Divisible Sum Pairs

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Problem Submissions Leaderboard Discussions Editorial

You are given an array of n integers, $a_0, a_1, \ldots, a_{n-1}$, and a positive integer, k. Find and print the number of (i, j) pairs where $i < j$ and $a_i + a_j$ is divisible by k.

Input Format

The first line contains 2 space-separated integers, n and k, respectively.
The second line contains n space-separated integers describing the respective values of $a_0, a_1, \ldots, a_{n-1}$.

Constraints

- $2 \leq n \leq 100$
- $1 \leq k \leq 100$
- $1 \leq a_i \leq 100$

Output Format

Print the number of (i, j) pairs where $i < j$ and $a_i + a_j$ is evenly divisible by k.

Sample Input

```
6 3
1 3 2 6 1 2
```

Sample Output

```
5
```

Explanation

Here are the 5 valid pairs:

- $(0, 2) \rightarrow a_0 + a_2 = 1 + 2 = 3$
- $(0, 5) \rightarrow a_0 + a_5 = 1 + 2 = 3$
- $(1, 3) \rightarrow a_1 + a_3 = 3 + 6 = 9$
- $(2, 4) \rightarrow a_2 + a_4 = 2 + 1 = 3$
- $(4, 5) \rightarrow a_4 + a_5 = 1 + 2 = 3$

Submissions: 71536
Max Score: 10
Difficulty: Easy

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Java 8

```java
import java.util.Scanner;

public class Solution {

    static int divisibleSumPairs(int n, int k, int[] ar) {
        // Complete this function
        int count = 0;
        for (int i = 0; i < ar.length; i++) {
            for (int j = 0; j < ar.length; j++) {
                if ((i < j) && ((ar[i] + ar[j]) % k) == 0) {  //evaluate index not value
                    count++;
                }
            }
        }
        return count;
    }

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        int n = in.nextInt();
        int k = in.nextInt();
        int[] ar = new int[n];
        for (int ar_i = 0; ar_i < n; ar_i++) {
            ar[ar_i] = in.nextInt();
        }
        int result = divisibleSumPairs(n, k, ar);
        System.out.println(result);
    }
}
```

Line: 29 Col: 2

Upload Code as File Test against custom input Run Code Submit Code

Testcase 0 ✔

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
6 3
1 3 2 6 1 2
```

Your Output (stdout)

```
5
```

Expected Output

```
5
```