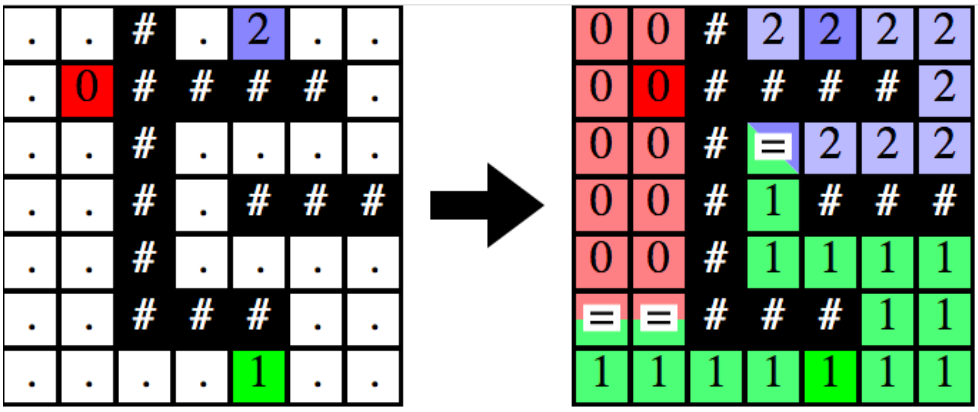
Goal

Your lab organizes the contest of the best bacteria of France. The principle is very simple: each participant drops a bacterium in a Petri dish; during the night, the bacteria multiply and form colonies covering the entire box. The winner is the one who has developed the largest bacterial colony.

To make the game more interesting, you build a petri dish with obstacles that bacteria can not cross. A Petri dish can then be represented by a square grid where:

- . represents a free space
- # represents an impassable obstacle
- a number from *0* to *9* represents the bacterium of a participant



Only whole cells are counted, if a cell is colonized at the same time by several bacteria, no point is awarded but the cell becomes contagious and can contaminate its neighbors, these cells are marked with a = in the final box-above. The second example below illustrates this contagion rule.

At each step the bacteria propagate in all four directions at the same time (not diagonally). Assuming that bacteria reproduce (and therefore propagate) at the same rate, what is the size of the largest bacterial colony?

Data

Input

Row *1*: an integer **N** between *1* and *100* the size of the Petri dish
Rows *2* to **N** +1: a string of **N** characters representing a line of the Petri dish. The characters can be a digit (a bacterium of the type corresponding to the digit), a # (impassable obstacle), . (an empty cell).

Output

An integer representing the size of the largest bacterial colony.

Example

The figure above corresponds to the entry:

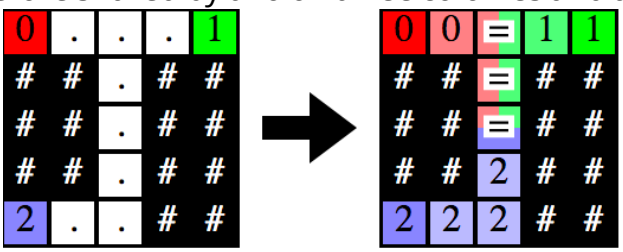
```
7
..#.2..
.0####.
..#....
..####.
..#....
..###..
....1..
```

In this case, the expected answer is 14, which is the number of cells covered by colony 1 (green) after dark.

The shared boxes remain contagious, as illustrated by the following Petri dish:

```
5
0...1
##.##
##.##
##.##
2..##
```

The expected answer is 4 (size of colony 2), in fact colonies 0 and 1 continue to propagate in the central column (which they share). So certain cells in the center of the map are therefore shared by two or three colonies and are not enumerated.



You can download sample input and output data files to work locally by clicking on the link at the bottom of the French version of the question.