Journey of the Knight

Problem Code: **KNIGHT2**

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Chef has an 8×8 chessboard. He placed a knight on the square (X_1, Y_1). Note that, the square at the intersection of the i^{th} row and j^{th} column is denoted by (i, j).

Chef wants to determine whether the knight can end up at the square (X_2, Y_2) in **exactly** 100 moves or not.

For reference, a knight can move to a square which is:

- One square horizontally and two squares vertically away from the current square, or
- One square vertically and two squares horizontally away from the current square

A visual description of this may be found here (https://en.wikipedia.org/wiki/Knight_(chess)#Movement).

Input Format

- The first line contains a single integer T — the number of test cases. Then the test cases follow.
- The first and only line of each test case contains 4 integers X_1, Y_1, X_2, Y_2 — where (X_1, Y_1) denotes the starting square of the knight and (X_2, Y_2) denotes the ending square of the knight.

Output Format

For each test case, output `YES` if knight can move from (X_1, Y_1) to (X_2, Y_2) in **exactly** 100 moves. Otherwise, output `NO`.

You may print each character of `YES` and `NO` in uppercase or lowercase (for example, `yes`, `yEs`, `Yes` will be considered identical).

Constraints

- $1 \leq T \leq 1000$
- $1 \leq X_1, Y_1, X_2, Y_2 \leq 8$

Sample Input 1

```
3
1 1 1 1
8 8 7 6
8 8 8 6
```

Sample Output 1

Submission Ends In

1 Days 22 Hrs 8 Min 58 Sec

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```
YES
NO
YES
```

Explanation

Test Case 1: Knight can first move to $(2, 3)$ and then back to $(1, 1)$. He can repeat this 50 times and he will end up at $(1, 1)$ after 100 moves.

Test Case 2: It can be proven that it is not possible for the knight to end at $(7, 6)$ after 100 moves.

Test Case 3: Knight can first move to $(6, 7)$ and then to $(8, 6)$. After that, he can alternate between $(6, 7)$ and $(8, 6)$ for 49 times and he will end up at $(8, 6)$ after 100 moves.

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Date Added:	3-07-2022
Time Limit:	1 secs
Source Limit:	50000 Bytes
Languages:	CPP17, PYTH 3.6, JAVA, C, CPP14, PYTH, PYP3, CS2, ADA, PYPY, TEXT, PAS fpc, NODEJS, RUBY, PHP, GO, HASK, TCL, kotlin, PERL, SCALA, LUA, BASH, JS, rust, LISP sbcl, PAS gpc, BF, CLOJ, R, D, CAML, swift, FORT, ASM, FS, WSPC, LISP clisp, SQL, SCM guile, PERL6, ERL, CLPS, PRLG, SQLQ, ICK, NICE, ICON, COB, SCM chicken, PIKE, SCM qobi, ST, NEM

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