

Problem ID: heightdifferences

By the 23rd century, the general public has taken note of your time travelling ways and problem solving proficiency. As a result, you were asked to be in Skyscraper City on the 26th of January, 2219.

While Skyscraper City is a huge metropolis, there is just one street you need to concern yourself with. Viewed from above, its buildings form a straight line, and the distance between adjacent buildings' doors is always exactly 1 *skyscraper unit*. What's weird is that each building has one inhabitant who spends their days overlooking the cityscape from the rooftop. The other residents of Skyscraper City have decided to call them "rooftop people" and to analyse their behaviour further.

As it turns out, rooftop people occasionally want to see the city from a rooftop of a different height. When this happens, they walk along their street to the nearest building whose height differs enough from the height of their own building (regardless of whether the new roof will be higher or lower than their home roof, and they don't care about the time spent riding elevators).



On that fateful 26th of January, the unthinkable is happening: *all* of the rooftop people are leaving their respective rooftops to see the city from a different height. To estimate the additional traffic, the city council has asked you to determine how many skyscraper units the rooftop people will walk in total.

Input

The input consists of:

- One line with two integers n and k ($2 \leq n \leq 500\,000$, $1 \leq k \leq 10^9$), the number of buildings and the minimum height difference the rooftop people are looking for.
- One line with n integers a_1, \dots, a_n ($1 \leq a_i \leq 2 \cdot 10^9$ for each i), the heights of the buildings from left to right.

You may safely assume that for each building, there is another building such that the height difference between the two is at least k .

Output

Output the sum of the minimum number of skyscraper units that each rooftop person has to walk in order to reach a building whose height differs from their home roof by at least k .

Sample Input 1

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6 5
1 3 7 6 6 8
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Sample Output 1

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19
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Sample Input 2

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2 1
100 10
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Sample Output 2

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2
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