

CCC '10 J2 - Up and Down

Canadian Computing Competition: 2010 Stage 1, Junior #2

Nikky and Byron are playing a silly game in gym class.

Nikky is told by his teacher to walk forward a steps ($1 \leq a \leq 100$) and then walk backward b steps ($1 \leq b \leq 100$), after which he repeats a forward, b backward, etc. Likewise, Byron is told to walk forward c steps ($1 \leq c \leq 100$) and then walk backward d steps ($1 \leq d \leq 100$), after which he repeats c forward, d backward, etc. You may assume that $a \geq b$ and $c \geq d$.

Byron and Nikky have the same length of step, and they are required to take their steps simultaneously (that is, Nikky and Byron will both step forward on their first steps at the same time, and this will continue for each step).

Nikky and Byron start walking from one end of a soccer field. After s steps ($1 \leq s \leq 10000$), the gym teacher will blow the whistle. Your task is to figure out who has moved the farthest away from the starting position when the whistle is blown.

Input Specification

The input will be the 5 integers a , b , c , d , and s , each on a separate line.

Output Specification

The output of your program will be one of three possibilities: Nikky if Nikky is farther ahead after s steps are taken; Byron if Byron is farther ahead after s steps are taken; Tied if Byron and Nikky are at the same distance from their starting position after s steps are taken.

Sample Input

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4
2
5
3
12
```

Output for Sample Input

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Byron
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Explanation of Output for Sample Input

Notice that after 12 steps, Nikky has moved $4 - 2 + 4 - 2$ steps, for a total of 4 steps from the starting position, whereas Byron has moved $5 - 3 + 4$ steps, for a total of 6 steps from the starting position. Thus, Byron is ahead.