

LMI Sudoku test *Shapes and Sizes* – 7/8 January 2012

About Shapes and Sizes

Chaos sudokus (or *Number Place* by its original name) have always been among my favourite puzzles. When I came across such a puzzle with a scattered irregular area in the USPC of 2003, I was a big fan of this type of puzzles immediately, recognizing the possibilities for symmetry and the extras it offers in ways of solving these puzzles. That's why I am very happy to make a sudoku test for LMI that is completely dedicated to sudokus with irregular areas: chaos, toroidal and scattered. I hope you will enjoy solving the puzzles as much as I did creating them.

What you need to know

- The test consists of 14 puzzles;
- The duration of the test is 120 minutes;
- None of the puzzles in the test will have the regular 3x3-blocks;
- The puzzles in the real test all will have the same **sizes** as in the IB. The **shapes** (e.g. the irregular areas) will – of course ☺ – be different;
- Some of the puzzles in the IB will be easier than the corresponding puzzle in the real test while other puzzles in the IB will be harder. This means that the level of difficulty of the puzzles in the IB does not correspond to the distribution of points over the puzzles in the real test.
- The distribution of points is based on the times needed by test solvers. Therefore, you might experience differences due to your own personal skills and preferences.
- Every puzzle has one marked row and one marked column as answer key;
- When submitting the answer key, ignore outside clues, sudokuro clues and black cells;
- I expect the fastest solvers to finish the test within the time limit. Everybody who solves all 14 puzzles correctly, is rewarded with a time bonus of 9 points per saved minute. When 13 puzzles are solved correctly and the answer submitted for the remaining puzzle contains no more than 4 wrong digits, the time bonus of 9 points per saved minute is also awarded.
- For two puzzles partial points can be earned if only one (of two) grid is solved correctly.
- The puzzle booklet will contain 9 pages, without cover page and points table.

Many thanks

I would like to thank LMI and Deb Mohanty for giving me the opportunity to make this sudoku test. Many thanks go to Arvid Baars, Claudia Müller, Hans Eendebak, Karin Griffioen, René Gilhuijs, Rick Uppelschoten, Robert Bearda and Wilbert Zwart for test solving and comments.

Last but not least: **Have fun!**

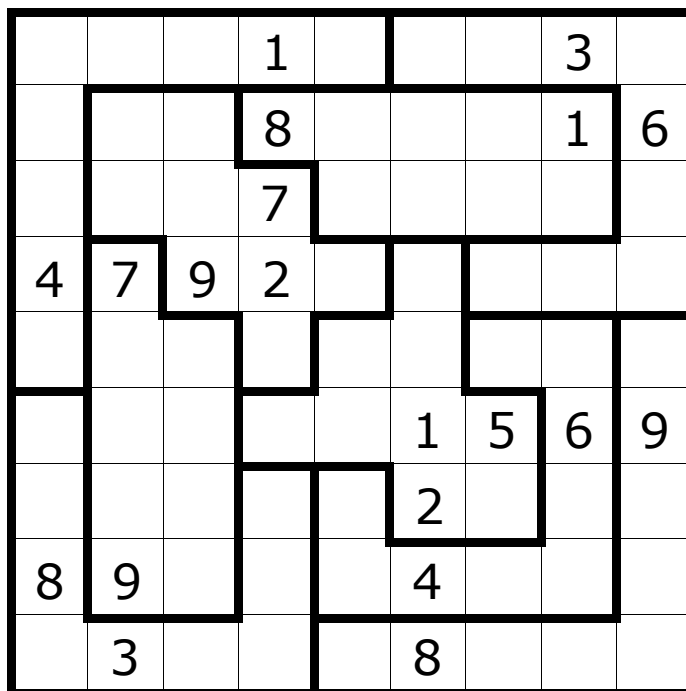
Points table

<i>Puzzle name</i>	<i>Points</i>
1. Chaos sudoku	52
2. Chaos windoku	54
3. Twin chaos sudoku	87
4. Low digits sudoku	84
5. Partly twins sudoku (partial points if only one grid solved)	65 (26)
6. Scattered outside sums sudoku	43
7. Scattered non-consecutive sudoku	114
8. Scattered overlapping sudoku	122
9. Scattered sudokus with added clues (partial points if only one grid solved)	98 (49)
10. Scattered sudokuro	63
11. Toroidal sudoku	32
12. Cylindrical sudoku	67
13. Toroidal sudoku in a too large grid	50
14. Chain sudoku	69
TOTAL	1.000

