

How Old Are You?

Jojo have data of all people in his class. Each time someone wonders how old is another someone, they will ask Jojo. Jojo became tired to answer these questions and he asked you to make a program to answer it.

Format Input

The input will be a single test data. The first line consist of an integer N represents the number of classmate, followed by N lines consists of Age_i and Name_i represent the age and the name respectively.

The input will be continued by an integer Q represents the number of queries. For each Q lines followed, the input will contain a string represents a name.

Format Output

For each query, output a line contains the age of the classmate. If Jojo does not know the answer, output "-1".

Constraints

$1 \leq N \leq 100$

$1 \leq Q \leq 100$

$1 \leq \text{Age} \leq 100$

$1 \leq |\text{Name}| \leq 30$

All the names consist of lowercase characters.

All the classmate's names will be unique.

Sample Input	Sample Output
3 19 jojo 20 lili 21 bibi 4 jojo lili bibi joli	19 20 21 -1

Note

Please use struct and only use the "stdio.h" library