Problem B. Number of Pairs

Time limit 2000 ms
Mem limit 262144 kB

You are given an array a of n integers. Find the number of pairs (i, j) ($1 \le i < j \le n$) where the sum of $a_i + a_j$ is greater than or equal to l and less than or equal to r (that is, $l \le a_i + a_j \le r$).

For example, if $n = 3$, $a = [5, 1, 2]$, $l = 4$ and $r = 7$, then two pairs are suitable:

- $i = 1$ and $j = 2$ ($4 \le 5 + 1 \le 7$);
- $i = 1$ and $j = 3$ ($4 \le 5 + 2 \le 7$).

Input

The first line contains an integer t ($1 \le t \le 10^4$). Then t test cases follow.

The first line of each test case contains three integers n, l, r ($1 \le n \le 2 \cdot 10^5$, $1 \le l \le r \le 10^9$) — the length of the array and the limits on the sum in the pair.

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($1 \le a_i \le 10^9$).

It is guaranteed that the sum of n overall test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output a single integer — the number of index pairs (i, j) ($i < j$), such that $l \le a_i + a_j \le r$.

Examples

Input	Output
4 3 4 7 5 1 2 5 5 8 5 1 2 4 3 4 100 1000 1 1 1 1 5 9 13 2 5 5 1 1	2 7 0 1