Cross the Racers!

Time Limit : 2.0 sec

Memory Limit : 256 MB

Abir is an athlete. Today he is in a race competition. Without him there are N racers. They all have distinct running powers. There will be Q queries. The racers and their running power will remain unchanged. In each query Abir's running power will be varied. With power P, before touching the finishing line Abir can cross all the racers whose power is less than or equal to P. As Abir is busy with his race your task is to count the number of racers that he can cross in each query and calculate total sum of their powers.

Input

The first line contains an integer N ($1 <= N <= 10^6$) – the number of racers.
The second line contains N integers ($1 <=$ power of each racer $<= 10^5$)
The next line contains an integer Q ($1 <= Q <= 10^5$) – number of queries.
Next Q lines contain an integer M ($1 <= M <= 10^5$) – power of Abir.

Output

For Q queries you need to print Q lines. In each line print space separated two integers - the number of racers he can cross and total sum of their powers.

Sample Input	Sample Output
7 1 2 4 5 6 7 9 4 3 6 8 4	2 3 5 18 6 25 3 7

Sample Input	Sample Output
6 21 11 7 35 17 12 5 6 15 23 34 44	0 0 3 30 5 68 5 68 6 103