Halum and Candies

Halum has been elected as the captain of his school's football team. To celebrate this, he is going to throw a party. Halum bought candies of \mathbf{N} different flavors for the party. There are $\mathbf{a_i}$ number of candies of the $\mathbf{i^{th}}$ flavor where $(1 \le \mathbf{i} \le \mathbf{N})$. To satisfy a guest he has to give him/her some positive number of candies of at least \mathbf{K} different flavors. Otherwise the guest is not satisfied. Given this information now you have to find the maximum number of guests Halum can satisfy with the available candies.

Input

First line of the input contains an integer T ($1 \le T \le 200$), denoting the number of test cases. T cases follow.

First line of each case contains two integers N and K ($1 \le K \le N \le 1000$). N space separated integers $a_1, a_2 ... a_N$ follow in the next line ($0 \le a_i \le 10^9$). The i^{th} of these integers a_i denotes the number of candies of i^{th} flavor ($1 \le i \le N$).

Output

For each case print one line containing "Case X: Y" (without the quotes) where X is the case number starting from 1 and Y is an integer denoting the maximum number of guests who can be satisfied.

Example

Input:

з.

3 3

123

3 1

123

32

324

Output:

Case 1: 1

Case 2: 6

Case 3: 4