

5407. Number of Ways of Cutting a Pizza

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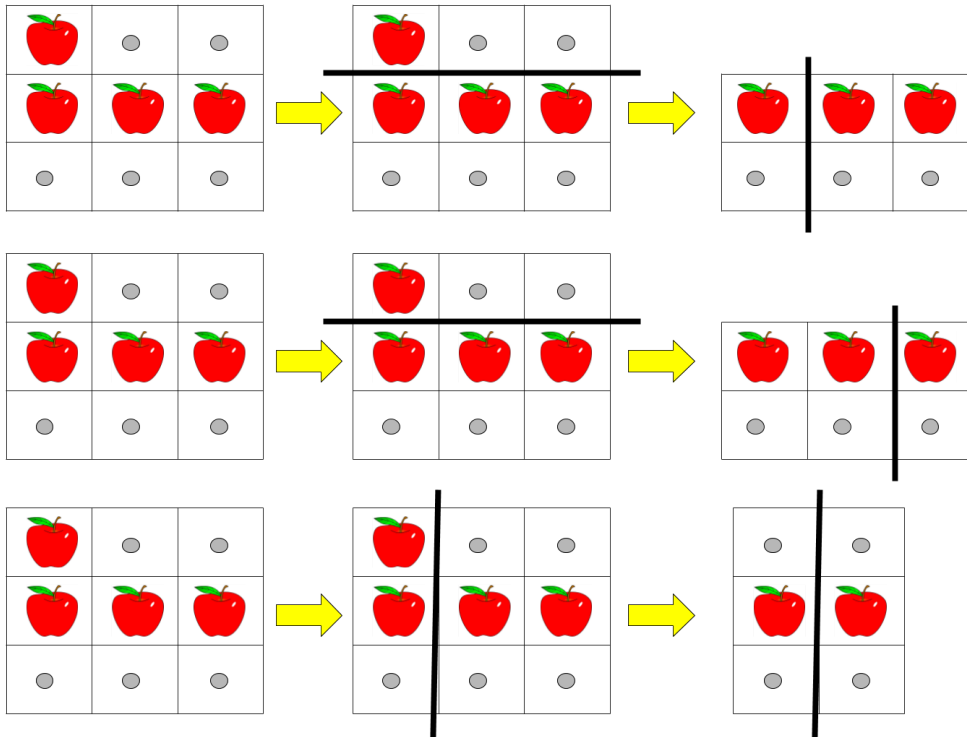
Given a rectangular pizza represented as a `rows x cols` matrix containing the following characters: 'A' (an apple) and '.' (empty cell) and given the integer `k`. You have to cut the pizza into `k` pieces using `k-1` cuts.

For each cut you choose the direction: vertical or horizontal, then you choose a cut position at the cell boundary and cut the pizza into two pieces. If you cut the pizza vertically, give the left part of the pizza to a person. If you cut the pizza horizontally, give the upper part of the pizza to a person. Give the last piece of pizza to the last person.

Return the number of ways of cutting the pizza such that each piece contains **at least** one apple. Since the answer can be a huge number, return this modulo $10^9 + 7$.

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|--------------------|------|
| User Accepted: | 458 |
| User Tried: | 634 |
| Total Accepted: | 484 |
| Total Submissions: | 999 |
| Difficulty: | Hard |

Example 1:



Input: `pizza = ["A..", "AAA", "..."], k = 3`

Output: 3

Explanation: The figure above shows the three ways to cut the pizza. Note that pieces must

Example 2:

Input: pizza = ["A..","AA.","..."], k = 3
Output: 1

Example 3:

Input: pizza = ["A..","A..","..."], k = 1
Output: 1

Constraints:

- $1 \leq \text{rows}, \text{cols} \leq 50$
- $\text{rows} == \text{pizza.length}$
- $\text{cols} == \text{pizza}[i].\text{length}$
- $1 \leq k \leq 10$
- pizza consists of characters 'A' and '.' only.

JavaScript



```
1  /**
2   * @param {string[]} pizza
3   * @param {number} k
4   * @return {number}
5   */
6  var ways = function(pizza, k) {
7
8  };
```

☐ Custom Testcase☒ Use Example Testcases