

Feeding Elmo

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 512 megabytes

Elmo is picky eater, and has decided that he will only eat batches of m cookies where the number of chocolate chips on each cookie forms an arithmetic sequence[†] with common difference d .

Cookie Monster has n cookies, and the i -th cookie has c_i chocolate chips. Cookie Monster loves exotic cookies, so some of the cookies in his collection may have a negative number of chocolate chips.

Find the number of sequences that Cookie Monster can create to successfully feed Elmo by choosing m cookies. Of course, each cookie can only be used once. Two sequences are different if there is any position where the number of chocolate chips differs between the two cookies at that position in those sequences.

[†] An arithmetic sequence is a sequence of integers b_1, b_2, \dots, b_k which satisfy $b_2 - b_1 = b_3 - b_2 = \dots = b_k - b_{k-1} = d$, where d is the common difference.

Input

The first line contains three integers n , d , and m ($1 \leq m \leq n \leq 10^5, 1 \leq d \leq 10^9$).

The second line contains n space separated integers c_1, c_2, \dots, c_n ($-10^9 \leq c_i \leq 10^9$) — the number of chocolate chips on each cookie.

Output

Output a single integer — the number of different arithmetic sequences of chocolate chips that Cookie Monster can form to feed Elmo.

Examples

standard input	standard output
10 3 2 2 8 0 14 6 5 6 9 12 3	6
5 1 1 2 -1 0 3 5	5

Note

In the first example, the six sequences that can be formed are $\{0, 3\}$, $\{3, 6\}$, $\{6, 9\}$, $\{9, 12\}$, $\{2, 5\}$, and $\{5, 8\}$.

In the second example, the five sequences that can be formed are $\{2\}$, $\{-1\}$, $\{0\}$, $\{3\}$, and $\{5\}$.