

# MSO Sudoku & KenKen 2025

The MSO Sudoku & KenKen competition consists of 4 sections. There are a total of 30 problems, each with an associated mark. You must complete the problem 100% correct to earn the marks – no partial marks will be awarded for partially correct solutions.

Harder problems are in general worth more marks, however there is no guarantee that a 30 mark problem in one section is harder than a 20 mark problem in another.

## Classic

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box.

### Points:

01 - 15 points  
02 - 15 points  
03 - 25 points  
04 - 25 points  
05 - 40 points  
06 - 40 points  
07 - 60 points  
08 - 60 points

## Diagonal

Also known as X-Sudoku. Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column and 3x3 outlined box. Each main diagonal contains each digit from 1 to 9.

### Points:

01 - 15 points  
02 - 15 points

03 - 25 points

04 - 25 points

05 - 35 points

06 - 35 points

## Killer

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each row, column, 3x3 outlined box and cage. 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.

### Points:

01 - 15 points

02 - 15 points

03 - 30 points

04 - 30 points

05 - 45 points

06 - 45 points

07 - 60 points

08 - 60 points

## KenKen

Place a digit from 1 to N into each cell in the N by N grid so that each digit appears exactly once in each row and column. The numbers in each cage must combine (in any order) to produce the target number in the top corner using the mathematic operation indicated (+, -, ×, /). Digits can repeat within a cage. The puzzles range from N=6 to N=9.

### Points:

01 - 15 points

02 - 15 points  
03 - 30 points  
04 - 30 points  
05 - 45 points  
06 - 45 points  
07 - 55 points  
08 - 55 points

# Classic

## Problem 1

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

## Problem 2

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

# Classic

## Problem 3

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

## Problem 4

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

# Classic

## Problem 5

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

## Problem 6

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

# Classic

## Problem 7

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

## Problem 8

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

# Diagonal

## Problem 1

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

## Problem 2

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

# Diagonal

## Problem 3

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

## Problem 4

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

# Diagonal

## Problem 5

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

## Problem 6

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

# Diagonal

## Problem 7

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

## Problem 8

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

# Killer

## Problem 1

|    |    |    |    |    |    |   |    |    |
|----|----|----|----|----|----|---|----|----|
| 7  |    | 6  |    | 12 | 10 |   | 11 | 9  |
| 16 |    | 18 |    |    | 12 |   |    |    |
| 10 |    |    | 3  |    | 14 | 8 |    | 10 |
|    | 15 |    | 11 |    |    | 8 |    |    |
| 12 |    | 7  | 13 |    | 9  |   | 13 |    |
| 12 |    |    | 8  |    | 16 |   |    | 21 |
|    | 10 |    | 15 |    |    | 8 | 5  |    |
| 9  | 9  | 14 | 16 |    |    |   |    |    |
|    |    |    | 6  |    | 11 |   | 11 |    |

# Killer

## Problem 2

|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 3  |    | 13 |    | 13 |    | 16 |    |    |
| 11 | 11 | 13 | 5  |    | 5  | 7  |    | 20 |
|    |    |    | 16 |    |    | 6  |    |    |
| 9  | 5  | 24 |    | 10 | 14 |    | 8  |    |
|    |    |    |    |    |    | 16 | 7  |    |
| 24 | 8  |    | 5  |    | 9  |    | 17 | 6  |
|    | 24 | 10 |    | 9  |    | 14 |    |    |
|    |    | 6  |    |    |    |    | 18 |    |
|    |    | 7  |    | 16 |    |    |    |    |

# Killer

## Problem 3

|    |    |    |    |    |   |    |    |    |
|----|----|----|----|----|---|----|----|----|
| 4  |    | 17 |    |    | 9 |    | 23 |    |
| 14 | 13 |    |    | 16 | 8 |    | 10 |    |
|    | 14 | 10 |    |    | 3 |    |    | 11 |
|    |    |    | 8  | 7  |   | 8  | 17 |    |
| 21 |    |    |    | 8  |   |    |    | 6  |
| 9  | 6  | 14 |    | 14 |   | 25 | 13 |    |
|    |    | 20 |    | 3  |   |    |    |    |
| 12 |    |    | 12 |    |   | 19 |    | 6  |
| 10 |    |    |    | 15 |   |    |    |    |

