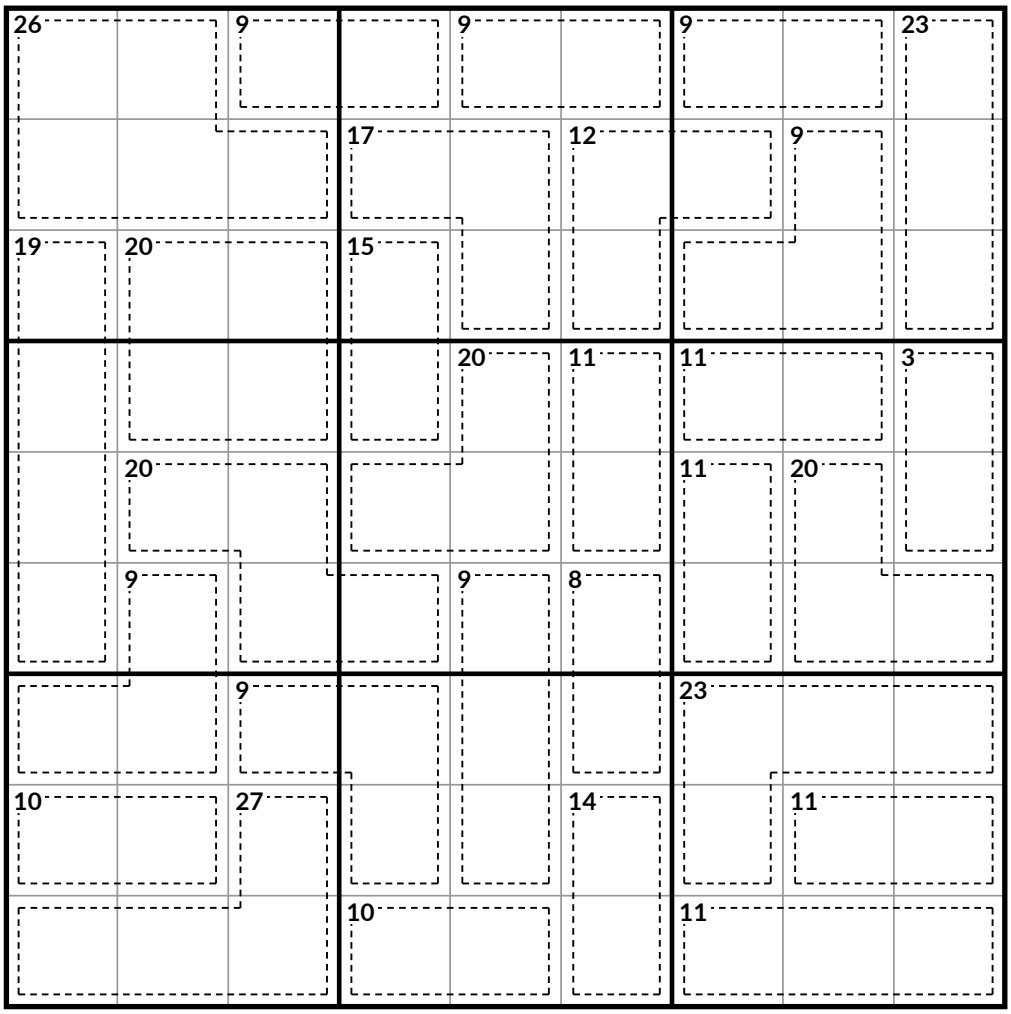
KILLER SUDOKU PUZZLE BOOK

Large Print Killer Sudoku

100 Easy to Expert Puzzles, One Big Puzzle per Page, Cage Combination Tables, with Solutions



Harper Lane

Large Print Killer Sudoku

100 Easy to Expert Puzzles, One Big Puzzle per Page, Cage Combination Tables, with Solutions

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All 100 puzzles in this book are original. Each one has exactly one solution and can be solved by logic alone, without guessing.

