

## Problem K. King of music

Source file name: K.c, K.cpp, K.java  
Input: Standard  
Output: Standard  
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The king of music has lost his composition validation device. The composition validation device shows the king of music if a given composition will be a huge hit or not, he has explained to us how a composition is known to be a hit. A composition can be seen as an arrangement of the intensity of the tones on the time, there are some “crescendos” and “decrescendos”. A “crescendo” is a gradual increase in the sound intensity while a “decrescendo” is a gradual decrease in the sound intensity over some time lapse in the composition.

The secret of the king of music is that he always composes his music in such a way that if you take the intensity at any given time  $t$  then none of the intensities in the lapse from time  $t - W$  to  $t - 1$  are greater or lower to  $K$  units when compared to the intensity in  $t$ . This method is why he earned the “King” title, however, since his composition validation device is lost he is unable to determine if a random composition will be a hit or not, that’s why he asks you to write a program to replace his device, your program should validate a given composition and print if it will be a hit or not, i.e it complies with the rule mentioned above.

### Input

The input contains several test cases, each test case starts with three numbers separated by a space  $N$ ,  $W$ ,  $K$ . Representing the number of intensities the composition have, and the values of  $W$  and  $K$  as mentioned above. The next line will contain the  $N$  intensities separated by a space. The end of input is given in a case where the values for  $N$ ,  $W$  and  $K$  are equal to 0, and should not be processed

- $1 \leq N \leq 10^6$
- $1 \leq W \leq N$
- $1 \leq K \leq 10^6$
- Intensity in each time  $C_i$  will be in the range :  $1 \leq C_i \leq 10^6$

### Output

For each test case your program must output a line with the string "Yes." if the given composition complies with the king of music rules, you must print "No." otherwise.

### Example

Input	Output
5 1 5	Yes.
1 6 7 6 7	No.
5 2 5	
1 6 7 6 7	
0 0 0	

### Explanation

In the first test case you must look only to the previous intensity and none of the intensities in the lapse for all possible lapses should be less than or more than 5 units. All time lapses comply.

In the second test case you must look to the two previous intensity for any intensity and none of the intensities in the lapse for all possible lapses should be less than or more than 5 units. The lapse 1 6 7 does not comply as 1 is more than 5 units less than 7.