

A. Space Navigation

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

You were dreaming that you are traveling to a planet named Planetforces on your personal spaceship. Unfortunately, its piloting system was corrupted and now you need to fix it in order to reach Planetforces.



Space can be represented as the XY plane. You are starting at point $(0, 0)$, and Planetforces is located in point (p_x, p_y) .

The piloting system of your spaceship follows its list of orders which can be represented as a string s . The system reads s from left to right. Suppose you are at point (x, y) and current order is s_i :

- if $s_i = \text{U}$, you move to $(x, y + 1)$;
- if $s_i = \text{D}$, you move to $(x, y - 1)$;
- if $s_i = \text{R}$, you move to $(x + 1, y)$;
- if $s_i = \text{L}$, you move to $(x - 1, y)$.

Since string s could be corrupted, there is a possibility that you won't reach Planetforces in the end. Fortunately, **you can delete some orders from s but you can't change their positions.**

Can you delete several orders (possibly, zero) from s in such a way, that you'll reach Planetforces after the system processes all orders?

Input

The first line contains a single integer t ($1 \leq t \leq 1000$) — the number of test cases.

Each test case consists of two lines. The first line in each test case contains two integers p_x and p_y ($-10^5 \leq p_x, p_y \leq 10^5$; $(p_x, p_y) \neq (0, 0)$) — the coordinates of Planetforces (p_x, p_y) .

The second line contains the string s ($1 \leq |s| \leq 10^5$; $|s|$ is the length of string s) — the list of orders.

It is guaranteed that the sum of $|s|$ over all test cases does not exceed 10^5 .

Output

For each test case, print "YES" if you can delete several orders (possibly, zero) from s in such a way, that you'll reach Planetforces. Otherwise, print "NO". You can print each letter in any case (upper or lower).

Example

input

Copy

Codeforces Round #699 (Div. 2)

Contest is running

01:36:53

Contestant



→ Submit?

Language: GNU G++14 6.4.0

Choose file: 파일 선택 선택된 파일 없음

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

Submit

→ Last submissions

Submission	Time	Verdict
106549791	Feb/05/2021 17:49	Pretests passed

→ Score table

	Score
Problem A	454
Problem B	681
Problem C	1362
Problem D	1816
Problem E	2270
Problem F	2724
Successful hack	100
Unsuccessful hack	-50
Unsuccessful submission	-50
Resubmission	-50

* If you solve problem on 00:23 from the first attempt

```

6
10 5
RRRRRRRRUUUUU
1 1
UDDRLLL
-3 -5
LDLDDDDR
1 2
LLLLUU
3 -2
RDULRLDR
-1 6
RUDUUUUUR

```

output

Copy

```

YES
YES
YES
NO
YES
NO

```

Note

In the first case, you don't need to modify s , since the given s will bring you to Planetforces.

In the second case, you can delete orders s_2, s_3, s_4, s_6, s_7 and s_8 , so s becomes equal to "UR".

In the third test case, you have to delete order s_9 , otherwise, you won't finish in the position of Planetforces.

[Codeforces](#) (c) Copyright 2010-2021 Mike Mirzayanov
 The only programming contests Web 2.0 platform
 Server time: Feb/05/2021 23:58:02^{UTC+9} (i2).
 Desktop version, switch to [mobile version](#).
[Privacy Policy](#)

Supported by



ITMO UNIVERSITY