Problem I

Future Coder

Prof. Pang builds his famous coding team recently. To pursue a gold medal in ICPC, hundreds of pupils join his team. Unfortunately, one of Prof. Pang's students believes that for any integers a and b, $a \times b \geq a + b$. To disprove this proposition, Prof. Pang writes n numbers $a_1, a_2, \ldots, a_n$ on a paper and wants you to count how many pairs of numbers (a_i, a_j) $(1 \leq i < j \leq n)$ satisfies $a_i \times a_j < a_i + a_j$.

Input

The first line contains a single integer T $(1 \leq T \leq 10^6)$ denoting the number of test cases.

For each test case, the first line contains a single integer n $(1 \leq n \leq 10^6)$. The second line contains n integers $a_1, a_2, \ldots, a_n$ $(-10^9 \leq a_i \leq 10^9)$.

It is guaranteed that the sum of n over all test cases will not exceed 10^6.

Output

For each test case, print one line containing the answer.

Sample Input	Sample Output
2 8 3 -1 4 1 -5 9 2 -6 1 0	19 0