Codewriting **300**

Sudoku is a number-placement puzzle. The objective is to fill a `9 × 9` grid with digits so that each column, each row, and each of the nine `3 × 3` sub-grids that compose the grid contains all of the digits from `1` to `9`.

This algorithm should check if the given grid of numbers represents a correct solution to Sudoku.

Example

- For

```
grid = [[1, 3, 2, 5, 4, 6, 9, 8, 7],
        [4, 6, 5, 8, 7, 9, 3, 2, 1],
        [7, 9, 8, 2, 1, 3, 6, 5, 4],
        [9, 2, 1, 4, 3, 5, 8, 7, 6],
        [3, 5, 4, 7, 6, 8, 2, 1, 9],
        [6, 8, 7, 1, 9, 2, 5, 4, 3],
        [5, 7, 6, 9, 8, 1, 4, 3, 2],
        [2, 4, 3, 6, 5, 7, 1, 9, 8],
        [8, 1, 9, 3, 2, 4, 7, 6, 5]]
```

the output should be

`solution(grid) = true`;

- For

```
grid = [[1, 3, 2, 5, 4, 6, 9, 2, 7],
        [4, 6, 5, 8, 7, 9, 3, 8, 1],
        [7, 9, 8, 2, 1, 3, 6, 5, 4],
        [9, 2, 1, 4, 3, 5, 8, 7, 6],
        [3, 5, 4, 7, 6, 8, 2, 1, 9],
        [6, 8, 7, 1, 9, 2, 5, 4, 3],
        [5, 7, 6, 9, 8, 1, 4, 3, 2],
        [2, 4, 3, 6, 5, 7, 1, 9, 8],
        [8, 1, 9, 3, 2, 4, 7, 6, 5]]
```

the output should be

`solution(grid) = false`.

The output should be `false`: each of the nine `3 × 3` sub-grids should contain all of the digits from `1` to `9`.

These examples are represented on the image below.

Example 1

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

Example 2

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

Input/Output

- **[execution time limit] 4 seconds (py3)**
- **[input] array.array.integer grid**

  A matrix representing `9 × 9` grid already filled with numbers from `1` to `9`.

  Guaranteed constraints:

  `grid.length = 9`,

  `grid[i].length = 9`,

  `1 ≤ grid[i][j] ≤ 9`.

- **[output] boolean**

  `true` if the given grid represents a correct solution to Sudoku, `false` otherwise.

[Python 3] Syntax Tips

```
# Prints help message to the console
# Returns a string
def helloWorld(name):
    print("This prints to the console when you Run Tests")
    return "Hello, " + name
```