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Description

Solution

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1654. Minimum Jumps to Reach Home

Medium

735

156

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A certain bug's home is on the x-axis at position `x` . Help them get there from position `0` .

The bug jumps according to the following rules:

- It can jump exactly `a` positions **forward** (to the right).
- It can jump exactly `b` positions **backward** (to the left).
- It cannot jump backward twice in a row.
- It cannot jump to any `forbidden` positions.

The bug may jump forward **beyond** its home, but it **cannot jump** to positions numbered with **negative** integers.

Given an array of integers `forbidden` , where `forbidden[i]` means that the bug cannot jump to the position `forbidden[i]` , and integers `a` , `b` , and `x` , return *the minimum number of jumps needed for the bug to reach its home*. If there is no possible sequence of jumps that lands the bug on position `x` , return `-1`.

Example 1:

Input: `forbidden = [14,4,18,1,15]`, `a = 3`, `b = 15`, `x = 9`

Output: `3`

Explanation: 3 jumps forward (0 -> 3 -> 6 -> 9) will get the bug home.

Example 2:

Input: `forbidden = [8,3,16,6,12,20]`, `a = 15`, `b = 13`, `x = 11`

Output: `-1`

Example 3:

Input: `forbidden = [1,6,2,14,5,17,4]`, `a = 16`, `b = 9`, `x = 7`

Output: `2`

Explanation: One jump forward (0 -> 16) then one jump backward (16 -> 7) will get the bug home.

Constraints:

- `1 <= forbidden.length <= 1000`
- `1 <= a, b, forbidden[i] <= 2000`
- `0 <= x <= 2000`
- All the elements in `forbidden` are distinct.
- Position `x` is not forbidden.

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class Solution {

public int minimumJumps(int[] forbidden, int a, int b, int x) {

}

}

Problems

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1654/2219

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Console

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https://leetcode.com/problems/minimum-jumps-to-reach-home/1/1