1188 – Fast Queries

Given an array of **N** integers indexed from **1** to **N**, and **q** queries, each in the form **i j**, you have to find the number of distinct integers from index **i** to **j** (inclusive).

Input

Input starts with an integer **T (≤ 5)**, denoting the number of test cases.

The first line of a case is a blank line. The next line contains two integers **N (1 ≤ N ≤ 10^5)**, **q (1 ≤ q ≤ 50000)**. The next line contains **N** space separated integers forming the array. There integers range in **[0, 10^5]**.

Each of the next **q** lines will contain a query which is in the form **i j (1 ≤ i ≤ j ≤ N)**.

Output

For each test case, print the case number in a single line. Then for each query you have to print a line containing number of distinct integers from index **i** to **j**.

Sample Input	Output for Sample Input
1 8 5 1 1 1 2 3 5 1 2 1 8 2 3 3 6 4 5 4 8	Case 1: 4 1 4 2 4

Note

Dataset is huge. Use faster I/O methods.