

Search II

(binary_search.cpp/c)

Time Limit : 1 sec , Memory Limit : 131072 KB

You are given a sequence of n integers S and a sequence of different q integers T . Write a program which outputs C , the number of integers in T which are also in the set S .

Input (binary_search.in)

In the first line n is given. In the second line, n integers are given. In the third line q is given. Then, in the fourth line, q integers are given.

Output (binary_search.out)

Print C in a line.

Constraints

- Elements in S is sorted in ascending order
- $n \leq 100000$
- $q \leq 50000$
- $0 \leq \text{an element in } S \leq 10^9$
- $0 \leq \text{an element in } T \leq 10^9$

Sample Input 1

```
5
1 2 3 4 5
3
3 4 1
```

Sample Output 1

```
3
```

Sample Input 2

```
3
1 2 3
1
5
```

Sample Output 2

```
0
```

Sample Input 3

```
5
1 1 2 2 3
2
1 2
```

Sample Output 3

```
2
```

Notes
