

Free Attendance

Assignment 2

Computer Programming

Due date: TBA

Problem Statement: As we all know our college has 85% attendance issue. Raju is one of the student and he has T friends in our college. But every friend of his has a condition and if he satisfies his condition then only his friend gives him proxy for one of the class. They give him two arrays P and Q of size N and M respectively and his task is to find the number of possible ways of picking two nonempty subarrays A and B such that the following conditions hold:

- 1) The two subarrays should be of same size. Let the size be s
- 2) Subarray A is from array P and subarray B is from array Q .
- 3) The number of pairs which satisfies $A[i] = B[j]$ should be greater than or equal to T. Here $1 \leq i, j \leq s$ (Assuming 1 based indexing)

Each possible way would give Raju a proxy. Raju is extremely busy this week so he asks for your help. Can you count for him the total number of proxies he will get from his T friends ?

Input

First line contains a single integer H denoting number of test cases. The description of H test cases follows
The first line comprises three integers N, M and T. The second line contains N space seperated integers denoting the elements of array P and the third line contains M space seperated integers denoting the elements of array Q.

Output

A single integer denoting the number of proxies Raju will get.

Constraints

- $1 \leq H \leq 10$
- $1 \leq N, M \leq 2 * 10^3$
- $1 \leq T \leq N * M$
- $1 \leq P[i] \leq 10^9$ for each i from 1 to N
- $1 \leq Q[i] \leq 10^9$ for each i from 1 to M

Time Limit: 3 sec

Memory Limit: 256 MB

Sample Test Case

Input	Output
1 4 4 3 1 3 5 6 3 5 1 4	2

Notes and Explanation

Subarrays are arrays within another array, it contains contiguous elements of the array. For example non empty subarrays of {1, 2} is {1}, {2}, {1, 2}. In the sample case given above two ways are subarray {1, 3, 5} from array P, subarray {3, 5, 1} from array Q and other way is {1, 3, 5, 6} from array P, subarray {3, 5,

1, 4} from array Q