Chess attack   X98646_en

You are given pairs of chess pieces with locations; for each pair, you are to output *true* if the first piece can attack the second, and *false* otherwise.

Input

A number $n \geq 1$, followed by n pairs of pieces.
Each piece is specified in the following format: *type x y*. *Type* is a character: K for king, Q for queen, R for rook, B for bishop, and N for knight. x and y are ints such that $0 \leq x \leq 7$ and $0 \leq y \leq 7$; they specify the x and y coordinates of the piece's position on the chessboard.
In each pair, the two pieces are guaranteed to be in different positions.

Output

For each pair, output *true* if the first piece can attack the second, and *false* otherwise. Refer to Wikipedia (or another internet source) for information on how each of the pieces behave.

Observation

Sample input 1

```
4
Q 2 3 Q 3 5
Q 2 3 Q 4 5
B 1 1 K 2 3
N 1 1 K 2 3
```

Sample output 1

```
false
true
false
true
```

Problem information

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