# Killer

## Problem 4

|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 9  | 6  |    | 17 |    | 14 |    |    | 20 |
|    | 12 |    | 6  | 11 | 5  |    |    |    |
| 9  | 15 |    |    |    | 16 | 14 | 3  |    |
|    | 8  | 16 |    |    |    |    |    | 11 |
| 6  |    |    | 15 |    |    | 16 |    |    |
|    | 11 | 18 | 9  |    | 9  | 10 | 12 | 15 |
| 14 |    |    |    | 11 |    |    |    |    |
|    |    | 8  |    |    | 14 |    |    |    |
| 15 |    | 13 |    | 7  |    | 10 |    |    |

# Killer

## Problem 5

|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 7  |    | 10 |    | 7  |    | 23 | 17 |    |
| 7  | 24 |    | 14 |    |    |    | 10 |    |
|    |    |    |    | 20 |    | 16 | 6  | 17 |
| 7  | 9  | 18 |    |    |    |    |    |    |
|    |    | 19 |    |    | 9  |    | 12 |    |
| 15 | 10 |    |    |    |    |    |    | 6  |
|    |    | 18 | 3  | 13 |    | 13 |    |    |
| 15 |    |    |    |    | 13 |    | 10 | 9  |
|    |    | 11 |    | 17 |    |    |    |    |

# Killer

## Problem 6

|    |    |    |    |    |    |    |    |   |
|----|----|----|----|----|----|----|----|---|
| 18 | 10 | 6  |    | 13 |    | 23 |    |   |
|    |    | 13 |    |    | 9  |    | 11 |   |
|    | 14 | 5  |    | 15 | 12 |    | 12 |   |
| 14 |    | 9  |    |    | 10 |    |    | 9 |
|    |    | 15 |    |    | 7  | 15 | 13 |   |
| 10 | 11 |    | 12 |    |    |    |    |   |
|    |    | 13 |    | 17 |    |    | 7  |   |
| 11 |    |    | 18 |    |    |    | 19 |   |
|    | 13 |    | 13 |    | 8  |    |    |   |

# Killer

## Problem 7

|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 13 |    | 11 |    |    |    | 23 |    | 13 |
| 22 |    | 4  | 15 |    | 24 |    |    |    |
|    | 13 |    |    |    |    | 9  |    | 3  |
|    |    | 10 | 11 | 19 | 8  | 14 |    |    |
| 28 |    |    |    |    |    |    | 21 |    |
|    |    | 16 | 23 |    | 10 |    | 17 |    |
|    |    |    |    |    |    | 10 |    | 7  |
| 14 |    | 20 |    |    | 9  |    |    |    |
|    |    |    |    |    |    | 18 |    |    |

# Killer

## Problem 8

|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 13 |    |    | 10 |    | 15 | 7  |    | 10 |
| 16 | 15 | 13 |    | 25 |    | 11 |    |    |
|    |    |    |    |    |    | 32 | 5  | 14 |
|    | 20 |    | 17 |    |    |    |    |    |
| 9  |    |    |    | 9  | 11 |    | 13 |    |
|    |    | 14 | 20 |    |    |    |    | 13 |
| 7  |    |    |    |    |    |    | 11 |    |
|    |    | 15 |    |    | 15 |    |    |    |
| 11 |    | 11 |    | 12 |    |    | 11 |    |

# KenKen

## Problem 1

|      |      |     |      |      |      |
|------|------|-----|------|------|------|
| 24 × |      | 5 ÷ |      | 7 +  | 12 × |
| 3 ×  |      | 6 ÷ | 180× |      |      |
| 7 +  |      |     |      | 24 × |      |
| 2    | 48 × |     |      | 2 -  | 10 × |
| 5 -  |      |     |      |      |      |
| 15 × |      | 2 ÷ |      | 7 +  |      |

## Problem 2

|      |      |      |      |     |      |
|------|------|------|------|-----|------|
| 11 + |      | 1 -  |      | 1 - | 8 ×  |
| 6    | 12 × |      | 5 -  |     |      |
| 6 ×  |      | 12 + |      | 3 ÷ |      |
| 2 ÷  | 6 +  |      | 20 × |     | 6    |
|      |      |      |      | 2   | 15 × |
| 8 ×  |      |      | 9 +  |     |      |

