

# Sherlock and Pairs



Sherlock is given an array of  $N$  integers ( $A_0, A_1 \dots A_{N-1}$ ) by Watson. Now Watson asks Sherlock how many different pairs of indices  $i$  and  $j$  exist such that  $i$  is not equal to  $j$  but  $A_i$  is equal to  $A_j$ .

That is, Sherlock has to count the total number of pairs of indices  $(i, j)$  where  $A_i = A_j$  AND  $i \neq j$ .

## Input Format

The first line contains  $T$ , the number of test cases.  $T$  test cases follow.  
Each test case consists of two lines; the first line contains an integer  $N$ , the size of array, while the next line contains  $N$  space separated integers.

## Output Format

For each test case, print the required answer on a different line.

## Constraints

- $1 \leq T \leq 10$
- $1 \leq N \leq 10^5$
- $1 \leq A[i] \leq 10^6$

## Sample input

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

## Sample output

```
0
2
```

## Explanation

In the first test case, no two pair of indices exist which satisfy the given condition.  
In the second test case as  $A[0] = A[1] = 1$ , the pairs of indices  $(0,1)$  and  $(1,0)$  satisfy the given condition.