

The 36th Annual ACM
International Collegiate Programming Contest
Asia Regional – Daejeon
Nationwide Internet Competition



Problem I

Two Numbers

Given a set of *distinct* integers $S = \{a_1, a_2, \dots, a_n\}$, and a given target number K , your task is to find two different numbers of S which add up nearest to K .

For example, within a set of 10 integers

$$S = \{-7, 9, 2, -4, 12, 1, 5, -3, -2, 0\}$$

there is a pair of numbers $\{-4, 12\}$ of S which add up to $K = 8$. Within the same set S , there are five pairs $\{\{-7, 12\}, \{9, -4\}, \{5, -2\}, \{5, 0\}, \{1, 2\}\}$ of numbers which add up nearest to $K = 4$.

Given a set of distinct integers and a target number, write a program to count the number of pairs of integers within the set which add up nearest to the target number.

Input

Your program is to read from standard input. The input consists of T test cases. The number of test cases T is given in the first line of the input. Each test case consists of two lines. The first line of each test case contains two integers. The first integer n ($2 \leq n \leq 1000000$) is the number of integers in the set S , and the second integer K ($-10^8 \leq K \leq 10^8$) is the target number. The second line of each test case contains n integers in the set S , where all integers are between -10^8 and 10^8 , both inclusive.

Output

Your program is to write to standard output. Print exactly one line for each test case. The line should contain the number of pairs of integers in S which add up nearest to the target number K .

The following shows sample input and output for three test cases.

Sample Input	Output for the Sample Input
3 10 8 -7 9 2 -4 12 1 5 -3 -2 0 10 4 -7 9 2 -4 12 1 5 -3 -2 0 4 20 1 7 3 5	1 5 1