First edition, 2026

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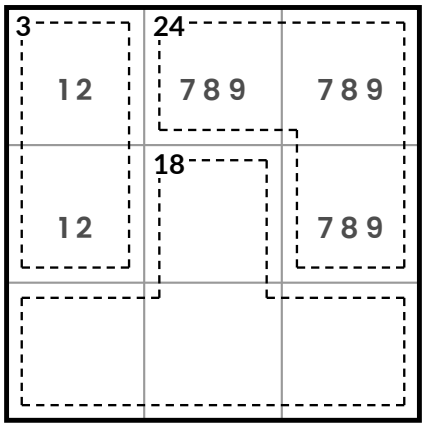
Sample pages

How to Play

Killer sudoku is a classic sudoku with sums. The grid is split into cages, drawn with dashed lines, and the small number in the top left corner of each cage is the total of the numbers inside it.

- ✓ Every row, every column and every 3 x 3 box holds the numbers 1 to 9, each exactly once.
- ✓ The numbers in a cage add up to the small number in its corner.
- ✓ A number never repeats inside a cage.
- ✓ There are no starting numbers: the cage totals are your only clues.

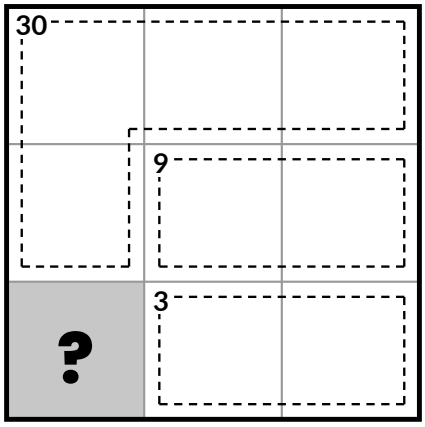


Small cages are the best place to begin. Two different numbers that add up to 3 can only be 1 and 2. Three that add up to 24 can only be 7, 8 and 9. Write them in as small pencil marks, then use the sudoku rules to work out which goes where. In this box, the 18 cage gets the four numbers that are left: 3, 4, 5 and 6.

The cage combination tables on page 6 list every total and the numbers that can make it.

The rule of 45

The numbers 1 to 9 add up to 45, so every row, column and box adds up to 45. Add up the cages that sit completely inside one of them: if only one square is left over, it must be 45 minus that total.



This box comes from the worked example. Three whole cages sit inside it: 30 + 9 + 3 = 42.

The shaded square belongs to a cage that pokes out of the box, so it is the one left over: 45 - 42 = 3.

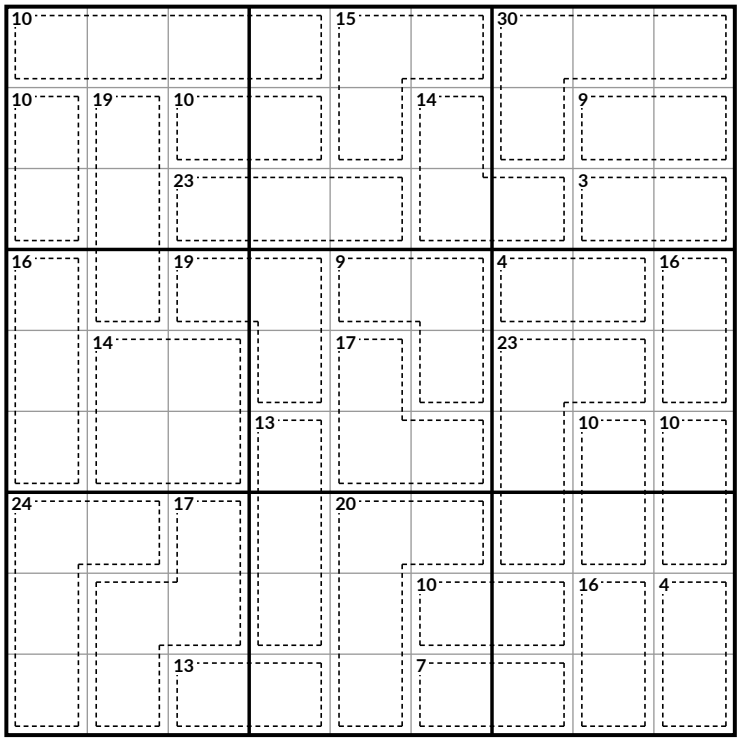
Look for this in every row, column and box. It also works across two or three rows (90 or 135), and for a square that sticks out of a box.

