HIDING COVID

The World Health Organization (WHO) wants to inspect the covid 19 case in your country. Now during the inspection they want to collect the data that what is the maximum amount of covid case in one district. Suppose there are 5 districts and covid cases in 5 districts are 1 2 3 4 5. Then WHO will take the data 5 Now this data represents the image of your country. So, your Government wants to minimize it as much as possible but surely the government can’t kill the covid patients. So, they (govt) started shifting covid patients from one district to another. Surely it is a bad idea as it would increase the number of infections but still the government wants to minimize the maximum number of cases in a district. Find the data that WHO will take after the government had taken their steps.

Input:

The first line of the input contains one integer t (1≤t≤100) — the number of queries. Then t queries follow.

The first line of the query contains one integer n (1≤n≤100)— the number of districts. The second line of the query contains n integers a1,a2,…,an (1≤ai≤10^7), where ai is the positive cases found on the ith district.

Output:

For each query print the value the government wants to publish on briefing.

Example:

Input:

3

5

1 2 3 4 5

3

1 2 2

4

1 1 1 1

Output:

3

2

1