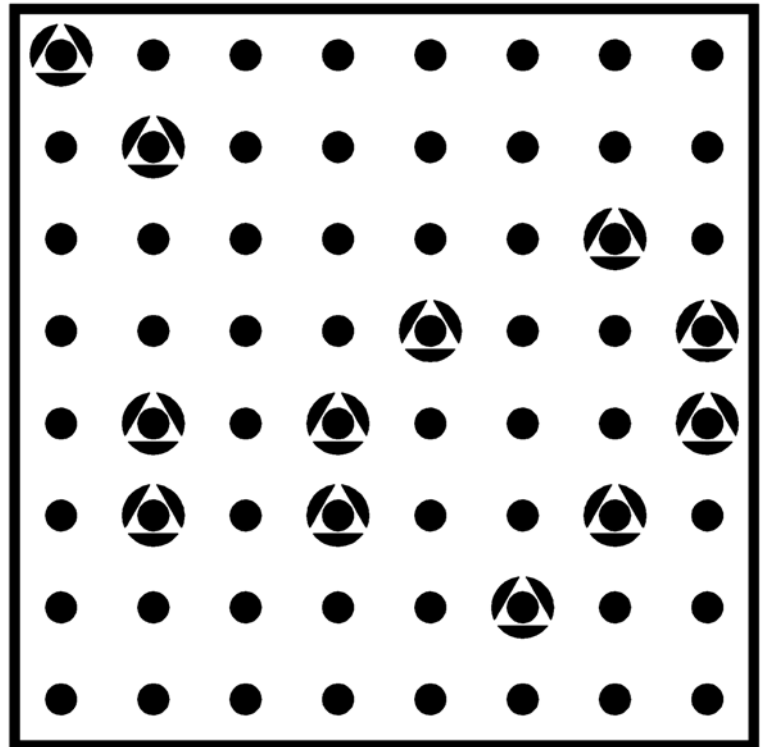
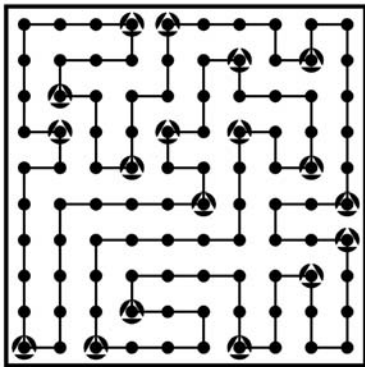


Elliott is the editor of Enigma, the International Puzzle Magazine for members of Mensa

>> Third Avenue

Draw a path that visits every dot once only.

- > The path can be made only of horizontal and vertical lines.
- > The path cannot cross itself or branch off, and must return to the start to form a complete circuit.
- > Every third turning point in the circuit path has been marked by a triangular symbol.



Sudoku Xtra 45

Puzzles by Serkan Yurekli

yurekklis.wordpress.com

>> Easy as Japanese Sums

Place the digits 1 to 5 in some empty cells so that each digit appears exactly once in each row and column.

> Clues outside the grid indicate the sum of the first set of digits encountered from the edge of the grid in the adjacent row or column. Digit sets are bounded by an empty cell or the edge of the grid, and need not touch the grid edge.

			4			8			
6	1	5	4		3	2		5	
	2	4		3		5	1		
	4		3	2	5	1			11
9	3	1	5		2		4		
		3		5	1	4	2		
	5		2	1	4		3		
7		2	1	4		3	5		
			5		3				14

Clues: Top (8, 4, 3), Right (7, 14, 3, 4), Left (2, 10, 6, 5), Bottom (9, 4, 7)

Clues: Top (9, 4), Right (10, 7, 11), Left (2, 8, 6), Bottom (10, 12)

>> Slash Pack

Divide the grid into various shapes by adding diagonal lines to some cells, such that each shape contains all of the numbers 1 to 5 once each (1 to 3 in the example).

> Lines must join to each other or the edge of the grid at both ends.
> Two diagonals cannot cross in a single cell.

		1				
3		1				2
2		1				3
		2	3			

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

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

46 Sudoku Xtra

Puzzles by Jim Bumgardner

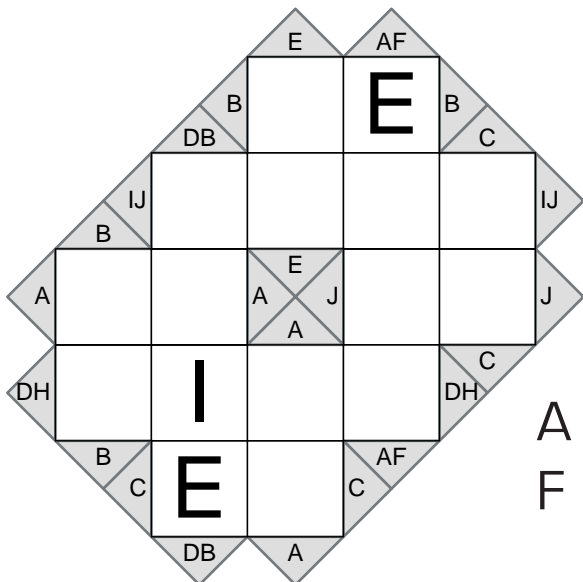
krazydad.com/puzzles

>> Krypto Kakuro

Krypto Kakuro puzzles are a cross between a crossword, a sudoku and a cryptogram.

