Problem J : Vaccination Against Corona

Whenever a baby is born in Neverland, a place on the main road of Neverland is assigned to her/him. In every traditional activity, such as morning exercises, the citizens of Neverland take place on their own assigned place on the main road. Unfortunately, during the corona pandemic, all out-door traditional activities of Neverland are canceled. After the approval of the corona vaccine, Neverland's council has decided to reopen the activities, but of course with a corona-secure regulation. Neverland's council has assumed that a vaccinated person is safe both in getting infected or in the transmission of the infection. On the other hand for non-vaccinated persons, there is a corona-safe distance that keeping this distance between every two persons keeps them safe. Thus, a safe situation is a situation in which every two non-vaccinated persons keep the corona-safe physical distance. Knowing assigned places to the citizens participating in traditional activities, Neveland's council has decided to vaccinate a minimum number of citizens to make their activity safe.

Input

The input consists of two lines. The first line contains two integers separated by a space n ($1 \leqslant n \leqslant 10^5$), the number of Neverland's citizens participating in the activities, and the corona-safe distance L ($1 \leqslant L \leqslant 10^5$), i.e. two persons will not get the virus from each other if their distance is at least L. The next line consists of n integer numbers in the range $[-10^5, 10^5]$, where the i-th number represents the location of the i-th participating citizen. The location is calculated as the distance in meters from the beginning of the main road of Neverland.

Output

Print the minimum number of citizens that should be vaccinated to have a safe activity in Neverland.

Example

Standard Input	Standard Output
5 2 -1 0 1 2 3	2

Standard Input	Standard Output
5 4 1 2 4 6 8	3