Sample pages

A Worked Example

Here is an easy puzzle and, below it, its solution. Check any cage in the solution: its numbers add up to the total in its corner and none repeats. Every puzzle has exactly one solution, and you can always find it by logic, without guessing. The solutions are at the back of the book, starting on page 116.

Puzzle



Solution

10 4	2	1	3	15 5	9	30 7	6	8
10 3	19 6	10 8	2	1	14 7	9	9 4	5
7	5	23 9	6	8	4	3	3 1	2
16 5	8	19 7	4	9 2	6	4 1	3	16 9
2	14 4	3	8	17 9	1	23 6	5	7
9	1	6	13 7	3	5	8	10 2	10 4
24 1	9	17 2	5	20 7	3	4	8	6
6	7	5	1	4	10 8	2	16 9	4 3
8	3	13 4	9	6	7 2	5	7	1

Sample pages

Cage Combinations

Every total a cage can have, with every set of different numbers that makes it. Shaded rows have only one possible set: look for those cages first. Keep a finger on these pages while you solve.

2-square cages

total				
3	12			
4	13			
5	14	23		
6	15	24		
7	16	25	34	
8	17	26	35	
9	18	27	36	45
10	19	28	37	46
11	29	38	47	56
12	39	48	57	
13	49	58	67	
14	59	68		
15	69	78		
16	79			
17	89			

3-square cages

total								
6	123							
7	124							
8	125	134						
9	126	135	234					
10	127	136	145	235				
11	128	137	146	236	245			
12	129	138	147	156	237	246	345	
13	139	148	157	238	247	256	346	
14	149	158	167	239	248	257	347	356
15	159	168	249	258	267	348	357	456
16	169	178	259	268	349	358	367	457
17	179	269	278	359	368	458	467	
18	189	279	369	378	459	468	567	
19	289	379	469	478	568			
20	389	479	569	578				
21	489	579	678					
22	589	679						
23	689							
24	789							

Sample pages

4-square cages

total												
10	1234											
11	1235											
12	1236	1245										
13	1237	1246	1345									
14	1238	1247	1256	1346	2345							
15	1239	1248	1257	1347	1356	2346						
16	1249	1258	1267	1348	1357	1456	2347	2356				
17	1259	1268	1349	1358	1367	1457	2348	2357	2456			
18	1269	1278	1359	1368	1458	1467	2349	2358	2367	2457	3456	
19	1279	1369	1378	1459	1468	1567	2359	2368	2458	2467	3457	
20	1289	1379	1469	1478	1568	2369	2378	2459	2468	2567	3458	3467
21	1389	1479	1569	1578	2379	2469	2478	2568	3459	3468	3567	
22	1489	1579	1678	2389	2479	2569	2578	3469	3478	3568	4567	
23	1589	1679	2489	2579	2678	3479	3569	3578	4568			
24	1689	2589	2679	3489	3579	3678	4569	4578				
25	1789	2689	3589	3679	4579	4678						
26	2789	3689	4589	4679	5678							
27	3789	4689	5679									
28	4789	5689										
29	5789											
30	6789											

Cages with only one possible set

2 squares	**3 =** 1+2	**4 =** 1+3	**16 =** 7+9	**17 =** 8+9
3 squares	**6 =** 1+2+3	**7 =** 1+2+4	**23 =** 6+8+9	**24 =** 7+8+9
4 squares	**10 =** 1+2+3+4	**11 =** 1+2+3+5	**29 =** 5+7+8+9	**30 =** 6+7+8+9
5 squares	**15 =** 1+2+3+4+5	**16 =** 1+2+3+4+6	**34 =** 4+6+7+8+9	**35 =** 5+6+7+8+9
6 squares	**21 =** 1+2+3+4+5+6	**22 =** 1+2+3+4+5+7	**38 =** 3+5+6+7+8+9	
	39 = 4+5+6+7+8+9			

