Slay the Spire 2

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	1024 megabytes

Little Cyan Fish is playing *Slay the Spire II* and chooses the character Silent.

Little Cyan Fish now needs to fight a Battle Friend. Initially, the Poison level of the Battle Friend and your Accelerant level are both 0. For the next n turns, the following events will occur in sequence each turn:

1. Play Deadly Poison: Increase the Battle Friend's Poison level by x_i.
2. Choose whether to play Accelerant: Choose whether to increase your Accelerant level by 1.
3. Trigger Poison effect: Let your Accelerant level be t, repeat the following event t times.
   - Let the Battle Friend's Poison level be x. If $x > 0$, deal x damage to the Battle Friend and decrease the Poison level by 1; otherwise, if $x = 0$, nothing happens.

Note that both Poison and Accelerant levels are retained across turns and do not disappear.

Little Cyan Fish wants to maximize the total damage dealt to the Battle Friend over the n turns, output the answer.

Input

There are multiple test cases. The first line of the input contains a single integer T ($1 \le T$), indicating the number of test cases.

For each test case, the first line of the input contains an integer n ($1 \le n \le 5\,000$).

The next line contains n integers $x_1, x_2, \ldots, x_n$ ($0 \le x_i \le 10^7$), indicating the Poison levels increased for the Battle Friend in each turn.

It is guaranteed that the sum of n over all test cases does not exceed 10^6, and the sum of n^2 over all test cases does not exceed 10^8.

Output

For each test case, output a single line containing one integer, indicating the maximum total damage dealt to the Battle Friend over all turns.

Example

standard input	standard output
4 5 1 1 0 3 7 3 0 3 2 9 9 9 8 2 4 4 3 5 3 13 1 1 4 5 1 4 1 9 1 9 8 1 0	33 11 750 725