

# Task: BAL

## Balloons

Farias Brito High School Programming Camp, Day 1. Available memory: 128 MB. 25.07.2016

A group of children came to a toy store. Each of them wants to buy a number of balloons. The children like diversity – none of them wants to have two balloons of the same colour. Help the shop-assistant to check whether orders of all children can be completed within the current assortment of the store.

Write a program that reads a description of the store’s assortment and the orders made by children, and checks whether all children can be made happy.

### Input

The first line of the input contains two integers  $n$  and  $m$  ( $n \geq 1, m \geq 2$ ), separated by a single space and denoting the number of different colours of balloons that are present in the store and the number of children. The second line contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $a_i \geq 1$ ), separated by single spaces and denoting the quantities of balloons of respective colours. The third line contains  $m$  integers  $b_1, b_2, \dots, b_m$  ( $b_i \geq 1$ ), separated by single spaces and denoting the orders of respective children;  $b_i = k$  means that the  $i$ -th child would like to buy  $k$  balloons, all having different colours.

### Output

The first and only line of the output should contain a single word **TAK** (Polish for *yes*), if orders of all children can be completed, and **NIE** (Polish for *no*) otherwise.

### Example

For the input data:

```
4 3
3 2 1 3
1 3 4
```

the correct result is:

**TAK**

and for the input data:

```
4 3
3 2 1 3
1 4 4
```

the correct result is:

**NIE**

### Grading

Subtask	Constraints	Points
1	$n, m \leq 50, a_i, b_i \leq 20$	30
2	$n, m \leq 2000, a_i, b_i \leq 10\,000$	30
3	$n, m \leq 200\,000, a_i, b_i \leq 1\,000\,000$	40