# KenKen

## Problem 3

|     |      |      |      |     |      |      |
|-----|------|------|------|-----|------|------|
| 6 ÷ |      | 20 × |      | 1 - |      | 14 × |
| 1 - |      | 7 +  | 4 -  |     |      |      |
| 2 - |      |      | 30 × |     | 4 -  |      |
| 2 ÷ |      | 5 -  |      | 5 + | 10 × |      |
| 7   | 1 -  | 7 +  | 6 ÷  |     |      | 11 + |
| 5 ÷ |      |      |      | 3 - |      |      |
|     | 14 × |      | 2 -  |     | 10 + |      |

## Problem 4

|      |       |      |      |     |     |      |
|------|-------|------|------|-----|-----|------|
| 12 + |       | 4    | 21 + |     | 3 ÷ | 3 +  |
| 60 × |       | 12 + |      |     |     |      |
|      | 252 × |      | 6    | 4   | 6 + | 12 × |
|      |       |      |      | 2 × |     |      |
|      | 192 × |      |      |     | 4 - | 12 + |
| 2 ÷  |       | 1 -  | 7 +  |     |     |      |
|      | 1     |      | 21 × |     | 2 - |      |

# KenKen

## Problem 5

|      |      |      |       |      |      |      |      |
|------|------|------|-------|------|------|------|------|
| 1    | 640× |      | 3     | 13 + |      |      | 36 × |
|      |      | 16 + |       |      | 21 × | 30 × |      |
| 10 + |      |      | 1536× |      |      |      |      |
|      | 18 + | 5    | 23 +  |      |      |      |      |
| 14 + |      |      |       |      | 6 ÷  | 18 + | 4    |
|      |      |      | 1 -   | 14 × |      |      |      |
|      | 84 × | 4 -  |       |      | 2 ÷  |      |      |
|      |      |      | 6 ÷   |      | 20 + |      |      |

## Problem 6

|      |      |      |     |      |      |      |      |
|------|------|------|-----|------|------|------|------|
| 6 ÷  |      | 112× |     | 20 + |      | 15 × |      |
| 6 +  |      |      |     |      |      | 48 × |      |
| 1 -  | 27 + | 75 × |     |      | 2 ÷  |      | 9 +  |
|      |      |      |     |      | 14 × |      |      |
| 4 ×  |      |      | 3 ÷ | 24 × |      | 13 + | 28 × |
| 16 + | 10 × | 21 + |     | 15 + |      |      |      |
|      |      |      | 5   |      | 14 + | 14 × |      |
|      |      |      |     |      |      |      |      |

# KenKen

## Problem 7

|      |      |      |      |      |     |      |      |      |
|------|------|------|------|------|-----|------|------|------|
| 30 × |      | 19 + | 210× |      | 9 × |      | 18 + |      |
| 3 -  |      |      |      | 360× |     |      | 8 ×  |      |
| 9 +  |      |      |      |      | 2 - |      |      |      |
|      | 70 × | 19 + |      | 3 ×  |     | 19 + | 210× |      |
|      |      |      | 24 × |      |     |      |      |      |
| 72 × | 19 + |      |      | 18 + |     | 10 + |      | 8 +  |
|      | 21 + |      |      | 6    |     |      |      |      |
|      |      | 18 × |      | 280× |     | 14 + | 48 × | 36 × |
| 11 + |      |      |      |      |     |      |      |      |

## Problem 8

|      |      |       |      |      |      |      |      |      |
|------|------|-------|------|------|------|------|------|------|
| 12 + |      | 4 ÷   |      | 84 × |      |      | 13 + |      |
| 168× | 23 + | 2 ÷   | 1 -  |      | 15 + | 2 -  | 8 -  |      |
|      |      |       | 63 × |      |      |      | 11 + |      |
|      |      |       |      | 9 ×  |      | 17 + |      |      |
| 4    | 19 + |       | 72 × |      |      |      | 5    | 756× |
| 11 + |      |       |      |      | 6 ÷  |      |      |      |
| 7 +  |      | 1701× | 8 ×  | 560× | 3 -  |      |      | 17 + |
|      |      |       |      |      | 54 × |      |      |      |
| 6    |      |       |      |      | 1 -  |      | 9 +  |      |