Sample pages

5-square cages

total										
15	**12345**									
16	**12346**									
17	12347	12356								
18	12348	12357	12456							
19	12349	12358	12367	12457	13456					
20	12359	12368	12458	12467	13457	23456				
21	12369	12378	12459	12468	12567	13458	13467	23457		
22	12379	12469	12478	12568	13459	13468	13567	23458	23467	
23	12389	12479	12569	12578	13469	13478	13568	14567	23459	23468
	23567									
24	12489	12579	12678	13479	13569	13578	14568	23469	23478	23568
	24567									
25	12589	12679	13489	13579	13678	14569	14578	23479	23569	23578
	24568	34567								
26	12689	13589	13679	14579	14678	23489	23579	23678	24569	24578
	34568									
27	12789	13689	14589	14679	15678	23589	23679	24579	24678	34569
	34578									
28	13789	14689	15679	23689	24589	24679	25678	34579	34678	
29	14789	15689	23789	24689	25679	34589	34679	35678		
30	15789	24789	25689	34689	35679	45678				
31	16789	25789	34789	35689	45679					
32	26789	35789	45689							
33	36789	45789								
34	**46789**									
35	**56789**									

Sample pages

6-square cages

total								
21	**123456**							
22	**123457**							
23	123458	123467						
24	123459	123468	123567					
25	123469	123478	123568	124567				
26	123479	123569	123578	124568	134567			
27	123489	123579	123678	124569	124578	134568	234567	
28	123589	123679	124579	124678	134569	134578	234568	
29	123689	124589	124679	125678	134579	134678	234569	234578
30	123789	124689	125679	134589	134679	135678	234579	234678
31	124789	125689	134689	135679	145678	234589	234679	235678
32	125789	134789	135689	145679	234689	235679	245678	
33	126789	135789	145689	234789	235689	245679	345678	
34	136789	145789	235789	245689	345679			
35	146789	236789	245789	345689				
36	156789	246789	345789					
37	256789	346789						
38	**356789**							
39	**456789**							

Big cages are easier than they look: a cage holds exactly the numbers it leaves out of 1 to 9. Example: 6 squares totalling 38 leave out three numbers totalling 45 - 38 = 7, which can only be 1, 2 and 4, so the cage holds 3, 5, 6, 7, 8 and 9.

Sample pages

How the Puzzles Are Graded

Every puzzle in this book was solved by a program that works like a person: it always uses the easiest step that makes progress, and it never guesses. A puzzle's level is set by the hardest step it needs, so a Hard puzzle really is harder than a Medium one. A second, separate solver then confirmed that every puzzle has exactly one solution.

★★☆☆☆ **Easy**	**Puzzles 1–25 · 29–33 cages** Cage combinations and singles
★★★☆☆ **Medium**	**Puzzles 26–50 · 26–29 cages** Hardest step: Cage Pointing, Pointing Pair, Box/Line Reduction
★★★★☆ **Hard**	**Puzzles 51–75 · 24–27 cages** Hardest step: Innie/Outie Pair, Hidden Pair, Naked Triple
★★★★★ **Expert**	**Puzzles 76–100 · 22–26 cages** Hardest step: Innie/Outie Group

Solving steps you will use

Cage combinations and singles

Write the possible numbers of a cage as small pencil marks, using the table of combinations, and cross out any that already sit in the same row, column or box. A square with one candidate left is solved; so is a number that fits only one square of a row, column, box or cage. Easy puzzles need nothing more.

The rule of 45

Each row, column and box adds up to 45. Add up the cages that sit completely inside one of them: if one square is left over (an innie), it is 45 minus that total. If a cage pokes out by one square (an outie), that square is the cage totals minus 45.

Sample pages

Cage permutations and pointing

Try the combinations of a bigger cage against its pencil marks: a number that fits none of the ways the cage can be filled goes. If a cage must contain a number and every square where it can go lies in one row, column or box, that number cannot be anywhere else in that row, column or box. Pointing pairs work the same way between boxes and lines.

Innies and outies across rows, pairs

The rule of 45 also works on two, three or four rows or columns together (90, 135, 180). When two squares are left over, you know their total, which works like a small extra cage. Naked and hidden pairs and triples clear the remaining pencil marks.

