## Example Sudoku Puzzles

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A Sudoku puzzle consists of a 9 by 9 array of squares, some of which have numbers in them, the numbers ranging from 1 through 9. The problem is to fill in all the squares such that each row, column, and 3 by 3 box includes the numbers 1 through 9 with no repetitions.

This is a collection of some 54 Sudoku puzzles which I have culled from various places. The sources include, among others: the *Sudoku Solver* [SSBL] website (labelled SE, SM, SH and SVH), *The Daily Telegraph* [Mep05] (labelled TG, TM, and TT), *The Seattle Times* (labelled ST), and some automatically generated by the createsudoku package [Wil06] (labelled CS).

You can try solving them yourself and/or get LaTeX to do it for you. The solvesudoku package [Wil06] is able to solve most, but not all of the puzzles. Other LaTeX packages may do better or worse.

The puzzles are presented in approximately increasing order of difficulty. Each source, though, has its own set of categories which don't necessarily agree with each other (and sometimes not within one source). I have included an indication of the difficulty as stated by the relevant source.

The parameters for the puzzles created via createsudoku are given in the table.

Number	Seed	initialelimination
CS1	1505263462	\elimcrossandexandnines
CS2	1495929734	\elimcrossandex
CS3	1487762722	\elimcrossandexandnines
CS4	1508763610	\elimcrossandex
CS5	839068723	\elimseventeen
CS6	833235143	\elimcrossandexandnines

EASY

			SI	E5 (eas	sy)			
	2				5	8	6	3
5	6		2		3		9	
	3				7	2	5	1
		9	7	5				
		6			4	7		9
	7			2	8	6		
6		5	8				7	
8					1			6
3		7		6			4	
			SE	10 (ea	sy)			
		6		4	9	7		
	8	2		1		6		
7	9			8		1	4	5
6	4	9		5		2	7	
		7		6			5	
	3			7	2		9	6
	2					8	1	
	7			2	8			
						5		7

			SE	15 (ea	sy)			
4		6	7		3	9		2
		1	6		8	4		
	7				4			1
5				4		2	1	
	2						6	
	6	8		7				9
6			5				9	
		2	4		9	3		
9		5	3		1	7		4
			SE	20 (ea	sy)			
3	6		9			5		
		5	4		8		2	
					7	8		9
2					3		6	8
	8	3		9				
	4		7			2		3
6		7	1			3		
1	3		8		5	9		2

			SE	25 (ea	sy)			
				6	3		5	
6		5		1		8	3	9
		1				2		
8	2	3				7		
	5				7			
	6	4		9				1
4		2	5	7	9	6		3
	9		1		6	5		8
	1				8	9		7

SE30 (easy) 

			TG	5 (gen	tle)			
	6		1		9		8	
	1	9				7	4	
2								1
		7	9		2	6		
	3						2	
		1	4		3	5		
1								5
	7	5				2	3	
	9		5		6		7	

TG10 (gentle) 

TG15 (gentle)

			1	(801	8			
	5	7				1	8	
9	8						2	6
		6	7	4	1	9		
		4	2	5	3	6		
7	2						9	4
	1	9				7	3	
			3		9			

TG20 (gentle)

			7	zo (ger	9			
	8		3		6		5	
7		9				6		8
		4	2		1	8		
	6						4	
		3	5		4	1		
9		2				5		7
	4		8		7		1	
			1		2			

TG25 (gentle)

7			4	20 (gc)		5		
	6	1			5		7	
	9		7		1			6
8				2	7			
			3	4				1
1			8		2		3	
	7		1			6	2	
		3			9			7

TG30 (gentle)

3	7		4	oo (ger	/			
9					6	1		4
				2	3			
	4		1			9		
	1	2				7	9	
		5			7		4	
			3	6				
4		3	2					6
					9		5	7

			ST12	226 (1)	star)			
9					4		3	1
7	4	5	2					
	8			6	7	4		
	2	6		4				5
5			6		9			8
4				2		3	7	
		7	5	9			6	
					1	8	2	3
2	1		3					7

			ST02	206 (1	star)			
1	7		4	2				5
		2		1			9	6
8	4	9			3			
				7	1	8		
	2	5				6	7	
		8	2	6				
			5			7	4	9
5	3			9		1		
6				4	8		2	3

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

ST0213 (1 star)

# CS1 (level 2)

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

			CS	2 (leve	12)			
	7		3		2	6	5	
			6			9		7
6	4		9		8		2	
		9				7	6	5
7	5	6				4		2
2	9		5				7	6
			2		1	5		3
		4			7		1	

			CS:	3 (leve	12)			
	5		8		7	1		
		3	5					
7	8		2		1		5	6
	3	4				8		1
8		1				5	6	
	4		7		6		1	2
			4		3	6		8
	7	8	1			3	4	

