Problem A

We are given two sequences A and B such that the elements of A (but not necessarily in B) are pairwise distinct. How many elements do we need to delete from B to obtain a subsequence of A? The elements of this subsequence in A do not have to be consecutive, but we are not allowed to change their order.

Input and output

The first line contains two integers n and m, where $n, m \leq 10^6$. The second line contains n pairwise distinct positive integers (smaller than 10^9), the sequence A. The second line contains m (not necessarily distinct) positive integers (smaller than 10^9), the sequence B.

Output a single integer, the number of elements that we need to delete from B in order to obtain a subsequence of A.

Remark: You can get half the points for a solution that manages to solve the task when $n, m \leq 5\,000$.

Example

Input:

```
5 6
3 2 1 10 9
7 3 1 2 1 9
```

Output:

```
2
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