

7849 ICPC Team Selection

The coach of Nha Trang University — Mr Van has just organized a contest to form its ICPC teams. There was $3N$ students attending the contest. The i -th student scored P_i in the contest.

The coach wants to form N different teams, each team has 3 students, to take part in the regional contest based on this result. In his experience, the performance of a team usually equals to the median of team members' individual result (i.e. the result of the second-best student).

The coach wants to maximize S — the sum of his N teams' performance. Your task is to calculate S .

Input

The input consists of several datasets. The first line of the input contains the number of datasets which is a positive integer and is not greater than 20. The following lines describe the datasets.

Each dataset is described by the following lines:

- The first line contains a positive integer N ($N \leq 100$).
- The second line contains $3N$ positive integers P_1, P_2, \dots, P_{3N} ($P_i \leq 100$).

Output

For each dataset, write out on one line the value S .

Explanation: one way to form a team is

- team 1: student 1, student 2, student 3
- team 2: student 4, student 5, student 6

Sample Input

```
1
2
8 8 6 9 10 9
```

Sample Output

```
17
```