



2nd Programming Contest League



2nd Programming Contest League 2025 - University of Birjand - Yalda Night Special Edition

Problem C : A Long Winter Night in Neverland

In the city of **Neverland**, there is a special night at the beginning of winter that everyone looks forward to. It is a cold night, but a warm one — a night when people stay awake longer than usual, gather together, share fruit, and talk about the year ahead.

To celebrate this night, many families choose to gather outdoors along the **main street of the city**. Each participant has a fixed position on the street, decided in advance.

However, past experience has shown that if some people stand too close to each other, the gathering becomes crowded and the calm atmosphere of the night is lost. Because of this, the city council of Neverland has introduced the following rule.

Each participant's position on the main street is given as a number, representing the distance (in meters) from the beginning of the street. According to the council's regulation, if two participants **do not have special permission**, the distance between them must be at least L .

The council may grant **special permission** to some participants. Those who receive such permission are exempt from the distance restriction and may remain at their positions regardless of how close others are.

The council now has the complete list of participants and their assigned positions. Its goal is to grant the **minimum possible number of special permissions** so that all remaining participants without permission are at least L meters apart from each other.

Your task is to determine the minimum number of participants that must receive special permission so that the gathering can be held peacefully in Neverland.

Input

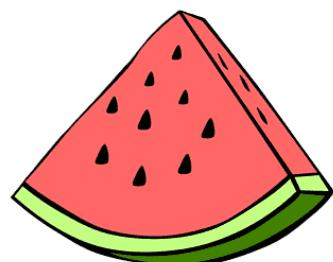
The input consists of two lines. The first line contains two integers n and L — the number of participants and the minimum required distance.

The second line contains n integers, where the i -th number represents the position of the i -th participant on the main street of Neverland.

$$1 \leq n \leq 10^5$$

$$1 \leq L \leq 10^5$$

$$-10^5 \leq a_i \leq 10^5$$





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Output

Print a single integer — the minimum number of participants that must receive special permission.

Example

Standard Input	Standard Output
5 2 -1 0 1 2 3	2
5 4 1 2 4 6 8	3

