Given a sequence of integers a, a triplet (a[i], a[j], a[k]) is beautiful if:

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

Given an increasing sequenc of integers and the value of **d**, count the number of beautiful triplets in the sequence.

For example, the sequence arr=[2,2,3,4,5] and d=1. There are three beautiful triplets, by index:

$$[i,j,k] = [0,2,3], [1,2,3], [2,3,4].$$
 To test the first triplet,  $arr[j] - arr[i] = 3 - 2 = 1$  and  $arr[k] - arr[j] = 4 - 3 = 1$ .

# **Function Description**

Complete the *beautifulTriplets* function in the editor below. It must return an integer that represents the number of beautiful triplets in the sequence.

beautifulTriplets has the following parameters:

- d: an integer
- arr: an array of integers, sorted ascending

# **Input Format**

The first line contains  $\boldsymbol{2}$  space-separated integers  $\boldsymbol{n}$  and  $\boldsymbol{d}$ , the length of the sequence and the beautiful difference. The second line contains  $\boldsymbol{n}$  space-separated integers  $\boldsymbol{arr[i]}$ .

#### **Constraints**

- $1 \le n \le 10^4$
- $1 \le d \le 20$
- $0 \le arr[i] \le 2 \times 10^4$
- arr[i] > arr[i-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**

The input sequence is 1, 2, 4, 5, 7, 8, 10, and our beautiful difference d = 3. There are many possible triplets (arr[i], arr[j], arr[k]), but our only beautiful triplets are (1, 4, 7), (4, 7, 10) and (2, 5, 8) by value not index. 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: arr[j] - arr[i] = arr[k] - arr[j] = d where i < j < k.