Problem E
Faustian Bargain

A *Faustian bargain* is a trade where someone gives up something of supreme moral value, such as integrity, in exchange for a material benefit like wealth or power. Today, Tresno is going to do exactly that.

Tresno runs a shop that sells a popular snack. The price of the snack, in rupiah, is shown on a board as a row of N stickers, placed at positions 1 to N from left to right. Each of the stickers shows a digit, and together they form the integer S.

Tresno's rival sells the same snack for T rupiah, where T is also an N-digit integer. Tresno wants his price to be strictly lower than his rival's. However, he can only reuse the stickers already on his board.

Before his shop opens, he may perform the following operation **at most once**:

- Choose two integers l and r satisfying $1 \le l \le r \le N$.
- Peel off **all** stickers from positions l to r (inclusive), then stick them back at those positions in any order.

This operation takes $r - l + 1$ units of time.

Leading zeros look weird, so the first sticker on the board must show a non-zero digit.

Determine the minimum time Tresno needs to make his price strictly lower than T, or determine that it is impossible to do so.

Input

The first line contains an integer N ($1 \le N \le 200\,000$), the number of digits in the prices.

The next line contains S in the form of a string of N decimal digits (`0` to `9`), denoting Tresno's initial price. The first digit of S is not `0`.

The final line contains T in the form of a string of N decimal digits (`0` to `9`), denoting Tresno's rival's price. The first digit of T is not `0`.

Output

Output a single integer denoting the minimum time Tresno needs to make his price strictly lower than T, or `-1` if it is impossible to do so.

Sample 1

Sample Input	Sample Output
4 4213 2415	2

Explanation of Sample 1: Tresno can choose $l = 1$ and $r = 2$. Then, he swaps the stickers showing the digits 4 and 2. The board now displays 2413, which is strictly lower than $T = 2415$. This operation takes 2 units of time.

Rearranging a single sticker cannot change the price, and the original price is greater than T. Thus, the answer is 2.

Sample 2

Sample Input	Sample Output
5 15937 15208	3

Explanation of Sample 2: Tresno can choose $l = 2$ and $r = 4$, then rearrange the stickers to make the board display $13\,957$, which is strictly lower than $15\,208$. This operation takes 3 units of time.

It can be shown that it is impossible to make the new price strictly lower than $15\,208$ in less than 3 units of time. Thus, the answer is 3.

Sample 3

Sample Input	Sample Output
4 3050 3005	-1

Explanation of Sample 3: Note that the new price is not allowed to be equal to T, nor is it allowed to have any leading zeros.

Sample 4

Sample Input	Sample Output
2 23 67	0

Explanation of Sample 4: Tresno's price is already lower than his rival's, so he does not need to do anything.