> Each digit has been substituted with a letter. To solve the puzzle, you must figure out what digit each letter stands for, and then solve it like a regular kakuro puzzle.

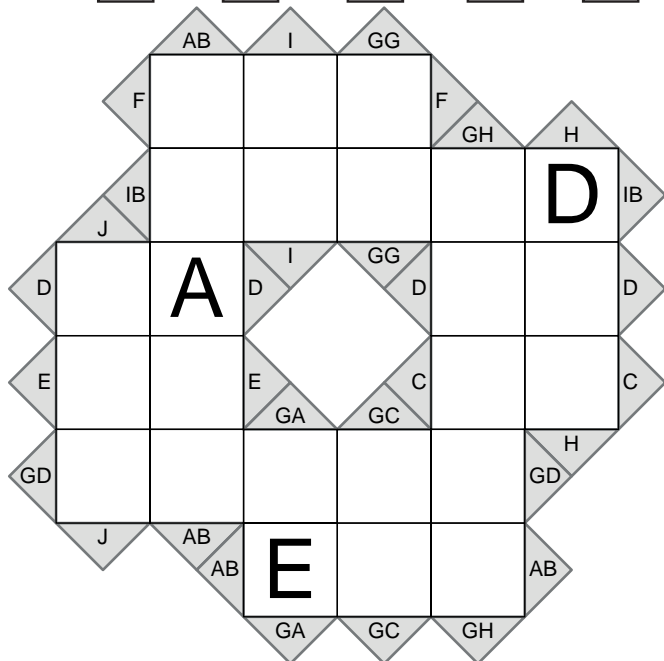
> Each "word" in the crossword contains only the digits 1 thru 9, and the same digit will never repeat within a word. The sum of the digits of each word are shown on the left and right sides of "across" words, and at the tops and bottoms of "down" words.



A B C D E
 F G H I J

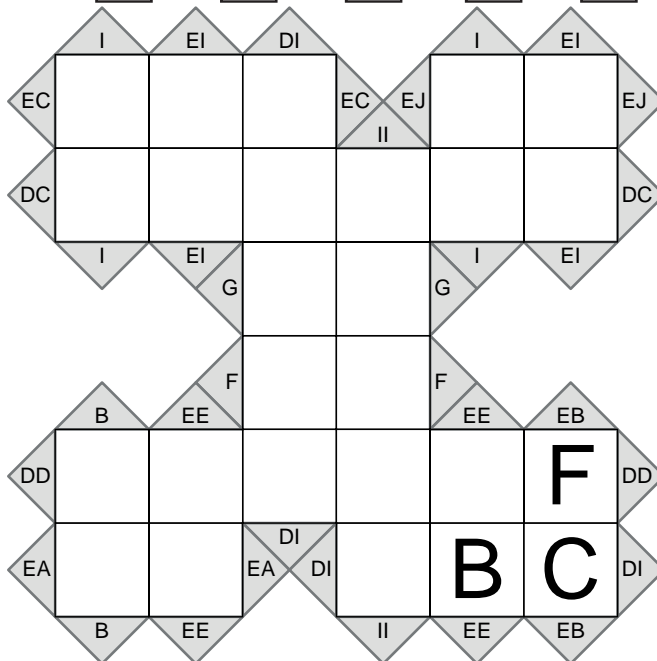
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A B C D E
 F G H I J



