



## 5811. Painting a Grid With Three Different Colors

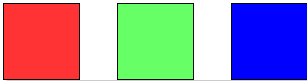
[My Submissions \(/contest/weekly-contest-249/problems/painting-a-grid-with-three-different-colors/submissions/\)](/contest/weekly-contest-249/problems/painting-a-grid-with-three-different-colors/submissions/)[Back to Contest \(/contest/weekly-contest-249/\)](/contest/weekly-contest-249/)

You are given two integers  $m$  and  $n$ . Consider an  $m \times n$  grid where each cell is initially white. You can paint each cell **red**, **green**, or **blue**. All cells **must** be painted.

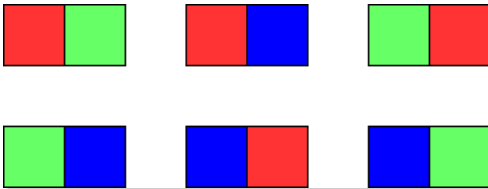
Return the number of ways to color the grid with **no two adjacent cells having the same color**. Since the answer can be very large, return it **modulo**  $10^9 + 7$ .

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Hard

## Example 1:

**Input:**  $m = 1, n = 1$ **Output:** 3**Explanation:** The three possible colorings are shown in the image above.

## Example 2:

**Input:**  $m = 1, n = 2$ **Output:** 6**Explanation:** The six possible colorings are shown in the image above.

## Example 3:

**Input:**  $m = 5, n = 5$ **Output:** 580986

## Constraints:

- $1 \leq m \leq 5$
- $1 \leq n \leq 1000$

JavaScript



```

1 /**
2  * @param {number} m
3  * @param {number} n
4  * @return {number}
5  */
6 var colorTheGrid = function(m, n) {
7
8  };

```