



Contest List HUPROG Algorithm Competition 2022- Qualification Round Problem List Still Got the Palindromes

Problem

Submissions

Discussion Coming Soon

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Özgün wants to join a guitar competition to try himself. He thought that he can use the solos he has already written. However, he finds out that this competition has quite weird rules:

- ullet Considering the notes of the solo as a sequence of letters, this sequence should be a palindrome. (s_i = s_{n+1-i} , for all i in the interval [1, n])
- i^{th} note and $(i+k)^{th}$ note must be the same. $(s_i = s_{i+k} \text{ for all } i \text{ in the interval } [1, n-k], k \text{ will be given in } i$ input)

Competitors who play a solo that does not comply with these rules will be disqualified from the competition. Özgün doesn't want to be disqualified and believes his old solos are good enough. Find minimum number of changes to make him solos compatible.

Input Format

ullet The first line contains an integer q- the number of test cases

Each test contains:

- ullet The first line contains two integers n and k- the length of a solo and the k value stated in explanation
- ullet The second line contains one string of length n- notes of a solo

Output Format

For each test case, print the minimum number of changes.

Constraints

- $1 \le q \le 10^5$
- $1 \leq k < n \leq 2 \cdot 10^5$ ($0 \equiv n \mod k$, $\sum_{i=1}^q n_i \leq 2 \cdot 10^5$)
- It is guaranteed that the given string contains only uppercase letters A, B, C, D, E, F, G.

Sample Input 1

3

6 2

FGFFGF

36 9

BCAADADEDFDBGEBDGBGBBCAABBBBCDABDBCB

21 7

BCDEAEFGAEABAEABCDEFG

Sample Output 1

2

19

14

Explanation 1

For the first case, a corrected version of the given string with minimal changes is FFFFFF, so the answer is 2.

3/19/22, 11:52 PM algoleague



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