Innie and outie groups, X-Wing, XY-Wing

Expert puzzles leave three or four innies or outies whose total you know: combine it with their pencil marks to cut them down. They may also need the classic X-Wing and XY-Wing patterns from regular sudoku.

Sample pages

EASY



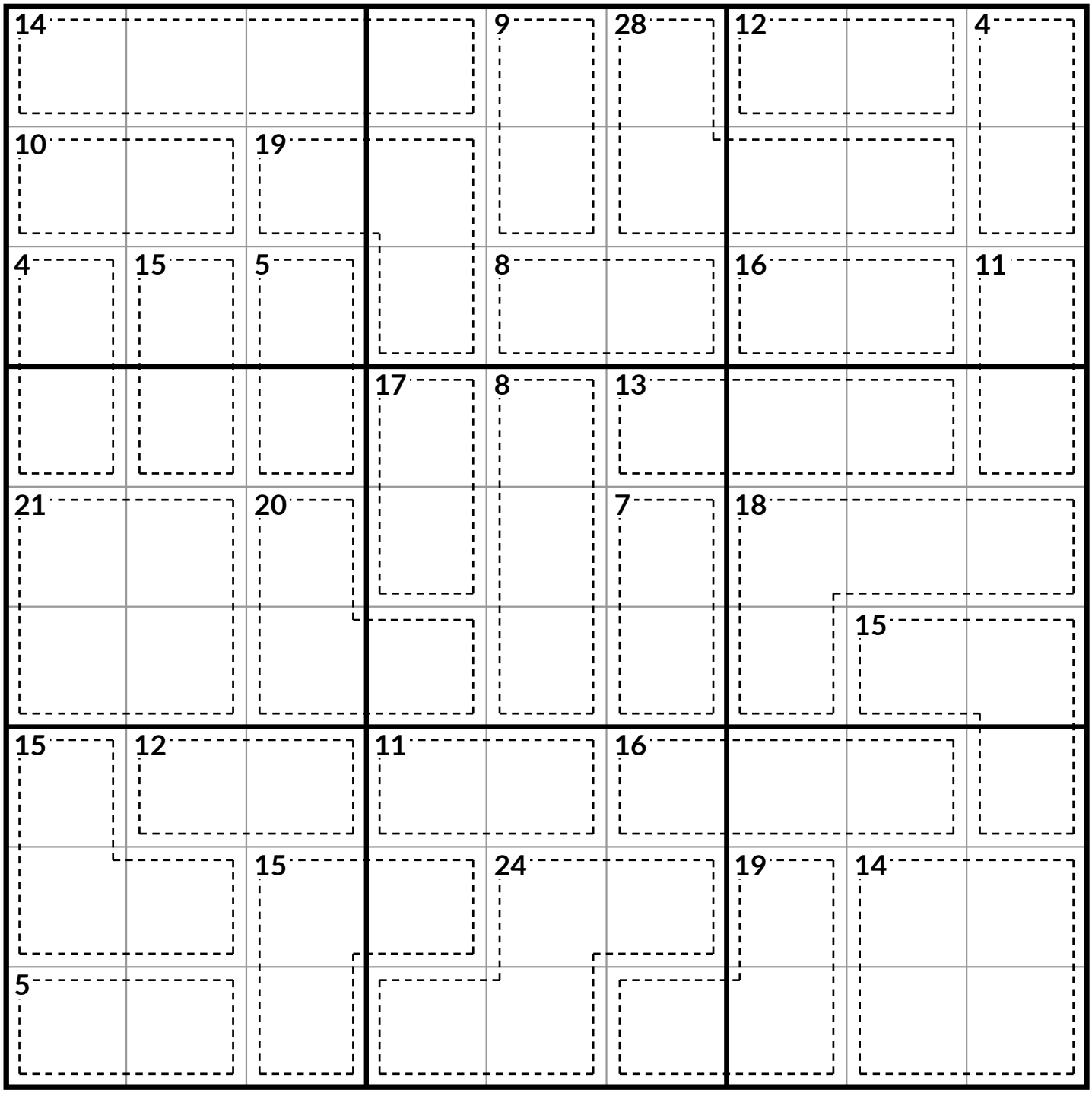
Puzzles 1 to 25

Cage combinations and singles are all you need.

