

# Happy New Year 2025 Sudoku Contest



Instruction Booklet

## Puzzles

1. Classic	30 Points
2. Classic	30 Points
3. Classic	30 Points
4. Classic	35 Points
5. Classic	75 Points
6. Antiking	80 Points
7. Antiknight	145 Points
8. Antiknight or Antiking	105 Points
9. German Whispers	95 Points
10. Thermo	75 Points
11. German Whispers or Thermo	160 Points
12. Killer	215 Points
13. X-Sums	120 Points
14. Killer X-Sums	305 Points
15. Outside	55 Points
16. Skyscrapers	120 Points
17. Outside or Skyscrapers	325 Points

Total	2000 Points
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## Contest Details

### **Solving Logistics**

Every 9x9 grid will have 2 rows/columns to enter, each labelled with a letter. Enter in the digits in those rows/columns starting from the left or top. Online solving via Penpa is available for each puzzle, although no automatic solution verification through the Penpa interface is available. As such, if you solve online, you will still have to enter the labelled rows/columns for each puzzle to receive credit. Links to each puzzle are available directly through the contest portal on LMI.

### **Submission**

You may submit answers at any point during the **200** minutes after you reveal the password, although any submissions recorded after the fact will not be accepted. There is instant grading for each puzzle so that you can immediately tell if your answer is correct or not. You can submit answers multiple times if your first few attempts are wrong, with each incorrect submission reducing the potential points you may receive for a puzzle. More specifically, the first, second, and third incorrect submissions reduce the potential score to 90%, 50%, and 0% respectively.

### **Bonus & Rankings**

Rankings are determined by most total points first, then by earliest final submission time (disregarding incorrect submissions). Bonus points are awarded to those who finish all puzzles correctly before time has elapsed, with 1% of your final score being added for every minute saved.

### **Acknowledgements**

Thank you to Prasanna Seshadri and Logic Masters India for being such a gracious host for this contest!

Thank you to Becca Chang, Thomas Luo, Sinchai Rungsangrattanakul, Tina Bratim, Pavel Kocka, and Jackie! Zhou for test-solving all the contest puzzles and providing feedback on them to finetune for this contest!

All IB puzzles are either self-written, or previously used puzzles from instruction booklets of previous sudoku GP rounds.

## Puzzles 1 - 5: Classic

**30 + 30 + 30 + 35 + 75 Points**

Rules: Place the digits 1-9 in each empty cell in the grid such that each row, column, and marked 3x3 box contains each digit exactly once. [Online Solving](#)

Example

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

Solution

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

## Puzzle 6: Antiking

**80 Points**

Rules: Classic sudoku rules apply. Digits placed in cells connected by a chess King's move must be different. [Online Solving](#)

Example

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

Solution

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

## Puzzle 7: Antiknight

145 Points

Rules: Classic sudoku rules apply. Digits placed in cells connected by a chess Knight's move must be different. [Online Solving](#)

Example

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

Solution

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

## Puzzle 8: Antiking or Antiknight

105 Points

Rules: Classic sudoku rules apply. Each number (1-9) abides by either Antiking or Antiknight rules (e.g. all 1s are Antiking, all 2s are Antiknight, all 3s are Antiking, etc.). [Online Solving](#)

Example

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

Solution

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

## Puzzle 9: German Whispers

95 Points

Rules: Classic sudoku rules apply. Adjacent digits along the line(s) must have a difference of at least 5. [Online Solving](#)

Example

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

Solution

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

## Puzzle 10: Thermo

75 Points

Rules: Classic sudoku rules apply. Some thermometer shapes are placed in the grid. Digits are strictly increasing from the round bulb of each thermometer to each flat end. [Online Solving](#)

Example

1							4
	3						2
		5					
			1				
				5			
	4					3	
2							1

Solution

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

## Puzzle 11: German Whispers or Thermo

160 Points

Rules: Classic sudoku rules apply. Some lines are placed in the grid, and each line is either a German Whispers line or Thermo shape with exactly one unlabeled bulb that at the end of the shape. [Online Solving](#)

Example

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

Solution

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

## Puzzle 12: Killer

215 Points

Rules: Classic sudoku rules apply. The number at the top-left corner of each cage equals the sum of digits inside the cage. Digits do not repeat inside a cage. [Online Solving](#)

Example

	2			4			3	
6		15			11			1
	9						6	
			9		2			
2		9			10			6
	13		7		4		8	
1		11			14			3
	3			7			9	

Solution

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

## Puzzle 13: X-Sums

120 Points

Rules: Classic sudoku rules apply. Each number outside the grid is the sum of the first X numbers placed in the corresponding direction, where X is equal to the first number placed in that direction. [Online Solving](#)

Example

	1	9	12	26	39	41	21	45	19	
1										26
42										11
29										30
37										23
20										40
45										9
17										31
10										1
14										45
	9	21	33	38	1	13	40	6	45	

Solution

	1	9	12	26	39	41	21	45	19	
1	1	2	3	6	7	8	5	9	4	26
42	8	7	4	1	9	5	2	6	3	11
29	6	9	5	2	4	3	1	8	7	30
37	7	6	1	8	2	9	4	3	5	23
20	5	3	2	4	6	7	9	1	8	40
45	9	4	8	5	3	1	6	7	2	9
17	4	1	9	3	8	2	7	5	6	31
10	2	8	7	9	5	6	3	4	1	1
14	3	5	6	7	1	4	8	2	9	45
	9	21	33	38	1	13	40	6	45	

## Puzzle 14: Killer X-Sums

305 Points

Rules: Classic sudoku rules apply. Killer and X-Sums rules apply. [Online Solving](#)

Example

	10	1	17	38	
21	8				
		26			
25					
				17	
23	24				
9					
			33		
9					
				12	
	26	7	11	33	

Solution

	10	1	17	38	
21	6	2	3	1	5
	7	8	1	9	3
25	4	9	5	7	8
	8	3	9	6	2
23	5	1	6	4	7
9	2	7	4	3	1
	9	5	7	8	6
9	3	4	2	5	9
	1	6	8	2	4
	26	7	11	33	



## 55 Points

## Online Solving

### Solution

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

## 120 Points

## Online Solving

### Solution

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

## Puzzle 17: Outside or Skyscrapers

325 Points

Rules: Classic sudoku rules apply. Each digit outside the grid is either a Skyscraper clue or Outside clue (or both!). [Online Solving](#)

Example

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

Solution

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