

Hot Pot

INSTRUCTION

BOOKLET

Time limit: 120 minutes

Classic : TThsieh

Variant: jcvb & cpickerel

Hot pot is a traditional Chinese dish that consists of a simmering metal pot of stock at the center of the dining table. While the hot pot is kept simmering, ingredients are placed into the pot and are cooked at the table. Typical hot pot dishes include thinly sliced meat, leafy vegetables, mushrooms, wontons, egg dumplings and seafood.



This problem set, just as hot pot, includes a diverse collection of problems. Enjoy the feast.

| No. | Types | Scores |
|---------------------|--------------------------------|---------------|
| 1 | Classic Sudoku | 15 |
| 2 | Classic Sudoku | 15 |
| 3 | Classic Sudoku | 18 |
| 4 | Classic Sudoku | 20 |
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| 15 | Outside Sudoku | 55 |
| Total scores | | 500 |

1-6 Classic Sudoku

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

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

7 Diagonal Sudoku

Fill in the grid so that every row, column, 3x3 box, and two main diagonals contain the digits 1 through 9.

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

8 1234+567+89

Apply standard Sudoku rules. For the indicated rows, the sum of the 4-digit number, the 3-digit number, and the 2-digit number will equal the given total.

| | | | | | | | | |
|---|---|---|-----|---|-----|---|---|---|
| 5 | 3 | 2 | 1 | 6 | 7 | 9 | 8 | 4 |
| 6 | 1 | 9 | 3 | 4 | 8 | 7 | 5 | 2 |
| 8 | 4 | 7 | 2 | 5 | 9 | 1 | 3 | 6 |
| 7 | 6 | 4 | 5 | 9 | 3 | 8 | 2 | 1 |
| 2 | 8 | 1 | 6+7 | 4 | 3+9 | 5 | | |
| 9 | 5 | 3 | 8+2 | 1 | 4+6 | 7 | | |
| 4 | 7 | 5 | 9 | 8 | 6 | 2 | 1 | 3 |
| 1 | 9 | 6 | 4 | 3 | 2 | 5 | 7 | 8 |
| 3 | 2 | 8 | 7 | 1 | 5 | 6 | 4 | 9 |

=3654
=9819

9 Inequality Sudoku

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9. The grids should satisfy '>' (greater than) and '<' (less than) signs.

| | | | | | | | | |
|-----|-----|---|-----|-----|---|-----|-----|---|
| 6 > | 1 < | 9 | 4 < | 8 > | 3 | 2 < | 7 > | 5 |
| 8 > | 2 < | 3 | 7 < | 9 > | 5 | 1 < | 6 > | 4 |
| 7 > | 5 > | 4 | 2 > | 1 < | 6 | 8 < | 9 > | 3 |
| 1 < | 9 > | 8 | 5 > | 4 < | 7 | 6 > | 3 > | 2 |
| 2 < | 3 < | 5 | 9 > | 6 > | 1 | 7 > | 4 < | 8 |
| 4 < | 6 < | 7 | 8 > | 3 > | 2 | 9 > | 5 > | 1 |
| 9 > | 7 > | 1 | 3 < | 5 < | 8 | 4 > | 2 < | 6 |
| 5 < | 8 > | 2 | 6 < | 7 > | 4 | 3 > | 1 < | 9 |
| 3 < | 4 < | 6 | 1 < | 2 < | 9 | 5 < | 8 > | 7 |

10 Bush * Sudoku

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9. The sum of two adjacent digits cannot be 10. ('bush' means no ten in Chinese.)

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

11 Sequence Sudoku

Apply standard Sudoku rules. For each row with grey cells, take a continuous sequence from the sequence on the right and fill it into the grey cells. The sequences have to follow the same order from top to bottom as they are in the original sequence. Within each row, the order of digits has to be identical to that in the original sequence as well. (The puzzle is 9*9).

| | | | | | |
|---|---|---|---|---|---|
| 6 | 1 | 2 | 3 | 4 | 5 |
| 4 | 5 | 3 | 2 | 1 | 6 |
| 1 | 3 | 4 | 5 | 6 | 2 |
| 5 | 2 | 6 | 4 | 3 | 1 |
| 2 | 4 | 1 | 6 | 5 | 3 |
| 3 | 6 | 5 | 1 | 2 | 4 |

1234056
16789142
121507651
2612

12 The greater Sudoku

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9. The small number between two cells stands for the larger of the two.

