

## 5425. Maximum Area of a Piece of Cake After Horizontal and Vertical Cuts

/weekly-contest-191/problems/maximum-area-of-a-piece-of-cake-after-horizontal-and-vertical-cuts/submissions/

weekly-contest-191/)

Given a rectangular cake with height  $h$  and width  $w$ , and two arrays of integers `horizontalCuts` and `verticalCuts` where `horizontalCuts[i]` is the distance from the top of the rectangular cake to the  $i$ th horizontal cut and similarly, `verticalCuts[j]` is the distance from the left of the rectangular cake to the  $j$ th vertical cut.

Return the maximum area of a piece of cake after you cut at each horizontal and vertical position provided in the arrays `horizontalCuts` and `verticalCuts`. Since the answer can be a huge number, return this modulo  $10^9 + 7$ .

User Accepted: 0

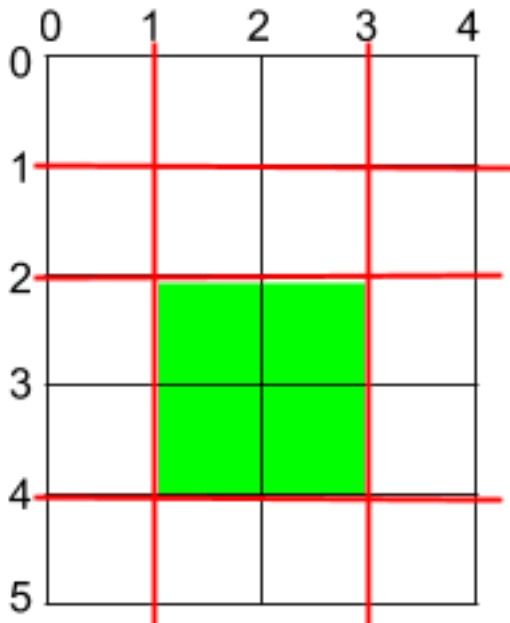
User Tried: 0

Total Accepted: 0

Total Submissions: 0

Difficulty: Medium

### Example 1:

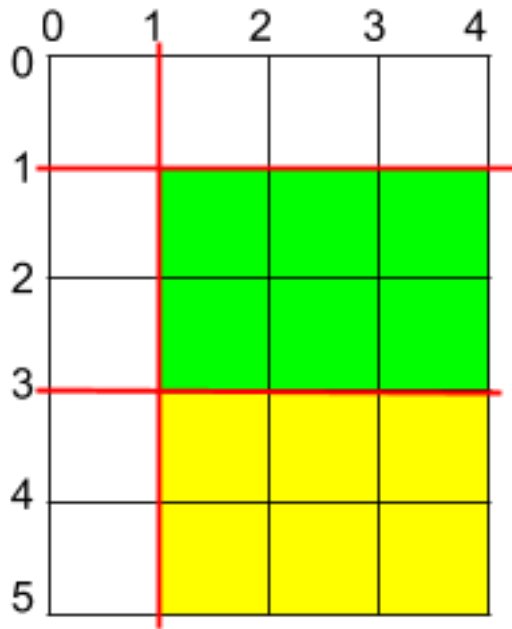


**Input:**  $h = 5$ ,  $w = 4$ , `horizontalCuts = [1,2,4]`, `verticalCuts = [1,3]`

**Output:** 4

**Explanation:** The figure above represents the given rectangular cake. Red lines are the horizontal and vertical cuts.

### Example 2:



**Input:**  $h = 5$ ,  $w = 4$ ,  $\text{horizontalCuts} = [3,1]$ ,  $\text{verticalCuts} = [1]$

**Output:** 6

**Explanation:** The figure above represents the given rectangular cake. Red lines are the horizontal and vertical cuts.

### Example 3:

**Input:**  $h = 5$ ,  $w = 4$ ,  $\text{horizontalCuts} = [3]$ ,  $\text{verticalCuts} = [3]$

**Output:** 9

### Constraints:

- $2 \leq h, w \leq 10^9$
- $1 \leq \text{horizontalCuts.length} < \min(h, 10^5)$
- $1 \leq \text{verticalCuts.length} < \min(w, 10^5)$
- $1 \leq \text{horizontalCuts}[i] < h$
- $1 \leq \text{verticalCuts}[i] < w$
- It is guaranteed that all elements in `horizontalCuts` are distinct.
- It is guaranteed that all elements in `verticalCuts` are distinct.

JavaScript



```

1  /**
2   * @param {number} h
3   * @param {number} w
4   * @param {number[]} horizontalCuts
5   * @param {number[]} verticalCuts
6   * @return {number}
7   */
8  var maxArea = function(h, w, horizontalCuts, verticalCuts) {
9

```