E1 – Music

Silence is useless. We need the world to be full of music. In computer music, volume is represented as an array of integers of length n. Silence in music is defined by 2 parameters c and m. Silence occurs in any sub-array of length m where the difference between the minimum element and the maximal element is no greater than c. For example if the volume array is $[1, 3, 2, 7, 5, 4, 6, 6]$, $m = 3$ and $c = 2$, then silence occurs in the subarrays of size 3 indexed at 0, 4, and 5. Output the total number of silence intervals.

Input

Each data set is 2 lines. The first line contains n, m, c ($n \leq 20, m \leq 20, c \leq 1000$). The second line contains n integers representing the volume array. Each integer is less than or equal to 1000.

Output

Print the total number of silence intervals.

Example

Input:	Output
8 3 2	3
1 3 2 7 5 4 6 6	

Input:	Output
4 2 1	3
1 2 3 4	

Input:	Output
4 5 900	0
1 1 1 1	