

1125 – Divisible Group Sums

Given a list of **N** numbers you will be allowed to choose any **M** of them. So you can choose in ${}^N C_M$ ways. You will have to determine how many of these chosen groups have a sum, which is divisible by **D**.

Input

Input starts with an integer **T** (≤ 20), denoting the number of test cases.

The first line of each case contains two integers **N** ($0 < N \leq 200$) and **Q** ($0 < Q \leq 10$). Here **N** indicates how many numbers are there and **Q** is the total number of queries. Each of the next **N** lines contains one **32** bit signed integer. The queries will have to be answered based on these **N** numbers. Each of the next **Q** lines contains two integers **D** ($0 < D \leq 20$) and **M** ($0 < M \leq 10$).

Output

For each case, print the case number in a line. Then for each query, print the number of desired groups in a single line.

Sample Input	Output for Sample Input
2 10 2 1 2 3 4 5 6 7 8 9 10 5 1 5 2 5 1 2 3 4 5 6 6 2	Case 1 : 2 9 Case 2 : 1