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A B C D E
 F G H I J



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Sudoku Xtra 47

Puzzle by Jim Bumgardner

krazydad.com/puzzles

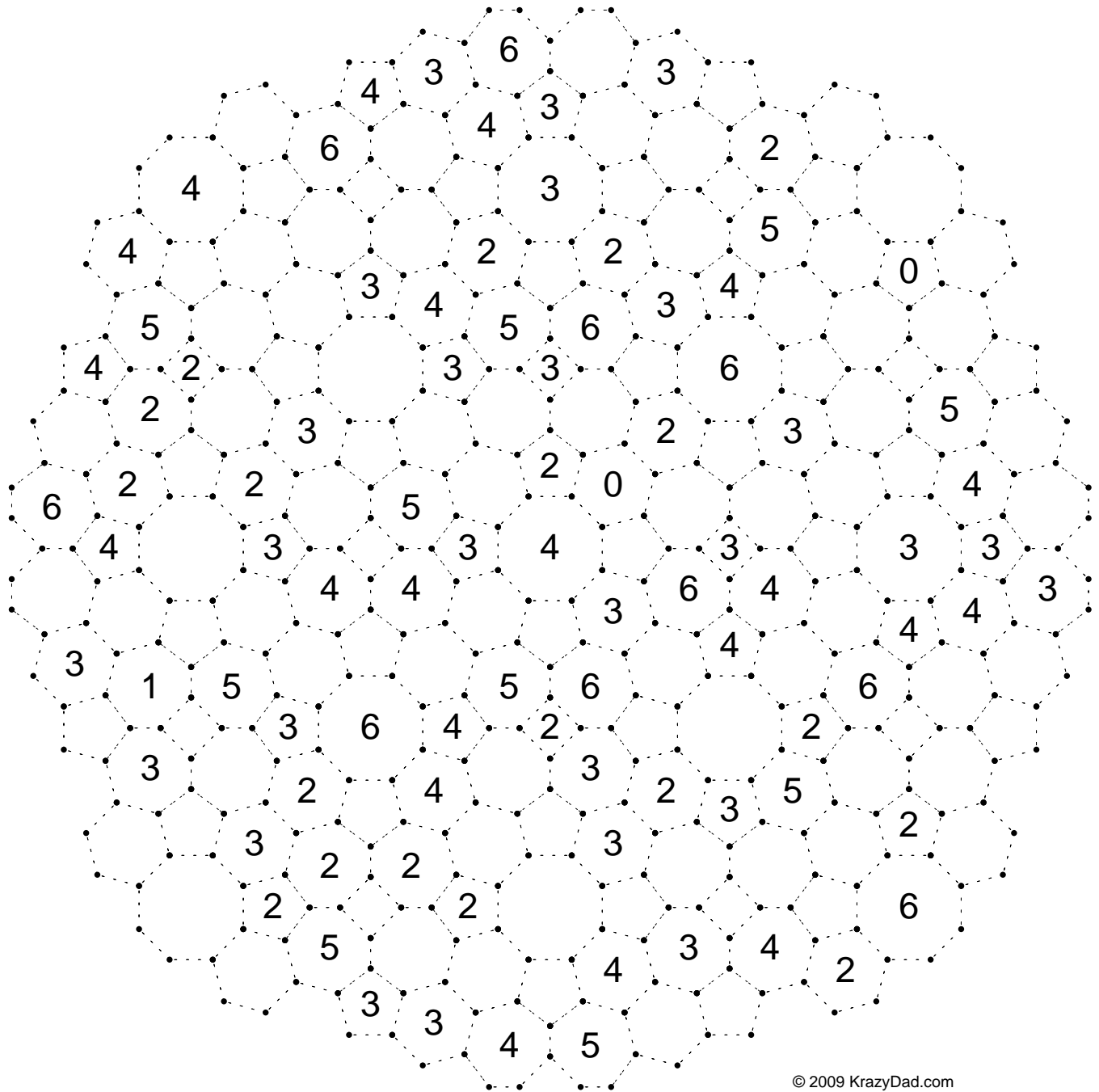
>> Altair Slitherlink

Fill in some of the dotted line segments to form a meandering path that forms a single loop.

> The path does not cross itself, branch, or touch itself at corners. The numbers indicate how many line segments surround each cell. Empty cells may be surrounded by any number of line segments.

This tiling is from a traditional Islamic design and appears in the books "Altair Design" by E. Holiday and "Arabic Geometrical Pattern and Design" by J. Bourgoïn.

Need some solving help? Visit krazydad.com/slitherlink

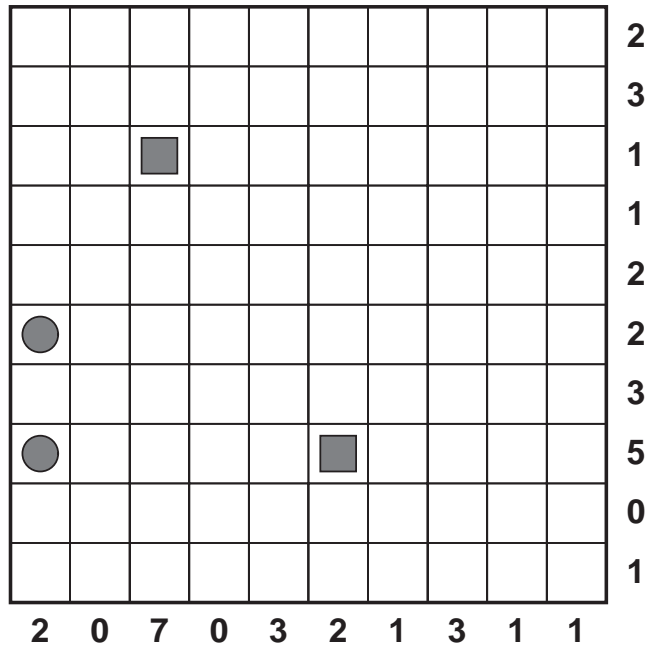
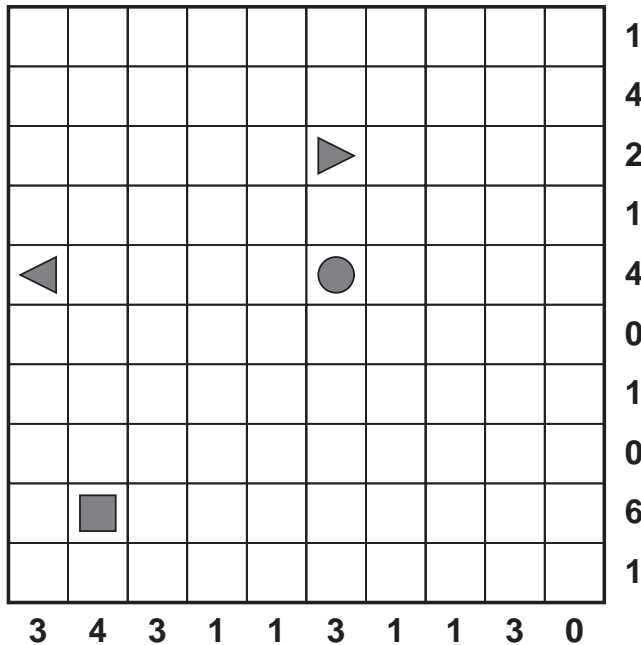
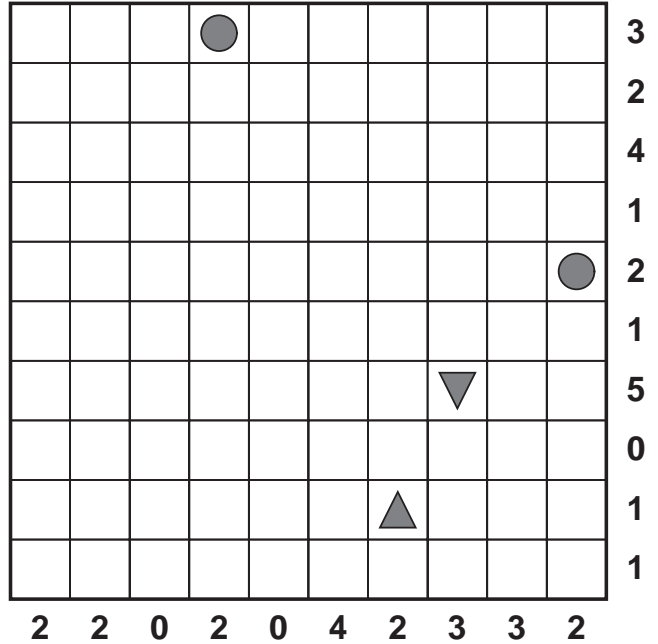
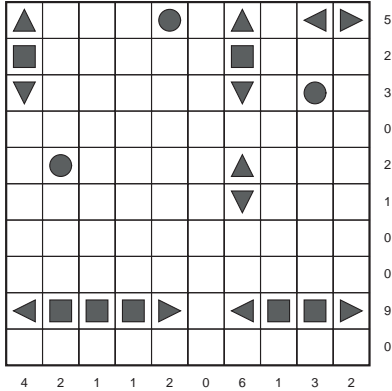


