

Difference (the real one)

You will receive a number n ($1 \leq n \leq 100\,000$), a positive number x ($1 \leq x \leq 10^{18}$), and on the second line, n positive numbers.

Your task is to determine if the difference between any two numbers in the input is equal to x . If yes, print „Ano“, otherwise print „Nie“ (without quotes).

Examples

input

```
7 40
10 20 30 50 40 70 60
```

output

```
Ano
```