1. Chaos sudoku

52 points

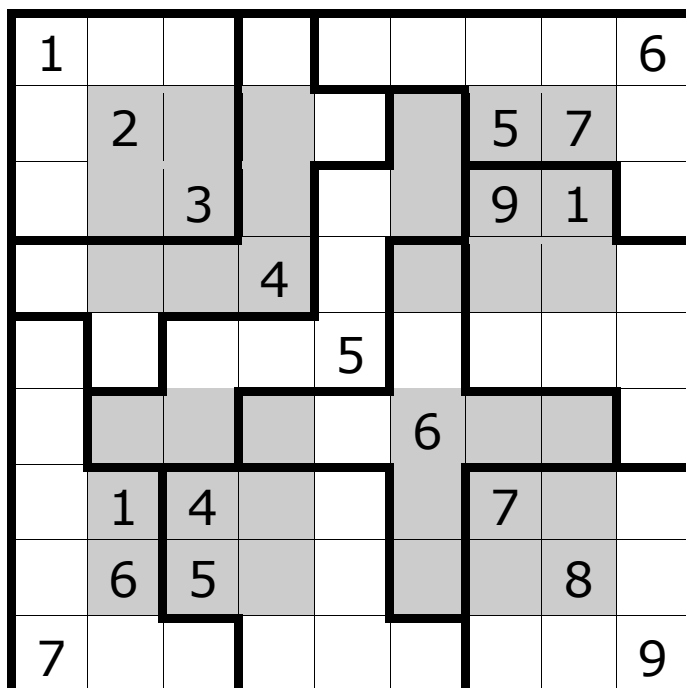
Place the digits from 1 to 9 in every row, every column and every boldly outlined irregular area.



2. Chaos windoku

54 points

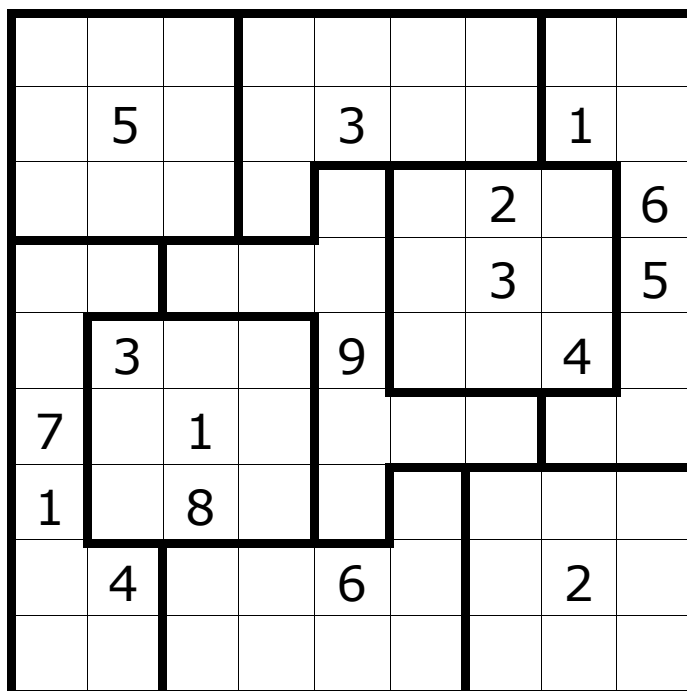
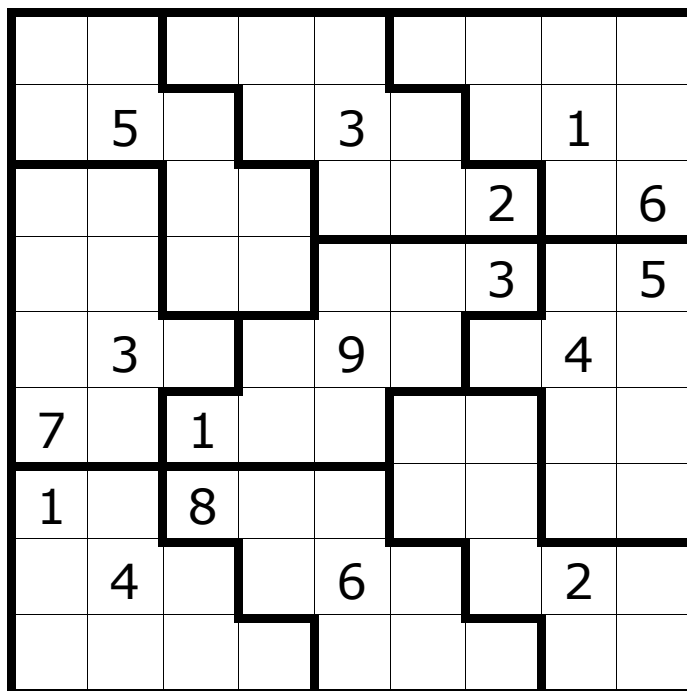
Place the digits from 1 to 9 in every row, every column, every boldly outlined irregular area and in the four grey marked 3x3-squares.