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>> Battleships

Locate the position of each of the listed ships in the grid. Ships are horizontal or vertical only.

- > Numbers around the edge tell you the number of ship segments in each row and column.
- > Ships are surrounded on all sides by water (empty cells), including diagonally.



>> Tiktaka

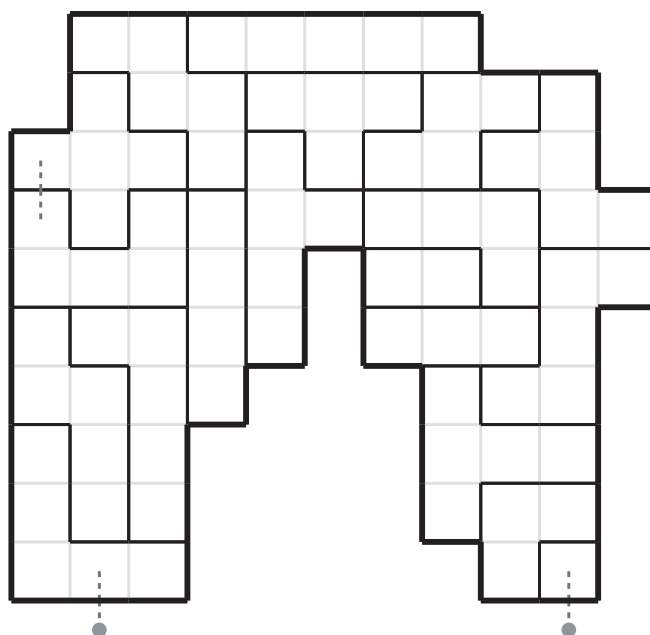
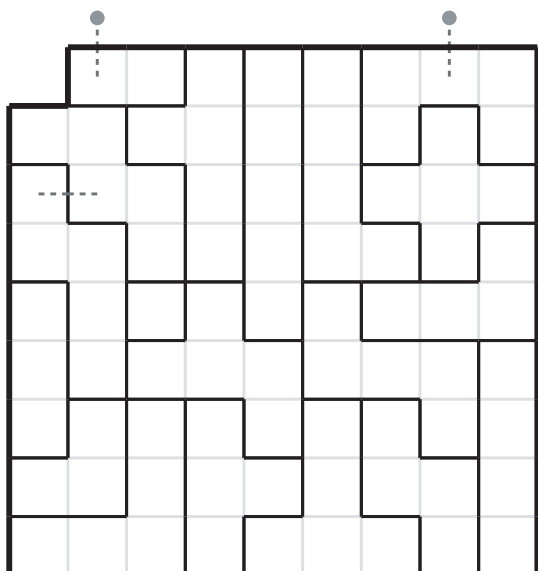
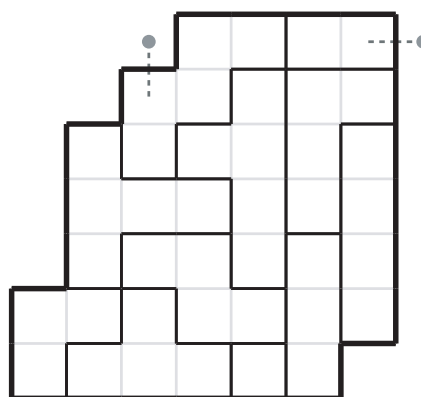
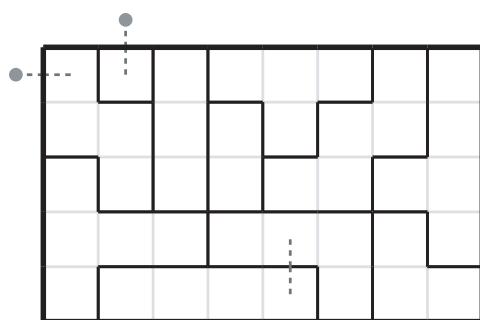
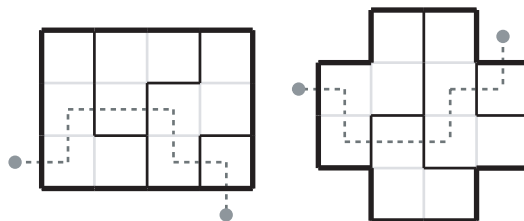
Find a path from the entrance to the exit of each grid such that each pair of grids has the same path for each shape.

