Problem 546: Remove Boxes

Problem Information

Difficulty: Hard
Acceptance Rate: 49.04%
Paid Only: No
Tags: Array, Dynamic Programming, Memoization

Problem Description

You are given several `boxes` with different colors represented by different positive numbers.

You may experience several rounds to remove boxes until there is no box left. Each time you can choose some continuous boxes with the same color (i.e., composed of `k` boxes, `k >= 1`), remove them and get `k * k` points.

Return _the maximum points you can get_.

Example 1:

Input: boxes = [1,3,2,2,2,3,4,3,1] **Output:** 23 **Explanation:** [1, 3, 2, 2, 2, 3, 4, 3, 1] ----> [1, 3, 3, 4, 3, 1] (3*3=9 points) ----> [1, 3, 3, 3, 1] (1*1=1 points) ----> [1, 1] (3*3=9 points) ----> [] (2*2=4 points)

Example 2:

Input: boxes = [1,1,1] **Output:** 9

Example 3:

Input: boxes = [1] **Output:** 1

Constraints:

* `1 <= boxes.length <= 100` * `1 <= boxes[i] <= 100`

Code Snippets

C++:

```
class Solution {
public:
int removeBoxes(vector<int>& boxes) {

}
};
```

Java:

```
class Solution {
public int removeBoxes(int[] boxes) {

}
}
```

Python3:

```
class Solution:
def removeBoxes(self, boxes: List[int]) -> int:
```