

Medusa's Snakes

Input File: *snakein.txt*

Output File: *snakeout.txt*

After the success of your latest research project in mythical DNA, you have gained the attention of a most diabolical creature: Medusa.

Medusa has snakes instead of hair. Each of her snakes' DNA is represented by an uppercase string of letters. Each letter is one of S, N, A, K or E.

Your extensive research shows that a snake's *venom level* depends on its DNA. A snake has venom level x if its DNA:

- has exactly $5x$ letters
- begins with x copies of the letter S
- then has x copies of the letter N
- then has x copies of the letter A
- then has x copies of the letter K
- ends with x copies of the letter E.

For example, a snake with venom level 1 has DNA SNAKE, while a snake that has venom level 3 has DNA SSSNNNAAAKKKEEE.

If a snake's DNA does not fit the format described above, it has a venom level of 0.

Medusa would like your help making her snakes venomous, by **deleting zero or more letters** from their DNA.

Given a snake's DNA, can you work out the maximum venom level this snake could have?

Input

The first line contains the integer N : the number of letters in the snake's DNA. The second line contains a string of N uppercase letters, representing the snake's DNA. Each letter is one of S, N, A, K or E.

Output

Your program should output a single integer: the maximum venom level the snake could have, after you delete some (possibly none) of the letters from its DNA.

Sample Input 1

17
KSEESNANNAAKNKESE

Sample Output 1

2

Sample Input 2

22
SSSSNNNAAAkkkkEEEEEEEE

Sample Output 2

3

Sample Input 3

15
SNAKESNAKESNAKE

Sample Output 3

1

Sample Input 4

6
KANSAS

Sample Output 4

0

Explanation

The letters that are deleted in each case are underlined below:

- Sample Input 1: KSEESNANNAAKNKESE → SSNNAAKKEE
- Sample Input 2: SSSSNNNAAAkkkkEEEEEEEE → SSSNNNAAAKKKEE
- Sample Input 3: SNAKESNAKESNAKESNAKE → SNAKE
- Sample Input 4: No matter which letters you delete, the snake will always have venom level 0, so the answer is 0.

Subtasks & Constraints

For all cases, $5 \leq N \leq 100\,000$. Additionally:

- For Subtask 1 (15 marks), all S come before all N, which come before all A, which come before all K, which come before all E. There will be at least one of each letter. Sample Input 2 is an example of a case that could be in this subtask.
- For Subtask 2 (15 marks), the DNA sequence consists of SNAKE repeated some number of times. Sample Input 3 is an example of a case that could be in this subtask.
- For Subtask 3 (30 marks), $N \leq 10$.
- For Subtask 4 (20 marks), $N \leq 1000$.
- For Subtask 5 (20 marks), no further constraints apply.