3. Twin chaos sudoku

87 points

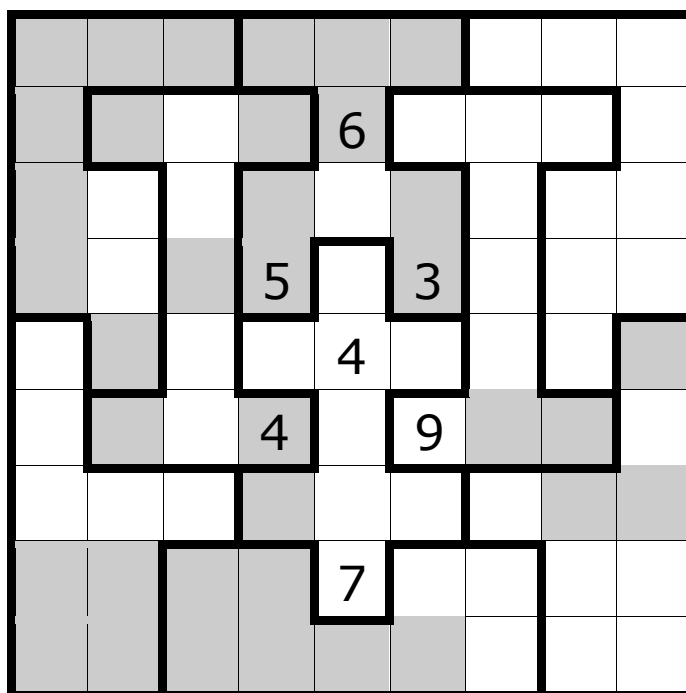
Place the digits from 1 to 9 in every row, every column and every boldly outlined irregular area of both grids. Both grids have the same solution.



4. Low digits sudoku

84 points

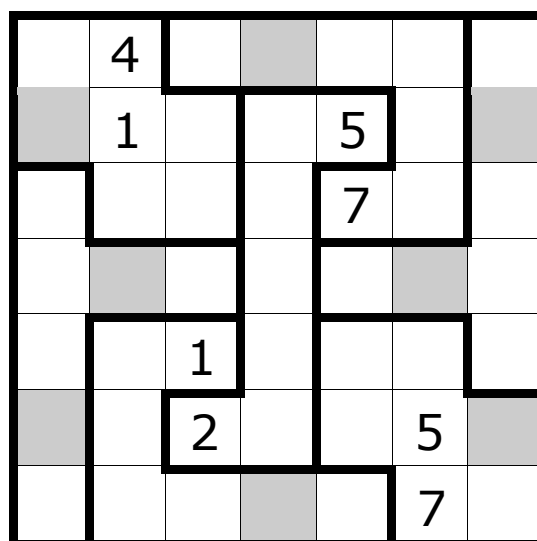
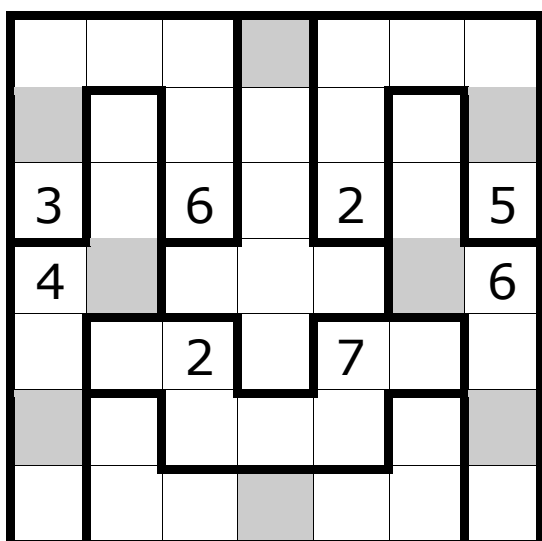
Place the digits from 1 to 9 in every row, every column and every boldly outlined irregular area. The lowest digits in every boldly outlined area have to be placed in the grey cells.