MODERATE 11

			SM5	med	ium)			
		7	6			2	4	
	4	6					9	
9	2			8	5			
8					2	9		
		3				4		
		4	9					6
			7	3			2	4
	5					8	6	
	3	2			6	7		

## SM10 (medium)

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

			SM1	o (med	lium)			
8	5				4			2
4				2		9		
			8				7	
		6						1
	4			8			3	
2						5		
	3	4			7			
	8	7		9				6
6			1				4	7

#### SM20 (medium)

			SM2	5 (med	lium)			
			4		7	9		
7		6				2		
		5			8	3		6
5	6			2	9	8		
		8			1			
	3		7					5
							3	8
				9	3			
	4		5					

			SM30	) (med	lium)			
		5	8					
				7	9			
		4	6	1			7	
	5		3					4
	2	3				6	5	
9					8		3	
	3			5	7	2		
			4	2				
					6	1		

		TM35	(mod	erate)		
5		3		8		6
	4		5		8	
2	8				1	5
	6	2		7	4	
	9	4		3	2	
9	5				6	4
	2		1		9	
1		8		9		2

TM40 (moderate) 

			TM45	(mod	erate)			
	1		2		8		3	
		8	7		9	4		
9								6
		9		8		5		
6								3
		3		5		6		
2								7
		7	3		5	1		
	6		4		7		9	

TM50 (moderate)

		111100	(	cracej		 
		9		2		4
4		3		5		
3					7	6
6		8			3	
1	3				9	7
	9			7		2
9	5					8
		2		9		1
2		7		4		

			TM55	(mod	erate)			
7								
2	4		1		8			
	6			7	2			3
		4		2	9		8	
	7						6	
	9		4	6		7		
1			6	8			3	
			3		7		9	1
								6

TM60 (moderate)

	ST0914 (2 stars)											
	6		2	9			8					
		8					3					
	1			7	8							
	2	1	7		9			8				
6								3				
7			6		4	9	2					
			1	2			4					
	7					3						
	5			8	6		7					

#### ST0207 (2 stars)

CS4 (level 4)											
			4		5	9	7				
		6	7		8	3		2			
7	8		1		2		4	5			
8	9	1				7	5				
5	6	7				4	2	3			
	1				4		6	7			
		8	9		1	5					
	4					2	9				

	CS5 (level 4)												
			6			9	7	8					
		4	9	8				2					
	9	7		2	1								
		8	4		2	7							
	7						2	3					
3				6				9					
7		6			9	5							
			8	7				1					
	2			4		8	6	7					

MODERATE 19

	CS6 (level 4)											
	1	2	6		4		7					
6		5			7	3		2				
	7		3		1		4					
7	5	6				4	2	3				
1	8							6				
	3		8		6			1				
2		1						7				
		7	2				3					

	SH5 (hard)											
		9			5							
4	7				2							
	8	3	6		4		1					
	1	5					8					
			3		7							
	2					7	4					
	4		5		1	8	7					
			7				5	2				
			2			1						

SH10 (hard) 

SH15 (hard)											
2			9								
	7			6			5	9			
			4				6	1			
7		1			2			4			
				4							
8			1			9		6			
1	2				3						
5	3			2			7				
					9			2			

SH20 (hard) 

			SH	25 (ha	rd)			
4					1			8
		7		3	8	4	5	
		2	4				1	
2	8		9					
		4				5		
					4		8	6
	4				9	2		
	2	1	3	4		8		
9			6					1

SH30 (hard)

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

TT10	0 (to	ugh)

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

TT105 (tough)

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

TT110 (tough)

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

TT115 (tough)

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

TT120 (tough)
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		8		1	9	7		
	4		6	7		8		
		2			4	6	1	
	9					1		8
2		1					9	
	7	5	9			4		
		4		5	2		6	
		9		3		5		

ST1130 (3 stars)

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

ST1207	(3)	stars	)
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			4	8	3			6
					5	7		2
						3	8	
		8			1	6		
	2	6		5		1	7	
		5	7			2		
	8	2						
9		1	8					
4			5	2	7			

ST1209 (5 stars)

			6	03 (8 )	,			
	4			8			5	
	5	1	9			2		8
		7	2	9				3
	9						1	
4				6	7	9		
6		8			9	5	7	
	7			2			9	
					4			

ST1221	(3	stars)	ĺ
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			O 1 1 2	21 (3)	Jears)			
					3	9	2	
4					5		7	
2	9		4				6	3
		4					5	
			2		1			
	5					3		
7	4				2		9	6
	6		5					7
	2	1	7					

## ST1228 (3 stars)

6			1	20 (0 .	Í	5		
						3	7	9
	9	4	2					
		5				8		3
	4						9	
9		7				6		
					6	2	3	
1	3	8						
		6			8			7

ST0126 (4 stars)

