

# Repetitions

A sequence of words over alphabet  $[a', \dots, z']$  is given. The length of longest word occurring as a coherent fragment in every word given is to be found.

## Input

In the first line of the standard input there is an integer  $n$ , where  $1 \leq n \leq 5$  is the number of words. In each of the next  $n$  lines there is one word formed from small letters of English alphabet  $[a', \dots, z']$ . The length of each word is at least 1, but not greater than 2 000.

## Output

The text of standard output should consist of exactly one line containing a single integer equal to the length of the longest word occurring as the coherent fragment in every word given.

## Example

**Input:**

```
3
abcb
bca
acbc
```

**Output:** 2