5. Partly twins sudoku

65 (26) points

Place the digits from 1 to 7 in every row, every column and every boldly outlined irregular area of both grids. **Only the digits in the grey cells are the same in both grids.** All other digits are different.



6. Scattered outside sums sudoku

43 points

Place the digits from 1 to 7 in every row, every column, every boldly outlined irregular area and in the grey cells. The numbers outside the grid are the sum of the first **two** digits in the row/column from that direction.

		8		7		3		9	
9									6
11									8
7									7
		3		5		11			

7. Scattered non-consecutive sudoku

114 points

Place the digits from 0 to 9 in every row, every column, every boldly outlined irregular area and twice in the grey cells. Adjacent cells cannot contain consecutive digits.

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

8. Scattered overlapping sudoku

122 points

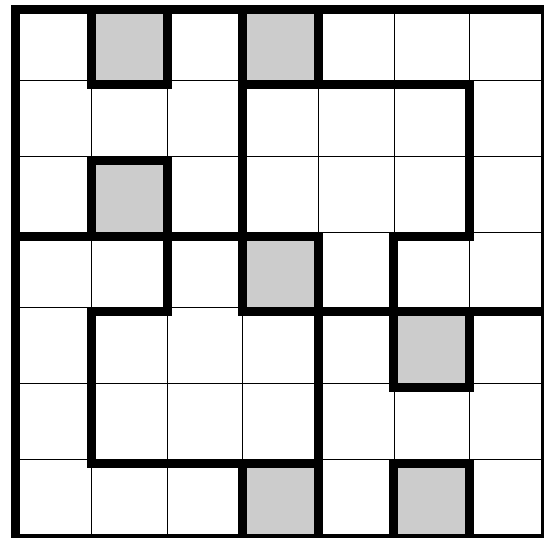
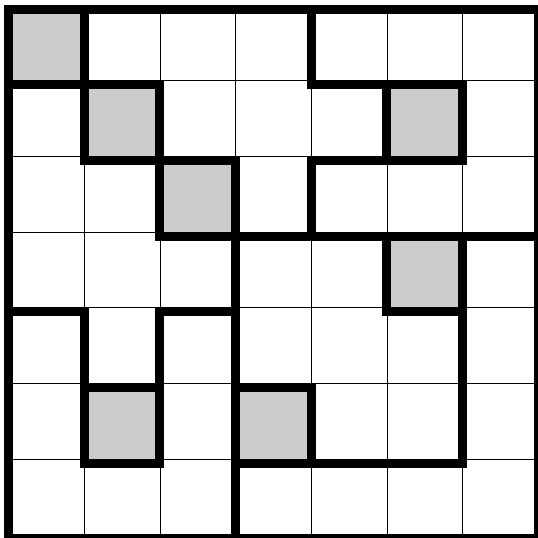
Place the digits from 1 to 9 in every row and column of both overlapping grids, in every boldly outlined area and in the grey cells for the puzzle as a whole.

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

9. Scattered sudokus with added clues 98 (49) points

Place the digits from 1 to 7 in every row, every column, every boldly outlined irregular area and the grey cells of both empty grids. The added clues for both grids are given in the topmost grid.

5						6
	10		5		13	
8		13		4		9
	12		9		2	
5						5
	3		8		6	



10. Scattered sudokuro

63 points

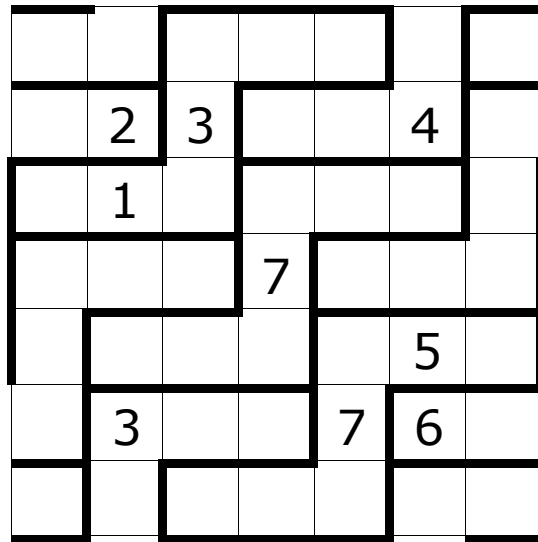
Place the digits from 1 to 9 in every row, every column, every boldly outlined irregular area and the light grey cells. The numbers in the dark grey cells are the sums of the digits in the reading direction.