		3	6	20 (4)	,		7	
1				3	5	2		
		4						
		6					2	9
7								4
3	2					5		
						1		
		8	2	4				5
	4				9	3		

ST0127 (5 stars)

2	5		8	21 (0)	,			
				9		8		2
9			4		7			
6	4						9	
	9		1		3		4	
	7						2	1
			5		4			7
7		6		8				
					1		8	3

ST0204 (6	stars)
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				01 (0 )				
	5			2		8		6
					6			3
	6			1	3	2		
	7					9	6	
4								1
	1	6					3	
		7	2	3			8	
6			7					
2		4		9			7	

## ST0208 (3 stars)

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

ST0209 (4 stars)											
		9									
	5	2	3		1						
8		1	2		6						
		4					1				
9	7			2			8	4			
	2					9					
			8		4	1		5			
			6		5	2	4				
						8					

SE5 (	easy	SO.	lution
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				v				
7	2	4	1	9	5	8	6	3
5	6	1	2	8	3	4	9	7
9	3	8	6	4	7	2	5	1
1	8	9	7	5	6	3	2	4
2	5	6	3	1	4	7	8	9
4	7	3	9	2	8	6	1	5
6	4	5	8	3	9	1	7	2
8	9	2	4	7	1	5	3	6
3	1	7	5	6	2	9	4	8

## SE15 (easy solution)

			- ( -	J		- /		
4	5	6	7	1	3	9	8	2
2	3	1	6	9	8	4	7	5
8	7	9	2	5	4	6	3	1
5	9	7	8	4	6	2	1	3
1	2	4	9	3	5	8	6	7
3	6	8	1	7	2	5	4	9
6	4	3	5	2	7	1	9	8
7	1	2	4	8	9	3	5	6
9	8	5	3	6	1	7	2	4

#### SE25 (easy solution)

SEE (easy seration)									
2	7	8	9	6	3	1	5	4	
6	4	5	7	1	2	8	3	9	
9	3	1	8	5	4	2	7	6	
8	2	3	6	4	1	7	9	5	
1	5	9	3	8	7	4	6	2	
7	6	4	2	9	5	3	8	1	
4	8	2	5	7	9	6	1	3	
3	9	7	1	2	6	5	4	8	
5	1	6	4	3	8	9	2	7	

## TG5 (gentle solution)

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

## SE10 (easy solution)

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

## SE20 (easy solution)

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

## SE30 (easy solution)

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

## TG10 (gentle solution)

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

TC15	(contle	solution	١
T CITO 1	genne	SOLUTION	1

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

## TG25 (gentle solution)

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

#### ST1226 (1 star solution)

	~ .		- ( -			Croro.	/	
9	6	2	8	5	4	7	3	1
7	4	5	2	1	3	6	8	9
1	8	3	9	6	7	4	5	2
3	2	6	7	4	8	9	1	5
5	7	1	6	3	9	2	4	8
4	9	8	1	2	5	3	7	6
8	3	7	5	9	2	1	6	4
6	5	9	4	7	1	8	2	3
2	1	4	3	8	6	5	9	7

#### ST0123 (1 star solution)

			- (				/	
5	9	4	6	2	1	8	3	7
7	3	6	4	8	9	1	2	5
2	8	1	3	5	7	4	6	9
3	1	9	2	7	8	6	5	4
6	5	2	1	3	4	9	7	8
4	7	8	5	9	6	3	1	2
9	2	7	8	1	3	5	4	6
1	4	5	9	6	2	7	8	3
8	6	3	7	4	5	2	9	1

## TG20 (gentle solution)

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

## TG30 (gentle solution)

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

## ST0206 (1 star solution)

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

## CS1 (level 2 solution)

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

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

## SM5 (medium solution)

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

#### SM15 (medium solution)

	,	1110	(	aran		auto	,	
8	5	3	9	7	4	6	1	2
4	7	1	3	2	6	9	5	8
9	6	2	8	1	5	4	7	3
3	9	6	5	4	2	7	8	1
7	4	5	6	8	1	2	3	9
2	1	8	7	3	9	5	6	4
1	3	4	2	6	7	8	9	5
5	8	7	4	9	3	1	2	6
6	2	9	1	5	8	3	4	7

## SM25 (medium solution)

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

#### CS3 (level 2 solution)

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

#### SM10 (medium solution)

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

## SM20 (medium solution)

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

## SM30 (medium solution)

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

$\Gamma M35$ (moderate solution	n)	
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5	9	1	3	2	8	7	4	6
6	7	4	9	5	1	8	2	3
2	3	8	6	7	4	1	9	5
3	5	6	2	9	7	4	8	1
4	2	7	1	8	5	3	6	9
8	1	9	4	6	3	2	5	7
9	8	5	7	3	2	6	1	4
7	4	2	5	1	6	9	3	8
1	6	3	8	4	9	5	7	2