Sample pages

Puzzle 1 ★★☆☆☆ EASY

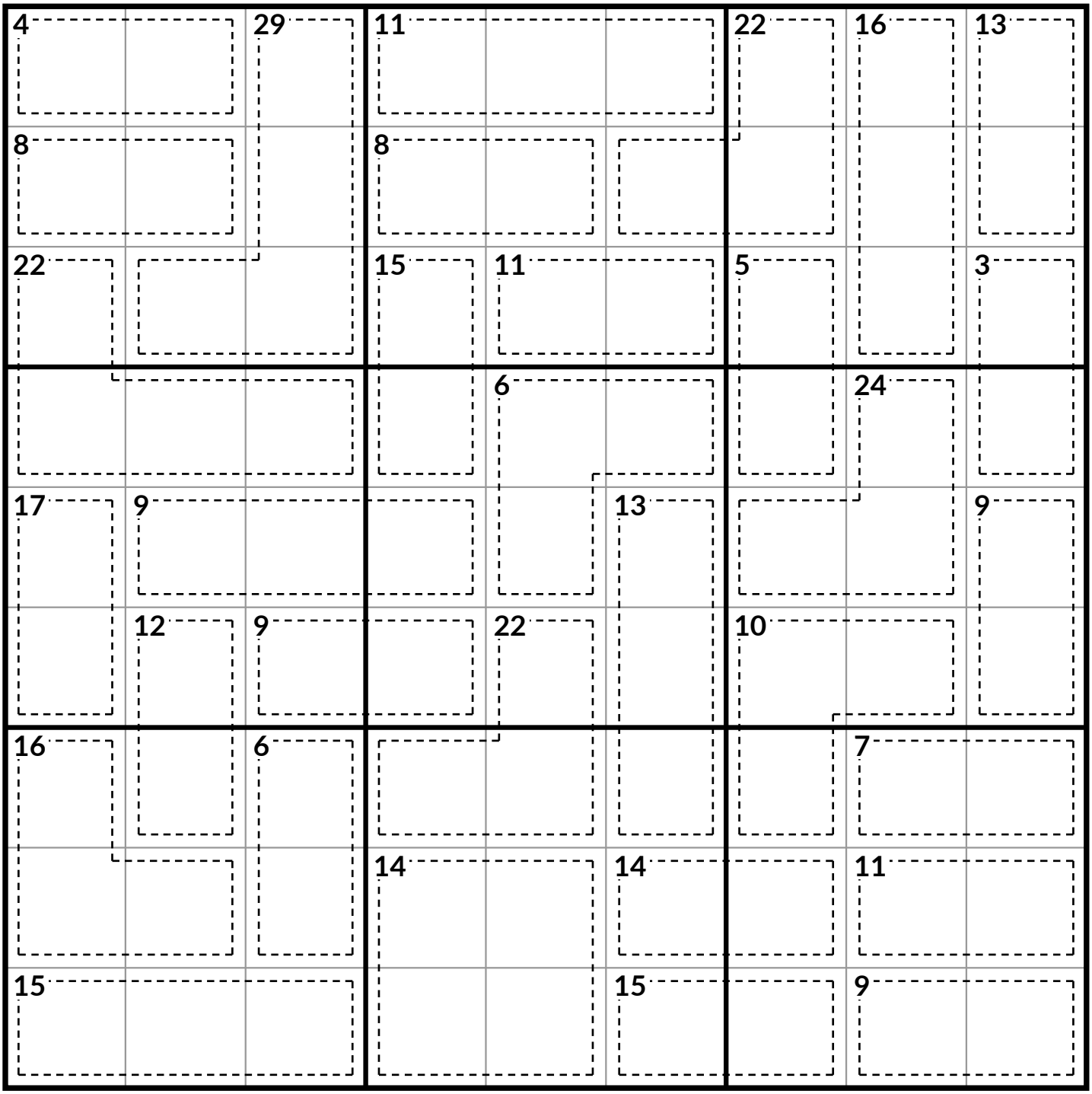
Time: _____



Sample pages

