Machete Order

Star Wars fans have spent a long time trying to figure out the best order to watch the movies. One popular option is the "Machete Order" which proceeds "IV, V, II, III, VI." Different fans like the movies different amounts though.

Ghyslain has decided to watch some of the movies tonight. His enjoyment for the night is equal to the product of how much he likes each movie. Given the movies he wants to watch, display Ghyslain's enjoyment!

Input Format

The first line is the number n, the total number of Star Wars movies. The next n lines are formatted $s\ e$, where s is a string representing the name of the movie and e is how much Ghyslain enjoys it.

After that is an integer m, the number of movies Ghyslain will watch tonight. The next m lines contains the names of those movies. Ghyslain doesn't watch movies more than once in a night.

Constraints

$$1 \le n \le 8 \quad 1 \le m \le n \quad 0 \le e \le 10$$

s is a string of at most 50 lowercase characters between a and z.

Output Format

Print a single number, the product of his happinesses.

Sample Input 0

```
6
phantommenace 4
attackofclones 1
revengeofsith 5
newhope 9
empirestrikesback 10
returnofjedi 7
3
newhope
empirestrikesback
returnofjedi
```

Sample Output 0

```
630
```

Sample Input 1

```
5
phantommenace 2
attackofclones 6
revengeofsith 3
newhope 1
returnofjedi 1
3
phantommenace
revengeofsith
attackofclones
```

Sample Output 1

```
36
```

Explanation 1

A surprise ordering to be sure, but a welcome one.