312. Burst Balloons

Difficulty : Hard

https://leetcode.com/problems/burst-balloons

You are given `n` balloons, indexed from `0` to `n - 1`. Each balloon is painted with a number on it represented by an array `nums`. You are asked to burst all the balloons.

If you burst the `i`th balloon, you will get `nums[i - 1] * nums[i] * nums[i + 1]` coins. If `i - 1` or `i + 1` goes out of bounds of the array, then treat it as if there is a balloon with a `1` painted on it.

Return *the maximum coins you can collect by bursting the balloons wisely*.

Example 1:

```
Input: nums = [3,1,5,8]
Output: 167
Explanation:
nums = [3,1,5,8] --> [3,5,8] --> [3,8] --> [8] --> []
coins =  3*1*5    +   3*5*8   +  1*3*8  + 1*8*1 = 167
```

Example 2:

```
Input: nums = [1,5]
Output: 10
```

Constraints:

- `n == nums.length`
- `1 <= n <= 300`
- `0 <= nums[i] <= 100`