Problem 2: Bracelet Jewels

Input File: *jewelsin.txt*
Output File: *jewelsout.txt*

Time limit	Memory limit
1 second	256 MB

Statement

You are shopping at Jakingy's Jewel Gem-porium. You want to buy two bracelets for your best friend and yourself, however, the way that Jakingy's Jewel Gem-porium sells its bracelets is very special.

The store owner, Jakingy, gives you a large piece of string with N gems on it. Each gem is either coloured red, or blue. The left and right ends of the string are connected, to form a ring shape. You are then allowed to cut the string at any point. With the two ends that are created from your cut, Jakingy will then give you two bracelets, formed by taking the largest block of gems of the same colour from each end. If the entire string only contains one colour of gem, then Jakingy will give you the entire string and tell you to cut the bracelets yourself.

You want to impress your best friend by buying two bracelets that have the largest possible combined number of gems, so you whip out your trusty smart watch and begin coding.

Input

The first line of input contains one integer: N. The second line of input is a string of N lowercase letters that are either r or b, representing the sequence of gems on the string. r denotes a red gem and b denotes a blue gem.

Output

Output a single integer, the largest combined number of gems you can obtain.

Sample Input 1

```
10
rbbrrbbbrr
```
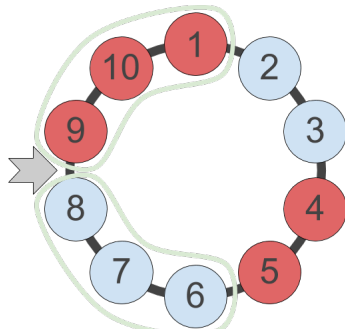
Sample Output 1

```
6
```

Sample Input 2

```
5
brbbr
```

Sample Output 2

```
3
```

Sample Input 3
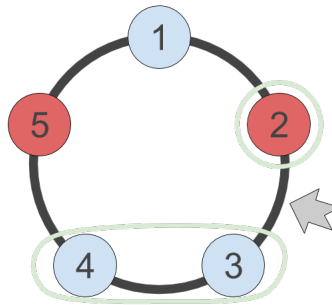
4
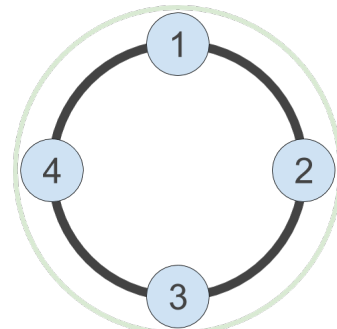bbbb

Sample Output 3

4

Sample Input 1

Sample Input 2

Sample Input 3

Explanation

- For sample input 1, cut between the eighth gem and the ninth gem, and Jakingy will give you two bracelets with 3 blue gems and 3 red gems respectively.

- For sample input 2, cutting between the second and third, or the fourth and fifth gem will give you two bracelets with 1 red gem and 2 blue gems respectively.

- Sample input 3 contains only blue gems, so Jakingy gives you the entire string and tells you to cut the bracelets yourself.

Constraints

- $4 \leq N \leq 10^5$

Subtasks

- For Subtask 1 (25 points), $N = 4$. *You are allowed to work out the answer for all 16 combinations of gems for this subtask by hand.* Sample input 3 is an example of this subtask.

- For Subtask 2 (20 points), there are exactly two red gems and they are not placed next to each other. Sample input 2 is an example of this subtask.

- For Subtask 3 (25 points), $N \leq 1000$.

- For Subtask 4 (15 points), no two red gems are placed next to each other. Sample input 2 is an example of this subtask.

- For Subtask 5 (15 points), no further constraints apply.