Solve Sudoku!

Sudoku is a logic-based, combinatorial 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 contain all of the digits from 1 to 9.

You are given a partially completed grid, which always has a unique solution. Your task is to solve the given Sudoku puzzle.

Input

- The input data should be read from the console.

- You will be given 9 lines with 9 symbols with numbers and dashes. The dashes represent empty cells.

- The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

- The output data should be printed on the console.

- You should print the solved Sudoku puzzle. See the examples bellow.

Sample tests

Input

```
53--7----
6--195---
-98----6-
8---6---3
4--8-3--1
7---2---6
-6----28-
---419--5
----8--79
```

Output

```
534678912
672195348
198342567
859761423
426853791
713924856
961537284
287419635
345286179
```

Input

```
---2---63
3----54-1
--1--398-
-------9-
---538---
-3-------
-263--5--
5-37----8
47---1---
```

Output

```
854219763
397865421
261473985
785126394
649538172
132947856
926384517
513792648
478651239
```