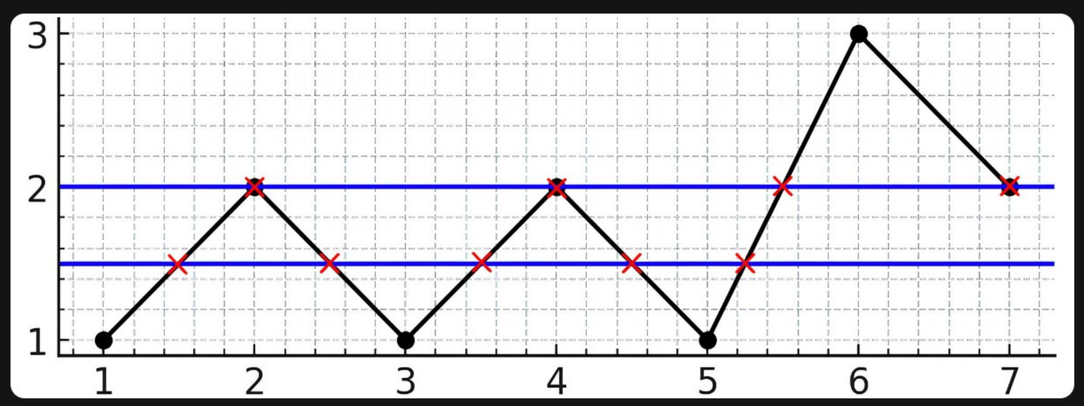
3009. Maximum Number of Intersections on the Chart

Description

There is a line chart consisting of `n` points connected by line segments. You are given a **1-indexed** integer array `y`. The `k th` point has coordinates `(k, y[k])`. There are no horizontal lines; that is, no two consecutive points have the same y-coordinate.

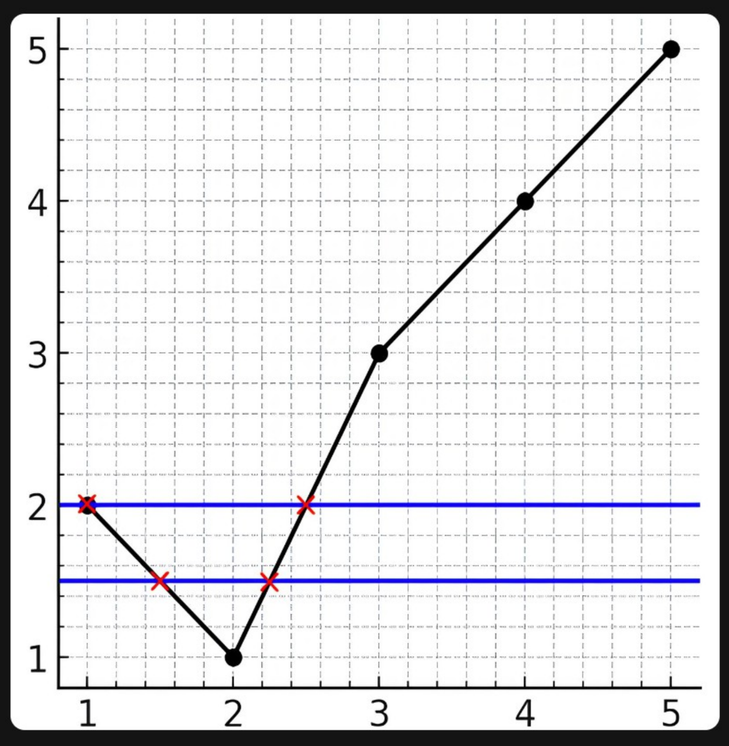
We can draw an infinitely long horizontal line. Return *the* ***maximum*** *number of points of intersection of the line with the chart*.

Example 1:




```
Input: y = [1,2,1,2,1,3,2]
Output: 5
Explanation: As you can see in the image above, the line y = 1.5 has 5 intersections with the chart (in red crosses). You can also see the line y = 2 which intersects the chart in 4 points (in red crosses). It can be shown that there is no horizontal line intersecting the chart at more than 5 points. So the answer would be 5.
```

Example 2:




```
Input: y = [2,1,3,4,5]
Output: 2
Explanation: As you can see in the image above, the line y = 1.5 has 2 intersections with the chart (in red crosses). You can also see the line y = 2 which intersects the chart in 2 points (in red crosses). It can be shown that there is no horizontal line intersecting the chart at more than 2 points. So the answer would be 2.
```

Constraints:

- `2 <= y.length <= 10 5`
- `1 <= y[i] <= 10 9`
- `y[i] != y[i + 1]` for `i` in range `[1, n - 1]`