Problem: Beautiful Triplets

Erica wrote an increasing sequence of  numbers () in her notebook. She considers a triplet  to be beautiful if:

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

**Input Format**

The first line contains  space-separated integers,  (the length of the sequence) and  (the beautiful difference), respectively.   
The second line contains  space-separated integers describing Erica's increasing sequence, .

**Constraints**

* for

**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 , and our beautiful difference . There are many possible triplets , but our only beautiful triplets are  ,  and . Please see the equations below:

Recall that a beautiful triplet satisfies the following equivalence relation:  where .

Solution

int main()

{

int n, d;

cin>>n >>d;

int array[n]; //to hold the n numbers;

/\*Feeding the data\*/

for(int i=0;i<n; i++)

{cin>>array[i];}

/\* Searching Beautiful Triplets\*/

int counter=0;

for(int i=0; i<n; i++)

{for(int j=i+1; j<n; j++)

{ if(array[j]-array[i]==d)

{

for(int k=j+1; k<n; k++)

{if(array[k]-array[j]==d)

{counter++;}

}

}

}

}

cout<<counter;

return 0;

}

-Anshul AGgarwal