

<https://course.acciojob.com/idle?question=0e914887-5f9e-4468-bfb2-7733589283ab>

● EASY

● Max Score: 30 Points

●

Minimum Removals

You're given an array 'arr' of size n and an integer k . Your task is to determine the minimum number of elements that should be removed from the array such that the difference between the maximum and the minimum element in the remaining array is less than or equal to k .

Input Format

The first line of the input contains two space-separated integers n and k , where n is the size of the array and k is an integer such that the difference between the maximum and minimum element in the remaining array is less than or equal to k .

The second line of each test case contains n space-separated integers, denoting the array elements.

Output Format

Print a single line containing a single integer denoting the minimum number of elements that should be removed from the array, such that the difference between the maximum and minimum element in the remaining array is less than or equal to k .

Example 1

Input

```
5 5
1 6 4 3 7
```

Output

1

Explanation

After removing only one element, i.e., 7, the maximum element and the minimum element in the remaining array are 6 and 1, respectively. The difference between them is 5, which is less than or equal to k. We can also remove 1 from the array. The difference between the maximum and minimum element in the remaining array will be $7 - 4 = 3$, which is also less than or equal to k.

Example 2

Input

```
6 4
5 6 8 10 9 7
```

Output

1

Explanation

After removing only one element, i.e., 5, the maximum element and the minimum element in the remaining array are 10 and 6. The difference between them is 4, which is less than or equal to k. We can also remove 10 from the array. The difference between the maximum and minimum element in the remaining array will be $9 - 5 = 4$, which is also less than or equal to k.

Constraints

$1 \leq N \leq 10^5$

$-10^9 \leq \text{arr}[i], k \leq 10^9$

Topic Tags

- Binary Search

My code

```
// in java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{
    public static void main (String[] args) throws java.lang.Exception
    {
        //your code here
        Scanner s=new Scanner(System.in);
        int n=s.nextInt();
        int k=s.nextInt();
        int arr[]=new int[n];
        for(int i=0;i<n;i++)
            arr[i]=s.nextInt();
        Arrays.sort(arr);
        int i=0,j=1,c=0;
        int ans=n;
        while(j<n)
        {
            if(arr[j]-arr[i]<=k){
                ans=Math.min(ans, n-(j-i+1));
                j++;
            }
            else i++;
        }
    }
}
```

```
}  
    System.out.print(ans);  
    }  
}
```