Beautiful Triplets

by Shafaet

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Erica wrote an increasing sequence of n numbers $(a_0, a_1, \ldots, a_{n-1})$ in her notebook. She considers a triplet (a_i, a_j, a_k) to be beautiful if:

- $i < j < k$
- $a[j] - a[i] = a[k] - a[j] = d$

Given the sequence and the value of d, can you help Erica count the number of beautiful triplets in the sequence?

Input Format

The first line contains 2 space-separated integers, n (the length of the sequence) and d (the beautiful difference), respectively.
The second line contains n space-separated integers describing Erica's increasing sequence, $a_0, a_1, \ldots, a_{n-1}$.

Constraints

- $1 \leq n \leq 10^4$
- $1 \leq d \leq 20$
- $0 \leq a_i \leq 2 \times 10^4$
- $a_i > a_{i-1}$ for $0 < i \leq n - 1$

Output Format

Print a single line denoting the number of beautiful triplets in the sequence.

Sample Input

```
7 3
1 2 4 5 7 8 10
```

Sample Output

```
3
```

Explanation

Our input sequence is $1, 2, 4, 5, 7, 8, 10$, and our beautiful difference $d = 3$. There are many possible triplets (a_i, a_j, a_k), but our only beautiful triplets are $(1, 4, 7)$, $(4, 7, 10)$ and $(2, 5, 8)$. Please see the equations below:

$7 - 4 = 4 - 1 = 3 = d$
$10 - 7 = 7 - 4 = 3 = d$
$8 - 5 = 5 - 2 = 3 = d$

Recall that a beautiful triplet satisfies the following equivalence relation: $a[j] - a[i] = a[k] - a[j] = d$ where $i < j < k$.

Submissions:15307

Max Score:20
Difficulty: Easy

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Current Buffer (saved locally, editable) Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
```

Line: 1 Col: 1

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