> Every path must pass through each shape exactly once.

> Each grid in the pair consists of the same set of shapes.

The route through each shape must follow an identical path in both grids.

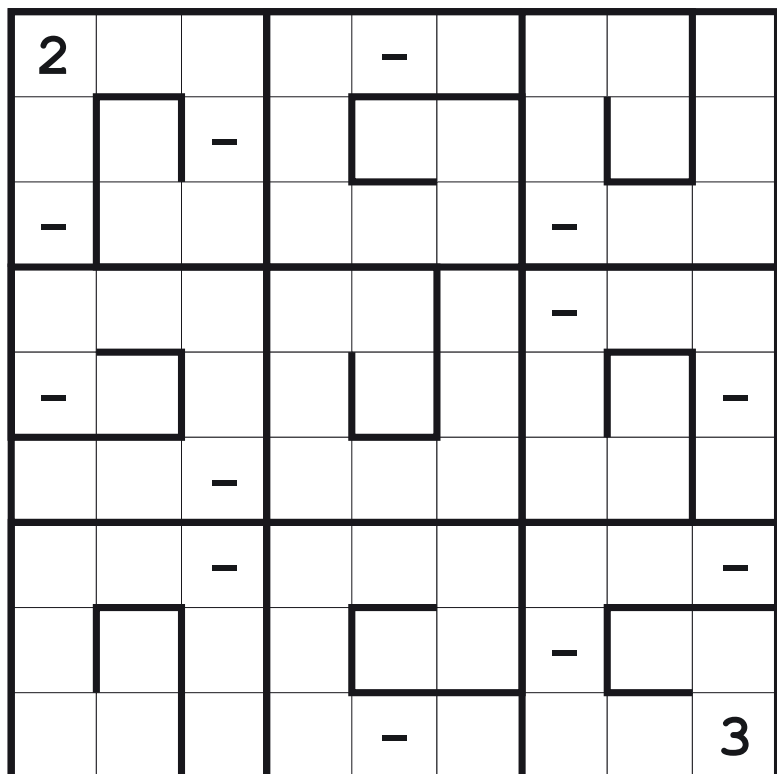
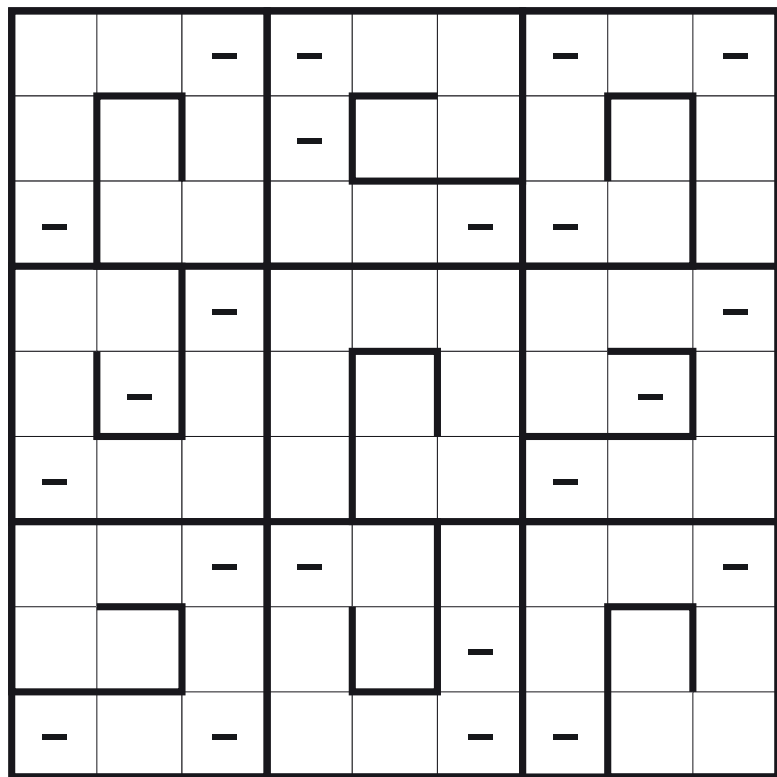
> Shapes, and therefore their paths, may be rotated or reflected between a grid and its pair.



