

Killer Sudoku Combinations Cheat Sheet

Digits 1–9, no repeats inside a cage · • = unique sum (only one combination) · jigsawmake.com

The 45 rule: every row, column, and 3×3 box sums to 45. When cages almost cover one, subtract their totals from 45 to solve the leftover cell instantly.

2-cell cages (sums 3–17)

Sum	Combinations
3 •	1+2
4 •	1+3
5	1+4, 2+3
6	1+5, 2+4
7	1+6, 2+5, 3+4
8	1+7, 2+6, 3+5
9	1+8, 2+7, 3+6, 4+5
10	1+9, 2+8, 3+7, 4+6
11	2+9, 3+8, 4+7, 5+6
12	3+9, 4+8, 5+7
13	4+9, 5+8, 6+7
14	5+9, 6+8
15	6+9, 7+8
16 •	7+9
17 •	8+9

Large-cage shortcut: a 6-cell cage = complement of a 3-cell group summing to 45 – S; a 7-cell cage = complement of a 2-cell group; an 8-cell cage is missing exactly the digit 45 – S; a 9-cell cage always holds all nine digits (sum 45).

3-cell cages (sums 6–24)

Sum	Combinations
6 •	1+2+3
7 •	1+2+4
8	1+2+5, 1+3+4
9	1+2+6, 1+3+5, 2+3+4
10	1+2+7, 1+3+6, 1+4+5, 2+3+5
11	1+2+8, 1+3+7, 1+4+6, 2+3+6, 2+4+5
12	1+2+9, 1+3+8, 1+4+7, 1+5+6, 2+3+7, 2+4+6, 3+4+5
13	1+3+9, 1+4+8, 1+5+7, 2+3+8, 2+4+7, 2+5+6, 3+4+6
14	1+4+9, 1+5+8, 1+6+7, 2+3+9, 2+4+8, 2+5+7, 3+4+7, 3+5+6
15	1+5+9, 1+6+8, 2+4+9, 2+5+8, 2+6+7, 3+4+8, 3+5+7, 4+5+6
16	1+6+9, 1+7+8, 2+5+9, 2+6+8, 3+4+9, 3+5+8, 3+6+7, 4+5+7
17	1+7+9, 2+6+9, 2+7+8, 3+5+9, 3+6+8, 4+5+8, 4+6+7
18	1+8+9, 2+7+9, 3+6+9, 3+7+8, 4+5+9, 4+6+8, 5+6+7
19	2+8+9, 3+7+9, 4+6+9, 4+7+8, 5+6+8
20	3+8+9, 4+7+9, 5+6+9, 5+7+8
21	4+8+9, 5+7+9, 6+7+8
22	5+8+9, 6+7+9
23 •	6+8+9
24 •	7+8+9

Unique Cages & Required Digits

Unique sums lock in their digits instantly. Required digits appear in every possible combination for that cage size and sum — pencil them in even before you know the exact combination.

Unique cages, 4–7 cells — sum locks the digits

Cage	Sum	Only combination
4-cell	10	1+2+3+4
4-cell	11	1+2+3+5
4-cell	29	5+7+8+9
4-cell	30	6+7+8+9
5-cell	15	1+2+3+4+5
5-cell	16	1+2+3+4+6
5-cell	34	4+6+7+8+9
5-cell	35	5+6+7+8+9
6-cell	21	1+2+3+4+5+6
6-cell	22	1+2+3+4+5+7
6-cell	38	3+5+6+7+8+9
6-cell	39	4+5+6+7+8+9
7-cell	28	1+2+3+4+5+6+7
7-cell	29	1+2+3+4+5+6+8
7-cell	41	2+4+5+6+7+8+9
7-cell	42	3+4+5+6+7+8+9

Cage	Sum	Must contain
3-cell	8	1
3-cell	22	9
4-cell	12	1, 2
4-cell	13	1
4-cell	27	9
4-cell	28	8, 9
5-cell	17	1, 2, 3
5-cell	18	1, 2

Cage	Sum	Must contain
5-cell	19	1
5-cell	31	9
5-cell	32	8, 9
5-cell	33	7, 8, 9
6-cell	23	1, 2, 3, 4
6-cell	24	1, 2, 3
6-cell	25	1, 2
6-cell	26	1
6-cell	34	9
6-cell	35	8, 9
6-cell	36	7, 8, 9
6-cell	37	6, 7, 8, 9
7-cell	30	1, 2, 3, 4, 5
7-cell	31	1, 2, 3, 4, 7
7-cell	32	1, 2, 3
7-cell	33	1, 2, 6
7-cell	34	1
7-cell	35	5
7-cell	36	9
7-cell	37	4, 8, 9
7-cell	38	7, 8, 9
7-cell	39	3, 6, 7, 8, 9
7-cell	40	5, 6, 7, 8, 9