Choose-a-lot

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	64 megabytes

Alice and John are playing a game. Alice creates a set of numbers, all of which are distinct. Now, In each turn, John picks up an odd-sized subset of this set and notes the median value of this subset. The Median value is the middle value when the data is sorted. John can't pick up the subset he already chose earlier. John's score is the sum of all his noted values. Find out the maximum score John can get. Note that John can play as much as he wants and is allowed to [in case there is no unique odd subset left to choose]. As the answer can be very big, output it $\mod 10^9 + 7$

Input

The first line contains an integer $T(1 \leq T \leq 10)$, the number of test cases. 2T lines follow:
The first line for each test case contains an integer $N(1 \leq N \leq 2000)$, the size of the set.
The second line for each test case contains N space-separated integers, all distinct, representing the elements of the set. All elements are in range 1 to 10^7.

Output

The output must contain T lines, where each line contains one integer representing the required answer for the test case.

Example

standard input	standard output
1 4 1 2 3 4	20

Note

Let the set be $\{1, 2, 3, 4\}$
John can choose the following:
$\{1\}, \{2\}, \{3\}, \{4\}, \{1, 2, 3\}, \{1, 2, 4\}, \{1, 3, 4\}, \{2, 3, 4\}$
So his score is $1 + 2 + 3 + 4 + 2 + 2 + 3 + 3 = 20$