50 Sudoku Xtra

Puzzles by Serkan Yurekli

yureklis.wordpress.com



>> Snail Sudoku

Place 1-4 into some empty cells so that each digit appears exactly once in each row, column and bold-lined 3x3 spiral.

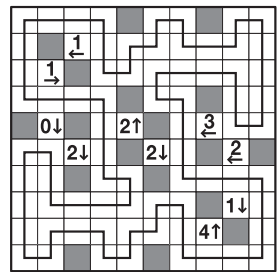
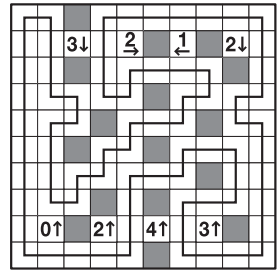
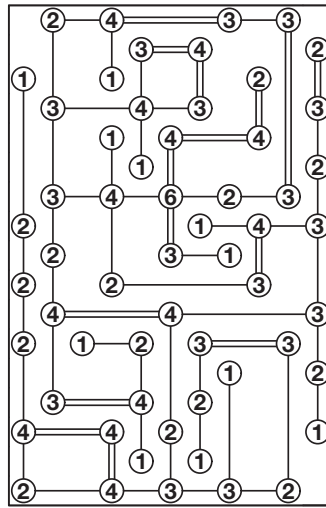
- > Digits must be placed in increasing numerical order within each spiral, from the outside to the centre.
- > Digits cannot be placed in cells marked with a '-'.

1			-	4	3	2		
2			3			4	-	1
	3	4	2	1				
	1	2	-	4	3			
	4	3		-		1		2
			1	2	-		4	3
	2		4	3			1	
3	-	1			2			4
4				-	1	2	3	

>> Solutions for pages 1 to 5

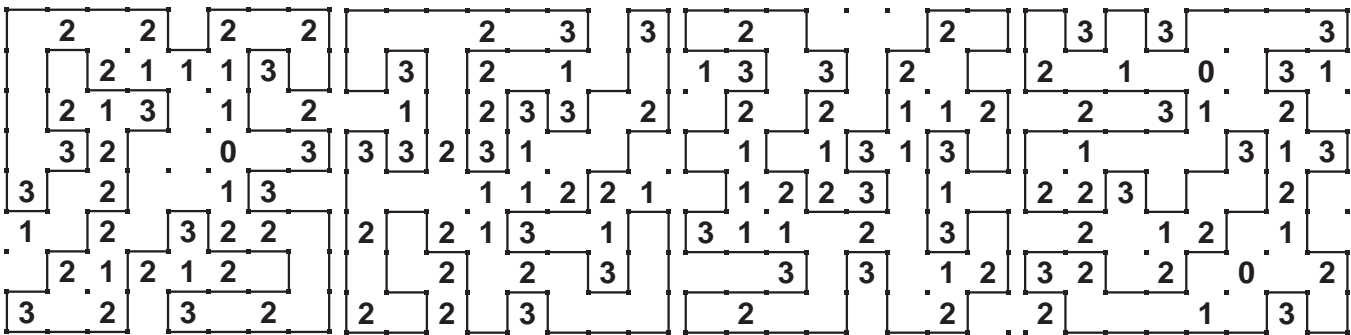
For more puzzles check out
www.puzzlemix.com

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



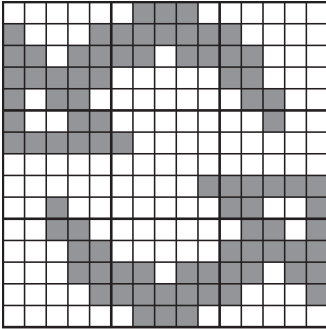
3	1	6	4	5	2
6	5	3	1	2	4
5	2	4	6	3	1
2	6	1	3	4	5
4	3	5	2	1	6
1	4	2	5	6	3

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

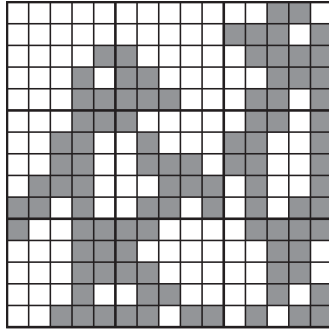


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>> Solutions for pages 22 to 26



Circular arrows



Penguins

1	2	1	3	3	2	2	1
4	4	0	0	0	6	5	5
5	4	3	0	4	4	4	2
1	5	1	5	3	2	2	2
4	6	1	5	6	6	6	3
4	1	6	5	0	3	2	0
6	1	0	5	0	6	3	3

1	4	1	4	3	3	6	1
1	6	1	6	6	6	2	5
0	5	6	5	2	1	3	0
2	4	3	4	2	5	2	0
4	0	4	6	6	1	2	3
3	2	4	0	5	4	0	0
1	3	3	5	5	0	5	2

5	3	5	0	6	4	0	4
5	0	3	5	2	2	2	3
4	4	4	4	4	6	3	3
3	2	6	1	2	1	1	2
1	6	5	5	1	5	5	2
1	6	1	0	6	0	3	0
0	6	3	2	1	0	6	4

