A. The Artful Expedient

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Rock... Paper!

After Karen have found the deterministic winning (losing?) strategy for rock-paper-scissors, her brother, Koyomi, comes up with a new game as a substitute. The game works as follows.

A positive integer n is decided first. Both Koyomi and Karen independently choose n distinct positive integers, denoted by $x_1, x_2, ..., x_n$ and $y_1, y_2, ..., y_n$ respectively. They reveal their sequences, and repeat until **all of $2n$ integers become distinct**, which is the only final state to be kept and considered.

Then they count the number of ordered pairs (i, j) $(1 \le i, j \le n)$ such that the value x_i `xor` y_j equals to one of the $2n$ integers. Here `xor` means the bitwise exclusive or operation on two integers, and is denoted by operators ^ and/or `xor` in most programming languages.

Karen claims a win if the number of such pairs is even, and Koyomi does otherwise. And you're here to help determine the winner of their latest game.

Input

The first line of input contains a positive integer n $(1 \le n \le 2\,000)$ — the length of both sequences.

The second line contains n space-separated integers $x_1, x_2, ..., x_n$ $(1 \le x_i \le 2 \cdot 10^6)$ — the integers finally chosen by Koyomi.

The third line contains n space-separated integers $y_1, y_2, ..., y_n$ $(1 \le y_i \le 2 \cdot 10^6)$ — the integers finally chosen by Karen.

Input guarantees that **the given $2n$ integers are pairwise distinct**, that is, no pair (i, j) $(1 \le i, j \le n)$ exists such that one of the following holds: $x_i = y_j$; $i \ne j$ and $x_i = x_j$; $i \ne j$ and $y_i = y_j$.

Output

Output one line — the name of the winner, that is, "`Koyomi`" or "`Karen`" (without quotes). Please be aware of the capitalization.

Examples

input
```
3
1 2 3
4 5 6
```
output
```
Karen
```

input
```
5
2 4 6 8 10
9 7 5 3 1
```
output
```
Karen
```

Note

In the first example, there are 6 pairs satisfying the constraint: $(1, 1)$, $(1, 2)$, $(2, 1)$, $(2, 3)$, $(3, 2)$ and $(3, 3)$. Thus, Karen wins since 6 is an even number.

In the second example, there are 16 such pairs, and Karen wins again.