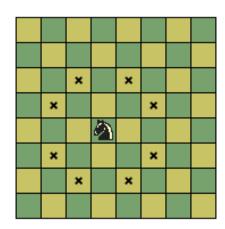


## Jojo the Knight

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.

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### **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.

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#### **Constraints**

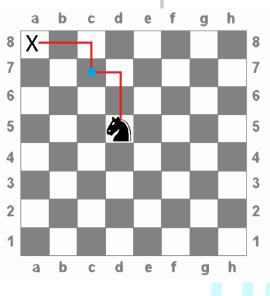
 $1 \le T \le 100$ 

 $1 \le Ni \le 6$ 

The coordinates consist of 1 uppercase letter and 1 digit number.

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

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.

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