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

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

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

Nurikabe is the latest puzzle added to puzzlemix.com

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

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

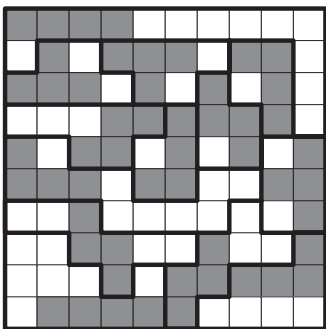
1	2	6	3	4	5
5	4	3	2	6	1
3	1	4	5	2	6
6	5	2	4	1	3
4	3	1	6	5	2
2	6	5	1	3	4

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

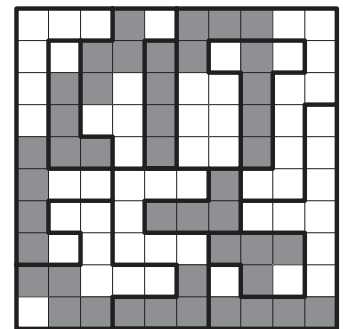
4	2	3	7	6	8	9	5	1
8	9	5	1	4	2	3	7	6
6	7	1	9	5	3	4	2	8
5	3	9	6	2	1	8	4	7
7	4	2	3	8	5	1	6	9
1	8	6	4	9	7	2	3	5
9	5	4	8	3	6	7	1	2
3	6	7	2	1	9	5	8	4
2	1	8	5	7	4	6	9	3

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

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



For more Sudoku variants check out my puzzle blog at www.garethmoore.co.uk



58 Sudoku Xtra

>> Solutions for pages 36 to 41

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

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

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

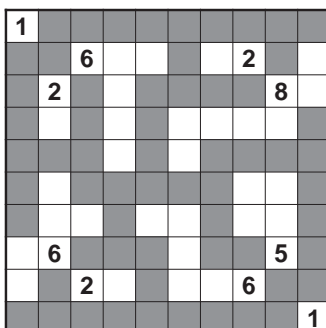
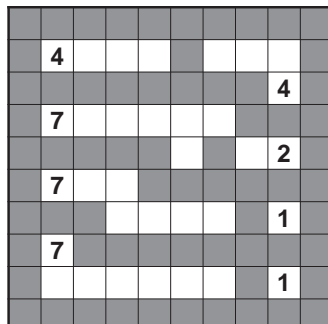
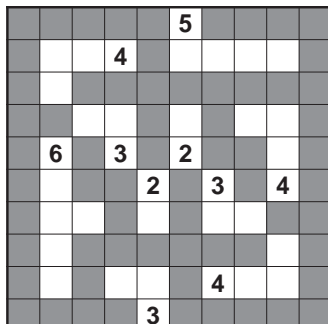
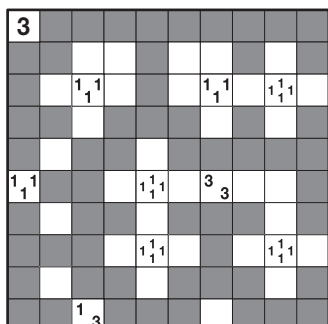
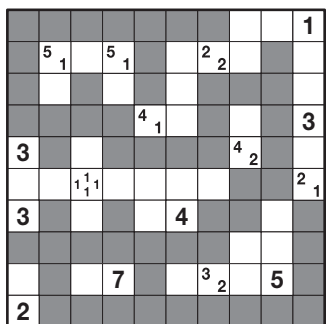
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3	5	1	2	6	8	7	9	4
4	6	8	5	9	7	2	1	3
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5	4	3	1	8	2	9	6	7
6	9	2	7	3	5	8	4	1
8	1	5	6	2	4	3	7	9
2	7	4	3	5	9	1	8	6
9	3	6	8	7	1	4	2	5

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

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

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

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

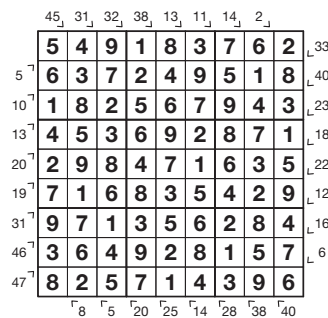
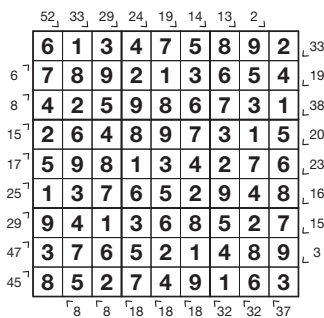


7	2	4	5	1	8	6	3
6	1	3	8	7	2	5	4
5	8	1	3	2	7	4	6
2	4	7	6	5	1	3	8
1	7	6	4	8	3	2	5
3	5	8	2	4	6	7	1
8	3	5	7	6	4	1	2
4	6	2	1	3	5	8	7

