Artificium

Pixel Polygons

Runtime Limit – 3s

Problem Statement

You have an *N*x*N* grid consisting of white and black square pixels. White pixels are represented by . and black pixels are represented by #. The pixels on the outer edges of the grid are all white.

The black pixels form a single connected shape without any holes (no white pixel is surrounded on all four sides with black pixels). How many sides does it have?

Format

Input

Line 1: An integer *N* – the size of the grid

Next *N* lines: – the rows of the grid

Output

Line 1: The number of sides the black region has.

Constraints

$3 \leq N \leq 10$

The pixels on the outer edge of the grid are all white.

The black pixels form a single connected region.

No white pixel is surrounded on all four sides with black pixels.

Sample

Input

```
4
....
.##.
.##.
....
```

Output

```
4
```