



Practice

Compete

Jobs

Rank

Leaderboard

bor0s

Dashboard > Algorithms > Implementation > Divisible Sum Pairs

Badge Progress

★ ★

Points: 681.00 Rank: 44405

Divisible Sum Pairs

by wanbo

Problem

Submissions

Leaderboard

Discussions

Editorial

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

**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: 57352

Max Score: 10

Difficulty: Easy

Rate This Challenge:

☆☆☆☆☆

More

Current Buffer (saved locally, editable)

C++

```
1 #include <bits/stdc++.h>
2
3 using namespace std;
4
5 int find_pairs(vector<int> &a, int k) {
6     int cnt = 0;
7
8     for (int i = 0; i < a.size(); i++) {
9         for (int j = i + 1; j < a.size(); j++) {
10             if ((a[i] + a[j]) % k == 0) {
11                 //cout << "(" << i << ", " << j << ")" << endl;
12                 cnt++;
13             }
14         }
15     }
16
17     return cnt;
18 }
19
20 int main() {
21     int n;
22     int k;
23     cin >> n >> k;
24     vector<int> a(n);
25     for(int a_i = 0; a_i < n; a_i++){
26         cin >> a[a_i];
27     }
28     cout << find_pairs(a, k);
29     // write your code here
30     return 0;
31 }
32
```

Line: 1 Col: 1

[Upload Code as File](#) ☐ Test against custom input

Run Code

Submit Code

Copyright © 2017 HackerRank. All Rights Reserved

Join us on IRC at [#hackerrank](#) on freenode for hugs or bugs.[Contest Calendar](#) | [Interview Prep](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)