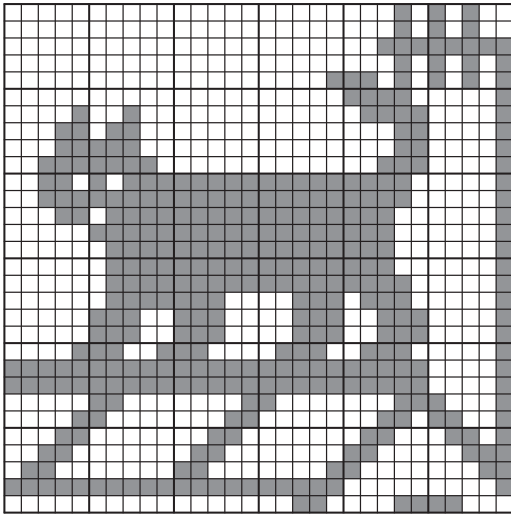
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5	7	2	6	1	3	4	8
6	1	7	4	8	5	3	2
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4	5	8	7	6	1	2	3
3	8	6	2	4	7	1	5
2	6	1	5	3	8	7	4
7	4	3	1	5	2	8	6

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

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

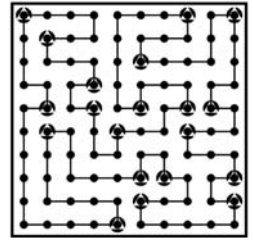
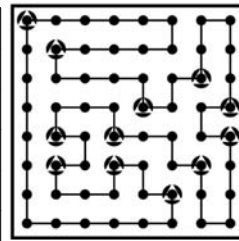


>> Solutions for pages 42 to 50



Cat on a roof

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



8 4 3

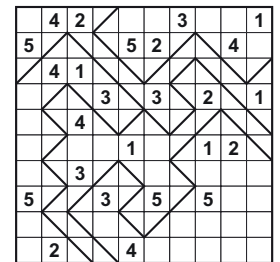
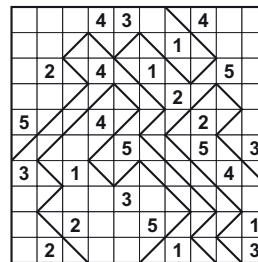
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1	2	4	3	5	14
1	4	5	2	3	3
2	2	1	3	5	4
10	3	5	2	4	1
6	4	2	5	3	1
5	5	3	4	1	2

9 4 7

9 4

5	4	3	1	2	10
2	5	4	1	3	2
2	3	5	4	1	7
3	4	1	5	2	7
4	2	1	5	3	11
1	3	2	4	5	11
6	1	5	2	3	4

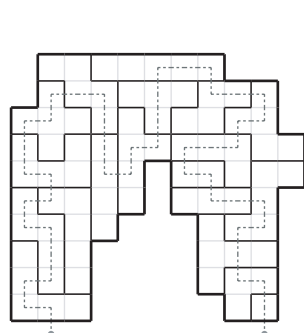
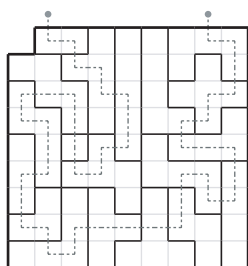
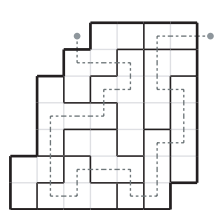
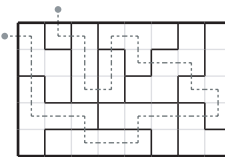
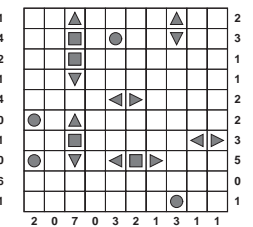
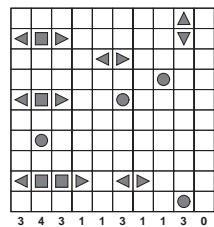
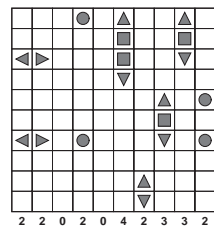
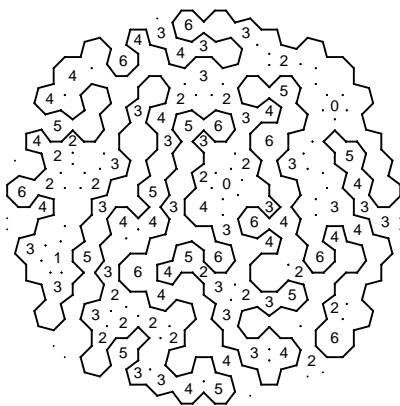
10 12



6	30		
7	1	6	7
8	5	9	7
2	1	8	1
5	2	1	7
6	2	8	3

20	3	11				
7	1	2	4	7	9	
8	1	7	9	5	30	
3	2	4	1	5	5	
2	6	1	3	4	4	
1	3	4	5	2	15	
8	9	3	20	12	14	19

3	13	23				
2	8	9	1	9	10	
1	5	8	9	2	4	29
1	7	8	3	13	3	
2	5	7	11	16	22	
1	2	3	4	5	7	22
5	9	8	6	9	14	23



2	-	-	3	4	-	1	-
1	3	-	-	2	4	-	-
-	4	2	1	-	-	3	-
4	-	1	-	2	3	-	-
3	-	1	-	-	4	-	2
-	2	-	4	3	-	-	1
4	3	-	-	1	-	2	-
-	2	4	-	-	1	-	3
-	1	-	3	2	-	-	4

2	3	-	4	1
1	-	4	3	2
-	4	1	2	-
3	2	4	-	1
-	4	3	1	2
1	-	2	3	4
2	-	3	4	1
3	1	2	-	4
4	-	1	-	2

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