## MIT Sudoku Open 2024

## Team Round 1: Pants on Fire

Division
$\square$ Beginner
$\square$ Experienced

Team Name:

Team Members:
1.
2.
3.
4.

Time Remaining: $\qquad$
Score $\qquad$ * 100 + $\qquad$ (Bonus) $=$ $\qquad$ Points

## 4.1-8: Pants on Fire Sudoku

Each of the eight grids contain clues belonging to the following 8 sudoku variants: Thermo, Arrow, Killer, Little Killer, Odd/Even, XV Pairs, Kropki Pairs, Palindrome. Some clues are liars, where liars are not allowed to follow their variant's rules. In each grid, all liar clues belong to the same variant, and the same variant may not be a liar in two different grids.

## Variants and Rules

Arrow Sudoku Rules: Apply Classic Sudoku rules. Each digit placed in a cell with a circle must be the sum of the digits placed in the cells that the adjoining arrow passes through. Digits may repeat on arrow.

Killer Sudoku Rules: Classic sudoku rules apply. 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.

Little Killer Sudoku Rules: Classic sudoku rules apply. Numbers outside the grid give the sum of the digits along the indicated diagonal. Digits may repeat on each indicated (or unindicated) diagonal.

Kropki Pairs Sudoku Rules: Classic sudoku rules apply. A white dot between two cells indicates that the digits in those two cells are consecutive. A black dot between two cells indicates that the digits in those two cells form a 1:2 ratio. Not all dots are given.

Odd/Even Sudoku Rules: Classic sudoku rules apply. Digits in circles must be odd and digits in squares must be even.

Palindrome Sudoku Rules: Classic sudoku rules apply. Numbers along shaded lines must be the same forwards and backwards.

Thermo Sudoku Rules: Classic sudoku rules apply. Some thermometer shapes are placed in the grid. Digits are strictly increasing from the round bulb of each thermometer to each flat end.

XV Pairs Sudoku Rules: Classic sudoku rules apply. A "V" symbol between two cells indicates that the digits in those two cells sum to 5 . An " X " symbol between two cells indicates that the digits in those two cells sum to 10 . Not all "X"s and "V"'s are given.
**Clarification**: When they appear as liars, Thermo and Palindrome clues are treated as a whole. For example, a Thermo reading 54321 and a Thermo reading 12354 are both acceptable liars. Similarly, palindromes reading 3456546 and 3456789 are both acceptable liars.

|  | A | B | C | D | E | F | G | H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Thermo |  |  |  |  |  |  |  |  |
| Arrow |  |  |  |  |  |  |  |  |
| Killer |  |  |  |  |  |  |  |  |
| Little Killer |  |  |  |  |  |  |  |  |
| Odd/Even |  |  |  |  |  |  |  |  |
| XV |  |  |  |  |  |  |  |  |
| Kropki pairs |  |  |  |  |  |  |  |  |
| Palindrome |  |  |  |  |  |  |  |  |
| R |  |  |  |  |  |  |  |  |



## B



C


D


## E



## F



## $\underline{G}$


$\underline{\mathbf{H}}$


