

# MIT Sudoku Competition 2023

## Experienced Team Round

Team Name: \_\_\_\_\_

Name 1: \_\_\_\_\_

Name 2: \_\_\_\_\_

Name 3: \_\_\_\_\_

Name 4: \_\_\_\_\_

9x9 Rules: Place the digits 1-9 in the empty squares in the grid, such that every row, column, and marked 3x3 square contains each of the digits exactly once.

Normal Sudoku rules apply in each grid. The following additional rules also apply for specific grids.

A: Digits in each cage may not repeat and must sum to the indicated total.

B: Digits along each thermometer must strictly increase from the round bulb to the tip.

C: Digits along arrows must sum to the digit in the attached circle.

D: Digits separated by a white dot are consecutive. Digits separated by a black dot are in a 1:2 ratio. Not all possible dots are necessarily given.

E: Digits in a white circle must appear somewhere in the four cells immediately surrounding that circle.

F: Digits separated by an X sum to 10. Digits separated by a V sum to 5. Not all possible clues are necessarily given.

The six grids form a loop (A-B-C-D-E-F-A) in which each grid has two immediate neighbors. In each pair of neighboring grids, exactly one of the nine 3x3 regions contains an identical arrangement of digits. For instance, region 4 might be identical in grids A and B. Which regions match between grids must be determined by the solvers.

Points are determined as so:

Each 6x6 grid correct in the smaller version is worth 1 point.

The correct completed smaller version is worth an additional 3 points.

Each 3x3 square correct in the larger version is worth 1 point.

Each correct completed 9x9 grid in the larger version is worth an additional 5 points.

The correct completed larger version is worth an additional 15 points.