	14	34	15	19		3		19			22
28							42		13		
24					19						
7			17			21					
	41									39	
16				13			16				
	45										
13				15			17				
		39									14
31						7			7		
		21					20				
10					31						

11. Toroidal sudoku

32 points

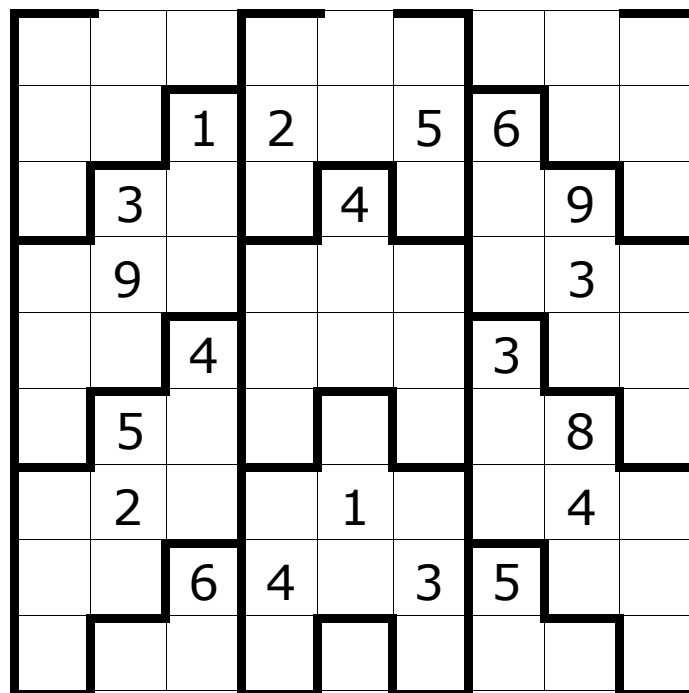
Place the digits from 1 to 7 in every row, every column and every boldly outlined irregular area. Some of the irregular areas wrap around the grid from top to bottom and/or from left to right.



12. Cylindrical sudoku

67 points

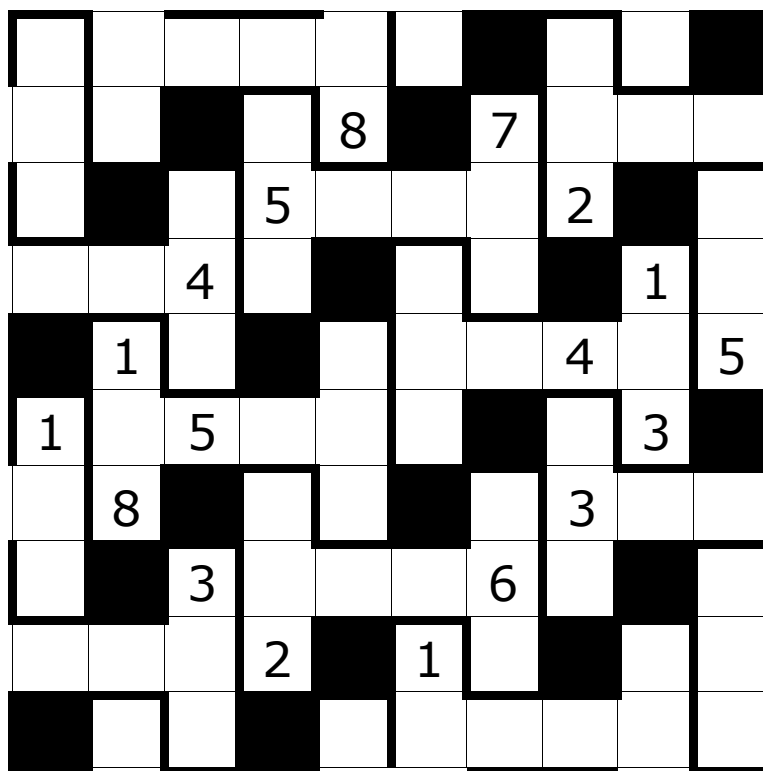
Place the digits from 1 to 9 in every row, every column and every boldly outlined irregular area. Some of the irregular areas wrap around the grid from top to bottom.



