D. Test of Love

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

ErnKor is ready to do anything for Julen, even to swim through crocodile-infested swamps. We decided to test this love. ErnKor will have to swim across a river with a width of 1 meter and a length of n meters.

The river is very cold. Therefore, **in total** (that is, throughout the entire swim from 0 to $n+1$) ErnKor can swim in the water for no more than k meters. For the sake of humanity, we have added not only crocodiles to the river, but also logs on which he can jump. Our test is as follows:

Initially, ErnKor is on the left bank and needs to reach the right bank. They are located at the 0 and $n+1$ meters respectively. The river can be represented as n *segments*, each with a length of 1 meter. Each *segment* contains either a log `'L'`, a crocodile `'C'`, or just water `'W'`. ErnKor can move as follows:

- If he is on the surface (i.e., on the bank or on a log), he can jump forward for no more than m ($1 \le m \le 10$) meters (he can jump on the bank, on a log, or in the water).
- If he is in the water, he can only swim to the next river *segment* (or to the bank if he is at the n-th meter).
- ErnKor cannot land in a *segment* with a crocodile in any way.

Determine if ErnKor can reach the right bank.

Input

The first line contains a single integer t ($1 \le t \le 10^4$) — the number of test cases.

The first line of each test case contains three numbers n, m, k ($0 \le k \le 2 \cdot 10^5$, $1 \le n \le 2 \cdot 10^5$, $1 \le m \le 10$) — the length of the river, the distance ErnKor can jump, and the number of meters ErnKor can swim without freezing.

The second line of each test case contains a string a of length n. a_i denotes the object located at the i-th meter. ($a_i \in \{$`'W'`,`'C'`,`'L'`$\}$)

It is guaranteed that the sum of n over all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output "`YES`" if ErnKor can pass the test, and output "`NO`" otherwise.

You can output the answer in any case (upper or lower). For example, the strings "`yEs`", "`yes`", "`Yes`", and "`YES`" will be recognized as positive responses.

Example

input
6 6 2 0 LWLLLW 6 1 1 LWLLLL 6 1 1 LWLLWL 6 2 15 LWLLCC 6 10 0

```
CCCCCC
6 6 1
WCCCCW
```

Copy

output Copy

```
YES
YES
NO
NO
YES
YES
```

Note

Let's consider examples:

- First example: We jump from the shore to the first log ($0 \to 1$), from the first log to the second ($1 \to 3$), from the second to the fourth ($3 \to 5$), and from the last log to the shore ($5 \to 7$). So, we have $0 \to 1 \to 3 \to 5 \to 7$. Since we did not encounter a crocodile and swam no more than k meters, the answer is «YES».
- Second example: $0 \to 1$, we jump into the water from the first log ($1 \to 2$), swim a cell to the log ($2 \rightsquigarrow 3$), $3 \to 4 \to 5 \to 6 \to 7$. Since we did not encounter a crocodile and swam no more than k meters, the answer is «YES».
- In the third example, ErnKor needs to swim two cells 'W', but can only swim one. Therefore, the answer is «NO».
- Sixth example: We jump from the shore into the water ($0 \to 6$) and swim one cell in the water ($6 \rightsquigarrow 7$). Since we did not encounter a crocodile and swam no more than k meters, the answer is «YES».