COCI '23 Contest 1 #1 Sudoku

Time limit: 1.0s   **Memory limit:** 512M

Sudoku is a logic-based, combinatorial number-placement puzzle. The objective is to fill a 9×9 grid with digits from 1 to 9 in such a way that the following statements hold:

- Each row contains exactly one occurrence of each digit from 1 to 9.
- Each column contains exactly one occurrence of each digit from 1 to 9.
- Each of the nine 3×3 subgrids contains exactly one occurrence of each digit from 1 to 9.

For a given not yet finished sudoku grid, determine if there is a mistake in it.

Note: It is not necessary to check whether the sudoku grid is solvable.

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

Daily sudoku, *New York Times*, November 1, 2023, Difficulty: Hard

Input Specification

The input describes the sudoku grid.

The characters `|`, `-` and `+` frame the 3×3 subgrids.

The character `.` represents an empty cell.

All the other characters in the input will be digits from `1` to `9`.

See the examples for clarification.

Output Specification

Output the word `GRESKA` if there is a mistake in the sudoku board. Otherwise, output the word `OK`.

Constraints

Subtask	Points	Constraints
1	11	It's possible to determine whether there is a mistake by only checking the first rule.
2	12	It's possible to determine whether there is a mistake by only checking the second rule.
3	13	It's possible to determine whether there is a mistake by only checking the third rule.
4	14	No additional constraints.

Sample Input 1

```
+---+---+---+
|52.|...|.81|
|.39|58.|...|
|.8.|.9.|...|
+---+---+---+
|24.|...|1.3|
|1..|43.|86.|
|.63|..7|.24|
+---+---+---+
|...|1.9|35.|
|..8|.74|6..|
|31.|86.|7.9|
+---+---+---+
```

Sample Output 1

```
OK
```

Explanation for Sample 1

There is no mistake, so the output is OK .

Sample Input 2

```
+---+---+---+
|3..|6..|..4|
|4.9|8.1|..7|
|..7|.49|6..|
+---+---+---+
|946|157|8.2|
|.2.|3..|745|
|.7.|28.|...|
+---+---+---+
|...|4..|..5|
|8.5|.6.|.2.|
|734|..8|5..|
+---+---+---+
```

Sample Output 2

Explanation for Sample 2

There is a mistake in the ninth column: the digit 5 appears twice; and there is also a mistake in the lower right 3×3 subgrid: the digit 5 appears twice.

Sample Input 3

```
+---+---+---+
|5..|98.|67.|
|6..|...|.31|
|.2.|613|.4.|
+---+---+---+
|.96|8.2|1.7|
|.28|..5|.9.|
|7.3|19.|6..|
+---+---+---+
|962|.7.|.1.|
|1.5|...|76.|
|.7.|5..|9..|
+---+---+---+
```

Sample Output 3

Explanation for Sample 3

There are two mistakes: the digit 2 appears twice in the second column, and the digit 6 appears twice in the seventh column.