



Pairs ☆

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Problem

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You will be given an array of integers and a target value. Determine the number of pairs of array elements that have a difference equal to a target value.

For example, given an array of $[1, 2, 3, 4]$ and a target value of 1, we have three values meeting the condition: $2 - 1 = 1$, $3 - 2 = 1$, and $4 - 3 = 1$.

Function Description

Complete the pairs function below. It must return an integer representing the number of element pairs having the required difference.

pairs has the following parameter(s):

- k : an integer, the target difference
- arr : an array of integers

Input Format

The first line contains two space-separated integers n and k , the size of arr and the target value.

The second line contains n space-separated integers of the array arr .

Constraints

- $2 \leq n \leq 10^5$
- $0 < k < 10^9$
- $0 < arr[i] < 2^{31} - 1$
- each integer $arr[i]$ will be unique

Output Format

An integer representing the number of pairs of integers whose difference is k .

Sample Input

```
5 2
1 5 3 4 2
```

Sample Output

```
3
```

Explanation

There are 3 pairs of integers in the set with a difference of 2: $[5, 3]$, $[4, 2]$ and $[3, 1]$.



Current Buffer (saved locally, editable)



Java 7



```
1 ▼ import java.io.*;
2 import java.math.*;
3 import java.security.*;
4 import java.text.*;
5 import java.util.*;
6 import java.util.concurrent.*;
7 import java.util.regex.*;
8
9 ▼ public class Solution {
10
11     // Complete the pairs function below.
12 ▼ static int pairs(int k, int[] arr) {
13
14
15     }
16
17     private static final Scanner scanner = new Scanner(System.in);
18
19 ▼ public static void main(String[] args) throws IOException {
20     BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));
21
22     String[] nk = scanner.nextLine().split(" ");
23
24 ▼ int n = Integer.parseInt(nk[0]);
25
26 ▼ int k = Integer.parseInt(nk[1]);
27
28 ▼ int[] arr = new int[n];
29
30     String[] arrItems = scanner.nextLine().split(" ");
31     scanner.skip("(\\r\\n|\\[\\n\\r\\u2028\\u2029\\u0085])?");
32
33 ▼ for (int i = 0; i < n; i++) {
34 ▼     int arrItem = Integer.parseInt(arrItems[i]);
35 ▼     arr[i] = arrItem;
36 }
37
38     int result = pairs(k, arr);
39
40     bufferedWriter.write(String.valueOf(result));
41     bufferedWriter.newLine();
42
43     bufferedWriter.close();
44
45     scanner.close();
46 }
47 }
48
```

Line: 1 Col: 1

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