Problem A: Assembling Triangles

Bash has n segments. The i-th segment has length 2^{a_i}. Bash wants to select three different segments to form a triangle.

Now Bash wonders, how many different ways there are to choose three segments that form a triangle? Note that three segments can form a triangle if and only if the sum of any two segments is greater than the third segment.

Input

The first line contains a single integer t ($1 \le t \le 10^5$) – the number of test cases. t test cases follow, each consists of two lines:

- The first line contains an integer n ($3 \le n \le 3 \cdot 10^5$).
- The second line contains n integers $a_1, a_2, \ldots, a_n$ ($0 \le a_i \le 10^9$).

The sum of n over all test cases does not exceed $3 \cdot 10^5$.

Output

For each test case, print a single line containing the number of ways to choose three segments that can form a triangle.

Sample Explanation

In the first test case, there are 3 segments with length 2, 4 and 8. You cannot form any triangle with these three segments.

In the second test case, there are 4 segments, all with length 2. Using any three of these segments, you can form a triangle.

Sample Input 1	Sample Output 1
2 3 1 2 3 4 1 1 1 1	0 4