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

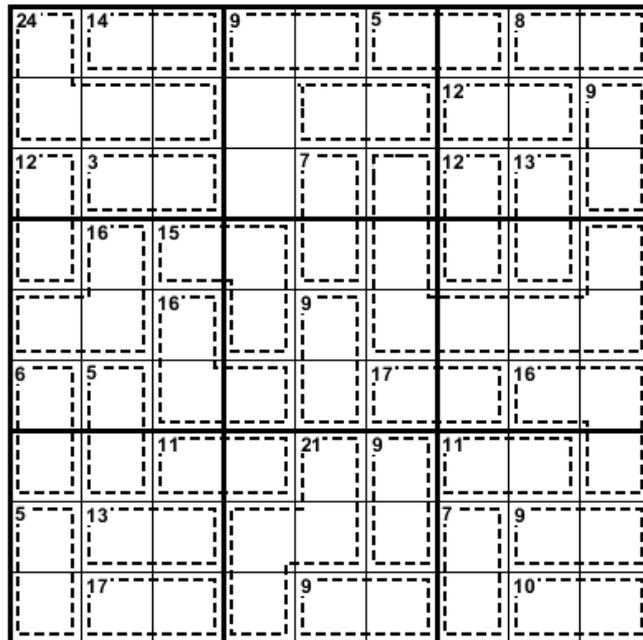
13 Blackout sum Sudoku

Fill in digits 1-9 to empty cells so that the digits in each row, each column and each 3*3 box are not repeated. The black cells should be left out blank, with only 8 digits in each row, each column and each 3*3 box. The number in a black cell is the sum of the three digits missing from the row, column and the 3*3 box that the black cell is in.

| | | | | | | | | |
|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 15 | 4 | 5 | 6 | 7 | 8 |
| 9 | 18 | 4 | 6 | 7 | 8 | 1 | 2 | 5 |
| 5 | 6 | 7 | 9 | 1 | 2 | 3 | 4 | 26 |
| 2 | 3 | 6 | 8 | 5 | 1 | 23 | 9 | 4 |
| 4 | 5 | 1 | 7 | 20 | 9 | 2 | 3 | 6 |
| 8 | 9 | 21 | 2 | 3 | 4 | 5 | 1 | 7 |
| 19 | 1 | 2 | 5 | 9 | 6 | 4 | 8 | 3 |
| 7 | 8 | 5 | 4 | 2 | 3 | 9 | 16 | 1 |
| 3 | 4 | 9 | 1 | 8 | 19 | 7 | 6 | 2 |

14 Incomplete killer

Apply standard Sudoku rules. The sum of the cells must equal the total given for the cage in the upper left of the cage. Each digit in the cage must be unique. However, that number is missing in some of the cages. Please fill in the following numbers into their corresponding dotted cages.



10, 36



15 Outside Sudoku

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9

The numbers outside the 9*9 box imply:

The numbers outside Box 1, with the form X-Y: in the corresponding column, the Xth digit is Y, or the Yth digit is X. At least one is right.

The number outside Box 2: the distance between digits 1 and 9 in the corresponding column. If 1 and 9 are adjacent the distance is assumed to be 1, if there is one digit in between the distance is 2, etc.

The numbers outside Box 3: represent the sums of all digits between 1 and 9 in that row.

The number outside Box 4: how many skyscrapers are seen from that direction of particular row (higher skyscrapers cover lower ones behind them).

The number outside Box 6: sum of the three closest cells in that row.

The number outside Box 7: product of the three closest cells in that row.

The number outside Box 8: the closest even or odd digit in that column.

The number outside Box 9: the digit(s) in the three closest cells in the corresponding column.

| | | | | | | | | | | | |
|----|--|-----|-----|---|---|---|---|---|---|---|----|
| | | 6-8 | 2-1 | | 2 | | 1 | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 35 |
| | | 4 | 5 | 6 | 7 | 8 | 9 | 1 | 2 | 3 | 0 |
| | | 7 | 8 | 9 | 3 | 2 | 1 | 5 | 4 | 6 | 5 |
| 4 | | 2 | 3 | 7 | 6 | 9 | 5 | 4 | 1 | 8 | 13 |
| | | 5 | 6 | 1 | 8 | 4 | 7 | 9 | 3 | 2 | |
| 2 | | 8 | 9 | 4 | 2 | 1 | 3 | 6 | 5 | 7 | |
| 60 | | 3 | 4 | 5 | 9 | 7 | 8 | 2 | 6 | 1 | |
| | | 9 | 1 | 8 | 5 | 6 | 2 | 3 | 7 | 4 | |
| | | 6 | 7 | 2 | 1 | 3 | 4 | 8 | 9 | 5 | |
| | | | | | 2 | 3 | 3 | 2 | 7 | 4 | |
| | | | | | | | 8 | 9 | 6 | 1 | |