#### TM45 (moderate solution)

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

#### TM55 (moderate solution)

		100	(1110)	acra		, i a ci		
7	3	1	9	4	6	5	2	8
2	4	5	1	3	8	6	7	9
9	6	8	5	7	2	1	4	3
6	1	4	7	2	9	3	8	5
5	7	2	8	1	3	9	6	4
8	9	3	4	6	5	7	1	2
1	5	9	6	8	4	2	3	7
4	2	6	3	5	7	8	9	1
3	8	7	2	9	1	4	5	6

#### ST0914 (2 star solution)

		_	- (-				/	
5	6	7	2	9	3	1	8	4
2	9	8	4	6	1	5	3	7
4	1	3	5	7	8	6	9	2
3	2	1	7	5	9	4	6	8
6	4	9	8	1	2	7	5	3
7	8	5	6	3	4	9	2	1
9	3	6	1	2	7	8	4	5
8	7	2	9	4	5	3	1	6
1	5	4	3	8	6	2	7	9

#### TM40 (moderate solution)

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

#### TM50 (moderate solution)

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

#### TM60 (moderate solution)

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

## ST0207 (2 star solution)

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

CICI 4	/1 1	$\circ$	1	١
(354)		×	solution	

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

## CS6 (level 4 solution)

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

#### SH10 (hard solution)

		OIII		ara ,				
4	3	7	9	2	1	8	6	5
1	5	6	8	3	7	4	9	2
2	8	9	4	5	6	1	3	7
5	9	8	1	6	3	2	7	4
3	7	4	2	9	5	6	8	1
6	2	1	7	4	8	9	5	3
7	1	3	6	8	2	5	4	9
8	4	5	3	1	9	7	2	6
9	6	2	5	7	4	3	1	8

## SH20 (hard solution)

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

## CS5 (level 8 solution)

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

## SH5 (hard solution)

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

## SH15 (hard solution)

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

## SH25 (hard solution)

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

SH30	(hard	solution)

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

## TT105 (tough solution)

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

#### TT115 (tough solution)

				9461		CLUICI	/	
4	3	2	7	5	8	1	9	6
1	9	6	2	4	3	5	8	7
7	5	8	1	6	9	4	2	3
9	4	5	6	8	2	3	7	1
2	6	3	5	7	1	8	4	9
8	7	1	9	3	4	2	6	5
3	2	9	4	1	6	7	5	8
5	8	4	3	9	7	6	1	2
6	1	7	8	2	5	9	3	4

## ST1130 (3 star solution)

$\overline{}$		_	9 (9				/	
8	1	9	3	5	6	2	4	7
5	7	6	9	2	4	8	1	3
3	4	2	8	1	7	5	9	6
7	8	1	5	6	3	9	2	4
9	6	5	2	4	8	3	7	1
4	2	3	1	7	9	6	8	5
6	5	8	7	9	1	4	3	2
2	9	7	4	3	5	1	6	8
1	3	4	6	8	2	7	5	9

## TT100 (tough solution)

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

## TT110 (tough solution)

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

## TT120 (tough solution)

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

#### ST1207 (3 star solution)

				5000		aroro.		
2	1	7	4	8	3	9	5	6
8	3	4	6	9	5	7	1	2
6	5	9	1	7	2	3	8	4
7	9	8	2	3	1	6	4	5
3	2	6	9	5	4	1	7	8
1	4	5	7	6	8	2	3	9
5	8	2	3	1	9	4	6	7
9	7	1	8	4	6	5	2	3
4	6	3	5	2	7	8	9	1

	ST1209 (	(5)	star	so	lution
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8	3	9	6	5	2	1	4	7
2	4	6	7	8	1	3	5	9
7	5	1	9	4	3	2	6	8
1	6	7	2	9	5	4	8	3
5	9	2	4	3	8	7	1	6
4	8	3	1	6	7	9	2	5
6	2	8	3	1	9	5	7	4
3	7	4	5	2	6	8	9	1
9	1	5	8	7	4	6	3	2

#### ST1228 (3 star solution)

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

#### ST0127 (5 star solution)

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

#### ST0208 (3 star solution)

510200 (5 star solution)										
2	1	3	9	8	5	6	4	7		
5	8	9	6	7	4	2	1	3		
6	4	7	2	1	3	8	5	9		
9	2	8	7	5	1	3	6	4		
3	6	1	4	2	9	5	7	8		
7	5	4	8	3	6	1	9	2		
8	7	5	1	9	2	4	3	6		
4	3	2	5	6	7	9	8	1		
1	9	6	3	4	8	7	2	5		

## ST1221 (3 star solution)

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

#### ST0126 (4 star solution)

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

#### ST0204 (6 star solution)

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

## ST0209 (4 star solution)

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

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