Problem ID: arithscore

As soon as you and your friends arrive in Las Vegas, Christopher starts lecturing everyone. “Mathematically, it doesn’t make any sense to play gambling games!” He accompanies you all into the nearest casino anyway. “Actually,” says Bob, who’s been here before, “see that woman over there? Apparently, she’s the dealer of a strange new game that is more profitable for the players than it is for the casino – and it’s kinda mathematical, so perhaps you’ll enjoy it. Don’t worry about not having any chips right now, she’ll let you play without them and pay her back later if necessary.” Intrigued, Christopher walks up to the dealer and decides to play.

“I will give you an integer sequence a of length n, and an integer k,” she says. “Your objective is to create the longest possible subsequence s of a such that $s_{i+1} = s_i + k$ holds for all consecutive pairs of elements in s. You will win \$1 per element in s. Now, before you have to decide on a subsequence, I will let you rearrange the numbers in a for free. Also, you may change any element of a to any conceivable integer of your choosing, but while you can use this power arbitrarily often, it will cost you \$1 each time.” While Christopher initially has \$0 in chips, he is willing to go into debt as long as he knows he can pay it back immediately after the game.

Input

The input consists of:

- One line with the two integers n ($2 \leq n \leq 500\,000$) and k ($-1\,000 \leq k \leq 1\,000$).
- One line with n integers $a_1, \ldots, a_n$ ($-10^9 \leq a_i \leq 10^9$ for each i), the elements of a.

Output

Print a single integer, the maximum number of dollars Christopher can have in chips after playing the game once and paying back any existing debt.

Sample Input 1

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2 2
1 3
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Sample Output 1

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2
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Sample Input 2

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4 -5
-3 12 -3 12
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Sample Output 2

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2
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