**[Burst Balloons](https://practice.geeksforgeeks.org/problems/burst-balloons/1)**

You are given **N** balloons, indexed from **0** to **n - 1**. Each balloon is painted with a number on it represented by an array **arr.** You are asked to brust all the balloons.  
If you brust the **ith** balloon,, you will get **arr[ i - 1 ] \* arr[ i ] \* arr[ i + 1]** coins. If **i - 1**, or**i + 1** goes out of bounds of the array, consider it as if there is a balloon with a **1** painted on it.  
Return the **maximum** coins you can collect by brusting the balloons wisely.

**Example 1:**

**Input:**  
N = 4  
arr[ ] = {3, 1, 5, 8}  
**Output:**167  
**Explanation:**   
arr[ ] = {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:**  
N = 2  
arr[ ] = {1, 10}  
**Output:**20

**Your Task:**  
You don't need to read input or print anything. Your task is to complete the function **maxCoins()** which takes the array of integers **arr**and **N**as parameters and returns the maximum coin you can collect.

**Expected Time Complexity:** O(N\*N\*N)  
**Expected Auxiliary Space:** O(N\*N)

**Constraints:**  
1 ≤ N ≤ 300  
0 ≤ arr [ i ]  ≤ 100