# Jojo the Knight

Jojo loved chess, he often played chess with his father. However, Jojo can only play chess pieces in the form of a knight. Jojo's father wanted Jojo to improve by providing a challenge to him. he determined a location that must be reached by Jojo's knight with a maximum of N_i steps. Jojo's father only asked Jojo to tell him whether it was possible to go to that goal.
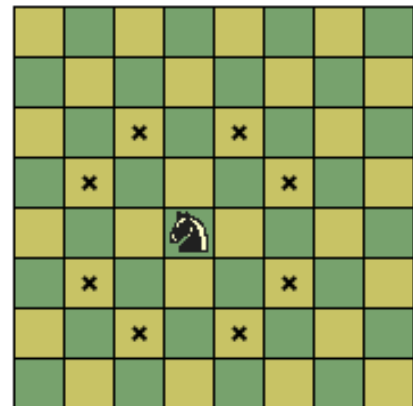
Knight Moves

For this problem please make a function:

`"int getResult(char position1[],char position2[],int step,int maxstep)"`. Which gives results, whether the goal point can be reached or not. You are encouraged to use recursive techniques to solve this problem.

DO NOT include any built-in C/C++ function, except for "stdio.h" function.

Format Input

The first line contains *T*, the number of test cases.

Each test case consists of 3 input:

The first input is the coordinate of Jojo's horse.

The second input is the coordinate of the goal.

The third input is N_i, the number of the steps.

It is guaranteed that the coordinates of the knight are valid.

Format Output

For each test case output "Case #*X*: *Y*" where *X* is the case number, and *Y* is the answer to this question, "YES" or "NO" without quotes.

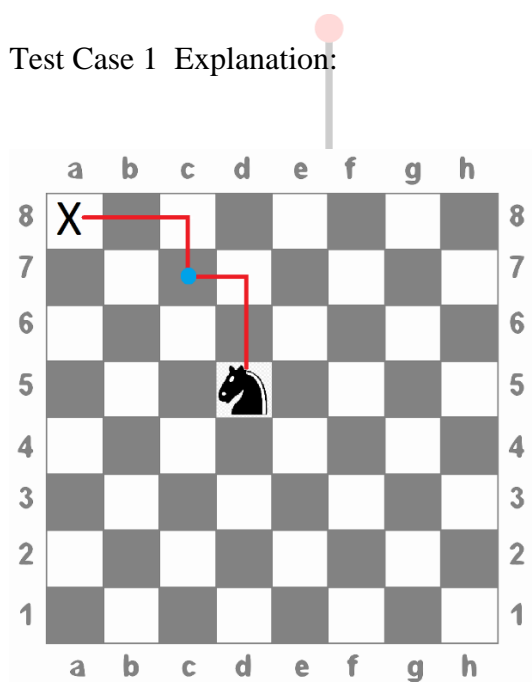**Constraints**

$1 \leq T \leq 100$
$1 \leq Ni \leq 6$
The coordinates consist of 1 uppercase letter and 1 digit number.

Sample Input	Sample Output
2 D5 A8 2 H1 A8 1	Case #1: YES Case #2: NO

Test Case 1 Explanation:

From the picture beside we can see that knight can move from its position to the destination coordinate with steps less than or equals to 2.