



Problem A: Photo Day

Time limit: 1s; Memory limit: 256 MB

It is photo day at a primary school. The n students stand in a queue, where n is even; the i -th student from the front has height h_i and all heights are distinct.

Everyone in the queue must appear in exactly one photo. For a photo, the photographer calls any $2k$ people still in the queue ($k \geq 1$), not necessarily adjacent. In queue order, the first k of them form one row and the other k form another. She chooses which row stands in front; the other row stands right behind it. People inside a row may stand in any order, so to be sure that nobody is hidden, the shortest person in the back row must be taller than the tallest person in the front row.

In the figure below, photo (a) is possible: the shortest person at the back (128) is taller than the tallest in front (124). The rows in (b) cannot form a photo: whichever row stands at the back, someone may be hidden.

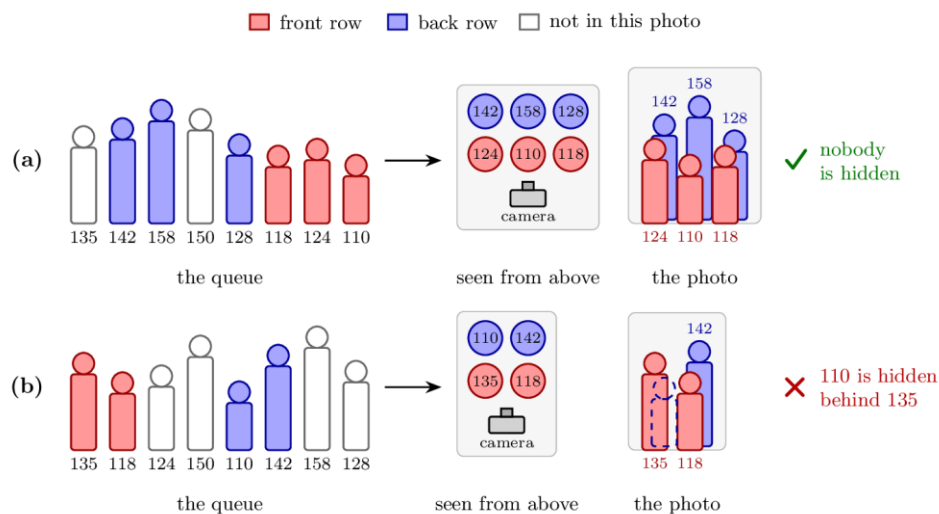


Figure 1: Valid photo (a) vs invalid photo (b).

Before the photos, the teacher may let two neighbours in the queue swap places, any number of times. A swap takes a seconds and a photo takes b seconds.

Find the minimum total time to photograph everybody.

Input

The first line contains three integers n , a , and b ($2 \leq n \leq 2 \times 10^5$, n is even, $1 \leq a, b \leq 10^6$) — the number of students, the time of one swap, and the time of one photo, in seconds.

The second line contains n distinct integers $h_1, h_2, \dots, h_n$ ($1 \leq h_i \leq 10^9$) — the heights of the students from the front of the queue to the end.

Output

Print one integer — the minimum total time in seconds.



Sample

Sample 1

Sample Input	Sample Output
4 1 10 120 130 110 140	11

Sample 2

Sample Input	Sample Output
4 20 10 120 130 110 140	20

Note / Explanation

In the first sample, the students with heights 130 and 110 swap places, and the queue becomes 120, 110, 130, 140. Then one photo takes everybody: 120, 110 in front and 130, 140 behind. The total time is $1 + 10 = 11$.

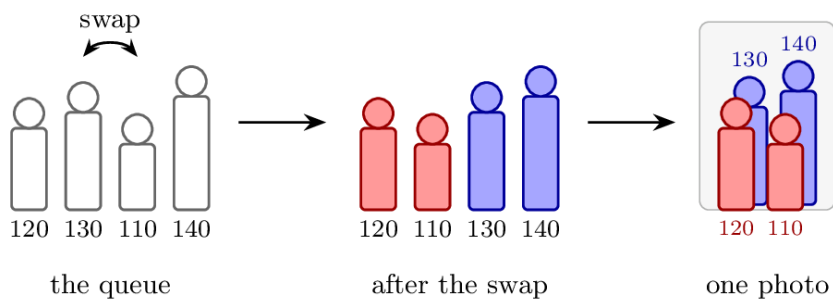


Figure 2: Process of swapping and taking one photo for Sample 1.

In the second sample, there are no swaps and two photos: first 120 in front of 140, then 110 in front of 130. The total time is $10 + 10 = 20$.

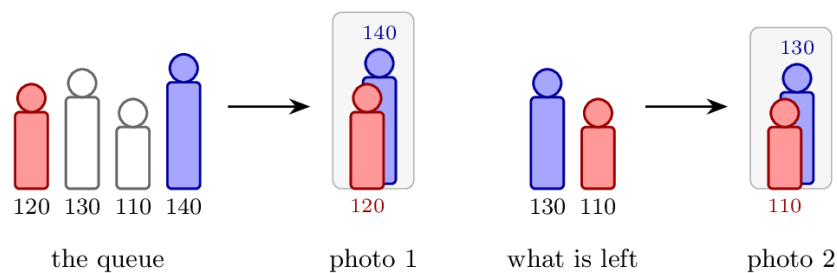


Figure 3: Process of taking two separate photos without swaps for Sample 2.