

**05** Hr **56** Min **27** Sec**Guidelines**

Coding Area

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# Coding Area

**A****B****C****D****E****F****ONLINE EDITOR (C)**

## Finding Sum

### + Problem Description

You are given a set of  $N$  positive integers and another integer  $P$ , where  $P$  is a small prime. You need to write a program to count the number of subsets of size (cardinality) 3, the sum of whose elements is divisible by  $P$ . Since the number  $K$  of such sets can be huge, output  $K$  modulo 10007 1009 (the remainder when  $K$  is divided by 1009)

### + Constraints

 $N \leq 500$  $P < 50$ All integers  $\leq 1000$ 

### + Input Format

First line two comma separated integers  $N, P$ The next line contains  $N$  comma separated integers

### + Output

One integer giving the number of subsets the sum of whose elements is divisible by  $P$ . Give result modulo 1009



## + Explanation

### Example 1

Input

4,5

5,10,15,20

Output

4

Explanation

Every non empty subset of the given numbers has sum of its elements a multiple of 5. Since there are 4 subsets of size 3, the output is 4.

### Example 2

Input

5,5

3,7,12,13,15

Output

4

Explanation

There are 4 subsets of size 3 with sum a multiple of 5: {3, 7, 15}, {12, 13, 15}, {7, 13, 15}, {3, 12, 15}, Hence the output is 4.

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