13. Toroidal sudoku in a too large grid

50 points

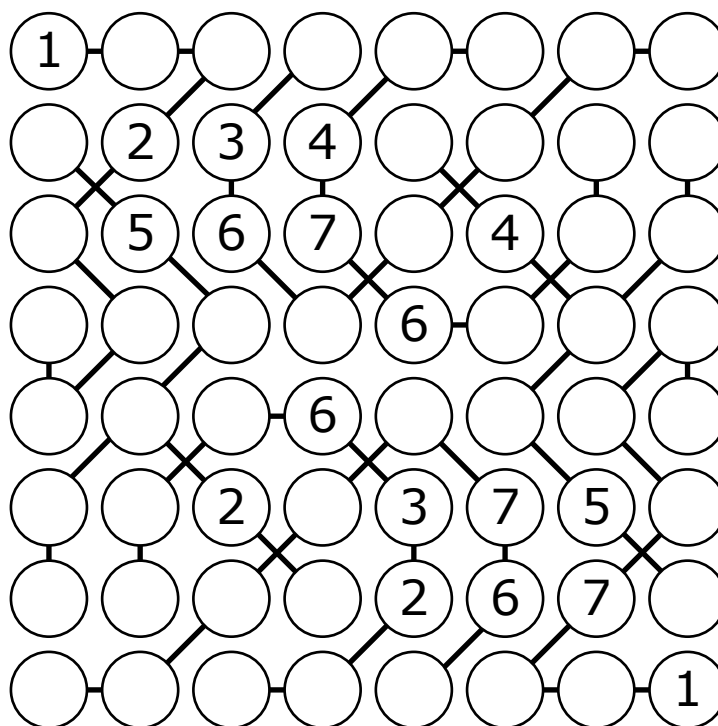
Place the digits from 1 to 8 in every row, every column and every boldly outlined irregular area. Some of the irregular areas wrap around the grid from top to bottom or from left to right.



14. Chain sudoku

69 points

Place the digits from 1 to 8 in every row, every column and every chain of connected circles.



Solutions

<i>1. Chaos</i>	<i>2. Windoku</i>	<i>3. Twin</i>	<i>4. Low</i>
562187934	187549236	689712534	563814279
954823716	629834571	257634819	139267845
381795642	453672918	413985276	486792513
479236158	271498365	824176395	791523684
725649381	396157842	536298147	827945361
248371569	538216497	791453682	658439127
613452897	814965723	178529463	975186432
896514273	965723184	945361728	214378956
137968425	742381659	362847951	342651798

<i>5. Partly Twins</i>	<i>6. Outside</i>	<i>7. Noncons</i>
1572463 7452316	2735164	9683705241
2346157 2163547	6347215	5147093628
3164275 4531762	1526437	2405869173
4217536 5276431	7413526	6931420857
5623741 3714625	4672351	8264157309
6751324 6327154	5261743	0728531964
7435612 1645273	3154672	7590316482
		4816972035
		1372648590
		3059284716

<i>8. Overlapping</i>	<i>9. Added clues</i>	<i>10. Sudokuro</i>
746598231	3746521 2431675	317692-4-58
958321647	4513276 1542763	9483-1756-2
134279865	2165347 6375142	25-98-63417
267915384	7652413 5627314	-86125973-4
685734912	1327654 4763521	574-382-961
412683759	6274135 7154236	-615478923-
893152476581923	5431762 3216457	832-645-179
579846123796845		6-57134289-
321467598314276		72985-16-43
249165738		4-3279-1586
862973451		19-4-638725
357642189		
735829614		
681437592		
914258367		

<i>11. Toroidal</i>	<i>12. Cylindrical</i>	<i>13. Too large</i>	<i>14. Chain</i>
1745236	512874963	857643-12-	16825347
5236147	941235678	32-18-7564	82347516
6174523	735146892	7-156842-3	35671482
3527614	497658231	6743-52-18	74186235
7613452	864921357	-12-368475	57468123
4352761	259367184	165472-83-	68213754
2461375	328519746	48-72-1356	41532678
	176483529	2-385467-1	23754861
	683792415	5462-13-87	
		-38-175642	