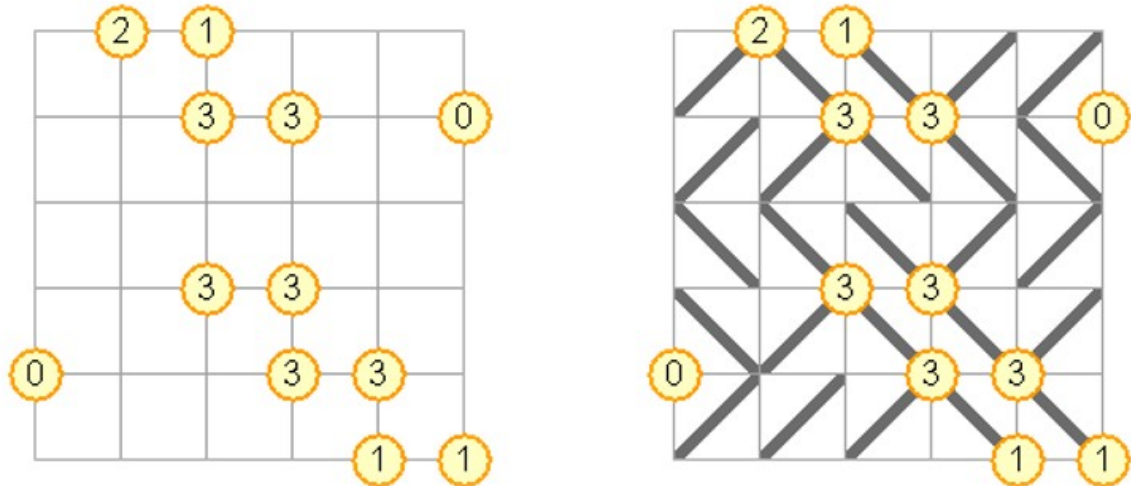


Problem Description

Gokigen Naname is a Japanese puzzle game played on a square grid in which numbers in circles appear at some of the intersections on the grid.

The objective is to draw diagonal lines in each cell of the grid, such that the number in each circle equals the number of lines extending from that circle. Additionally, it is forbidden for the diagonal lines to form an enclosed loop.



The first figure shows the start position of a puzzle. The second figure shows the solution to the same puzzle. A *Gokigen Naname* puzzle always has exactly one solution.

Input

The first line of the input file contains an integer N ($N < 25$) which denotes the total number of test cases. The description of each test case is given below: The first line of each test case contains a single integer n ($2 \leq n \leq 7$), the number of cells along each of the sides in the square grid. Then follow $n+1$ lines containing the contents of the intersections of the grid cells. Each such line will contain a string of $n + 1$ characters, either a digit between 0 and 4, inclusive, or a period ('.') indicating that there is no number at this intersection (arbitrarily many lines may connect to it).

Output

For each test case print n lines, each line containing exactly n characters. Each character should either be a slash or a backslash, denoting how the corresponding grid cell is filled.

Sample Input

```
2
3
```

1.1.
...0
.3..
..2.
5
.21...
..33.0
.....
..33..
0..33.
....11

Sample Output

V/
\\
^/
^V/
/^\\
\\V/
VV
//^\\