CHALLENGES F

PRACTICE

**COMPANIES** 

All Tracks > Data Structures > Hash Tables > Basics of Hash Tables > Problem



Mathison has discovered an old piece of paper with N integers written on it. Let's call this given sequence of numbers A[]. In his History class, Mathison has learnt that a trio of numbers is special if and only if their sum is divisible by a mythical constant M.

Mathison tries to find out how many **distinct** triplets of numbers, from the piece of paper, have their sum divisible by M. Unfortunately, this problem is quite hard to crack and he needs your help.

## Input

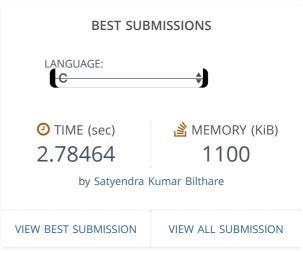
The first line of the input file contains two space-separated integers, N and M, representing the number of integers and the mythical constant. The next line contains N space-separated integers, where the  $i^{th}$  integer represents A[i].

### Output

The output file should contain only one integer, the answer to Mathison's question.

#### **Constraints**

- $1 < N < 2 \times 10^5$
- $1 \le M \le 10^4$

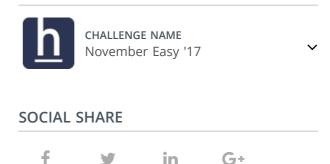


#### **CONTRIBUTOR**





#### THIS PROBLEM WAS ASKED IN



# • $0 \le A[i] \le 2 \times 10^9$

| SAMPLE INPUT                    | SAMPLE OUTPUT |
|---------------------------------|---------------|
| 10 5<br>1 10 4 3 2 5 0<br>1 9 5 | 26            |

# **Explanation**

There are 26 *special* trios: (0, 1, 2); (0, 1, 8); (0, 2, 5); (0, 2, 6); (0, 2, 9); (0, 3, 7); (0, 5, 8); (0, 6, 8); (0, 8, 9); (1, 2, 7); (1, 3, 4); (1, 5, 6); (1, 5, 9); (1, 6, 9); (1, 7, 8); (2, 4, 8); (2, 5, 7); (2, 6, 7); (2, 7, 9); (3, 4, 5); (3, 4, 6); (3, 4, 9); (5, 6, 9); (5, 7, 8); (6, 7, 8); (7, 8, 9);

**Note**: Here we only show the **positions** (0-indexed) in each trio.

| Time Limit:        | 0.6 sec(s) for each input file.          |
|--------------------|--|
| Memory Limit:      | 256 MB                                   |
| Source Limit:      | 1024 KB                                  |
| Marking Scheme:    | Marks are awarded when all the           |
|                    | testcases pass.                          |
| Allowed Languages: | C, C++, C++14, Clojure, C#, D, Erlang,   |
|                    | F#, Go, Groovy, Haskell, Java, Java 8,   |
|                    | JavaScript(Rhino), JavaScript(Node.js),  |
|                    | Julia, Kotlin, Lisp, Lisp (SBCL), Lua,   |
|                    | Objective-C, OCaml, Octave, Pascal,      |
|                    | Perl, PHP, Python, Python 3, R(RScript), |
|                    | Racket, Ruby, Rust, Scala, Swift, Visual |
|                    | Basic                                    |
|                    |  |

## **CODE EDITOR**

Enter your code or Upload your code as file.