Puzzle 2 ★★☆☆☆ EASY

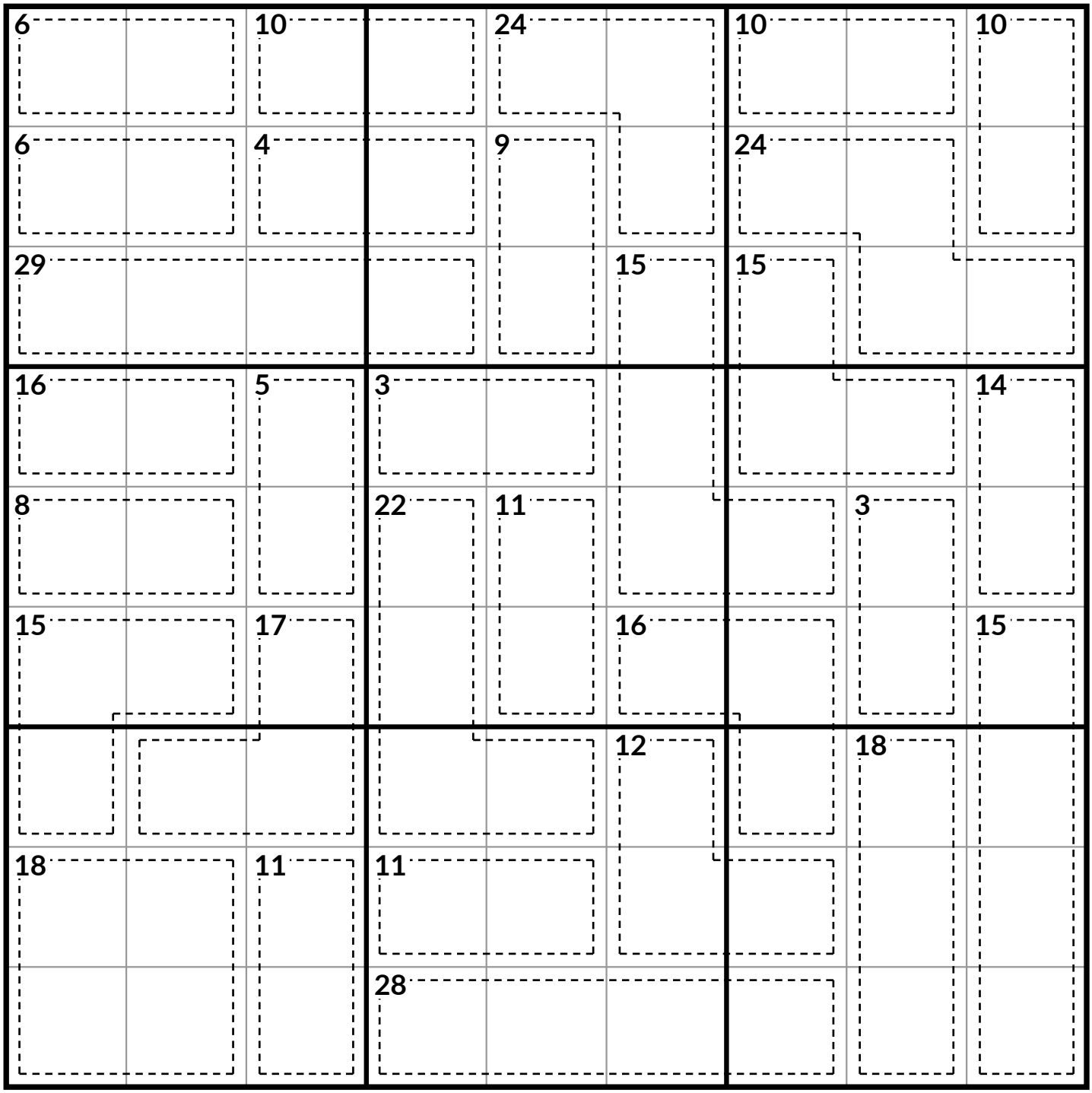
Time: _____



Sample pages

Puzzle 3 ★★☆☆☆ EASY

