**[Array Removals](https://practice.geeksforgeeks.org/problems/array-removals/1)**

Given an array **arr[]** of size **N** and an integer **K**. The task is to find the minimum number of elements that should be removed, such that **Amax-Amin<=K.** After the removal of elements, Amax and Amin is considered among the remaining elements.

**Note:**Can you solve the probelm without using any extra space and O(N\*log(N)) time complexity?

**Example 1:**

**Input:** N = 9, K = 4

arr[] = {1,3,4,9,10,11,12,17,20}

**Output:** 5

**Explanation:** Remove 1, 3, 4 from beginning

and 17, 20 from the end.

**Example 2:**

**Input:** N = 5, K = 2

arr[] = {1, 5, 6, 2, 8}

**Output:** 3

**Explanation:** There are multiple ways to

remove elements in this case.

One among them is to remove 5, 6, 8.

The other is to remove 1, 2, 5

**Your Task:**  
You don't need to read input or print anything. Your task is to complete the function **removals()** which takes the array of integers **arr,** **n**and**k**as parameters and returns an integer, denotes minimum number of elements should be remove to satisfy the condition.

**Expected Time Complexity:** O(N^2)  
**Expected Auxiliary Space:** O(N^2)

**Constraints:**  
1 ≤ N ≤ 100  
1 ≤ Arr[i], K ≤ 106