Solitaire of the stones (2)   P52369_en

This exercise is a variation of the exercise . The only difference in the rules of the game is that now the jumps do not make disappear the stones that have been jumped.

Write a program such that, given two configurations of a solitaire, prints if is possible to go from one to the other one.

Input

Input consists of a natural $n \geq 3$, followed by the descriptions of the two configurations, each one with n rows with n characters each one. A 'X' indicates a stone. The empty positions are indicated with a dot.

Output

Your program must print "1" if you can go from one configuration to the other one, or "0" if it is not possible.

Sample input 1

```
3

.XX
X..
.XX

.X.
X..
XXX
```

Sample output 1

```
1
```

Sample input 2

```
3

XXX
...
XXX

XXX
...
XXX
```

Sample output 2

```
1
```

Sample input 3

```
4

XX..
.XX.
..X.
XXX.

XXX.
...X
XX..
..XX
```

Sample output 3

```
0
```

Problem information

Author : Salvador Roura
Translator : Carlos Molina
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