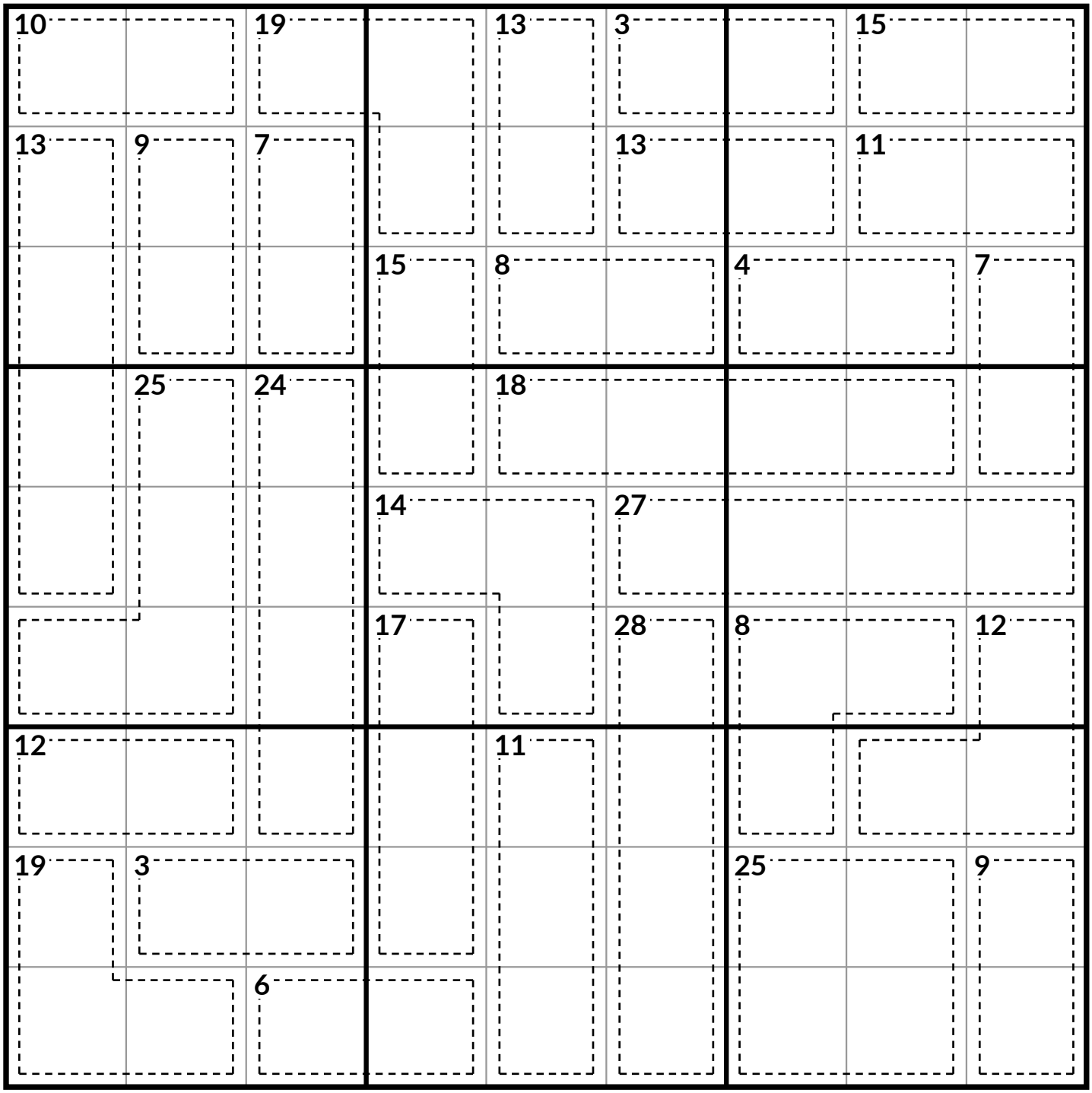
Time: _____



Sample pages

Puzzle 4 ★★☆☆☆ EASY

Time: _____



Sample pages