

## 1434. Number of Ways to Wear Different Hats to Each Other

Submissions (/contest/biweekly-contest-25/problems/number-of-ways-to-wear-different-hats-to-each-other/submissions/)

Link to Contest (/contest/biweekly-contest-25/)

There are  $n$  people and 40 types of hats labeled from 1 to 40.

Given a list of list of integers `hats`, where `hats[i]` is a list of all hats preferred by the  $i$ -th person.

Return the number of ways that the  $n$  people wear different hats to each other.

Since the answer may be too large, return it modulo  $10^9 + 7$ .

### Example 1:

**Input:** `hats = [[3,4],[4,5],[5]]`

**Output:** 1

**Explanation:** There is only one way to choose hats given the constraints.  
First person choose hat 3, Second person choose hat 4 and last person choose hat 5.

### Example 2:

**Input:** `hats = [[3,5,1],[3,5]]`

**Output:** 4

**Explanation:** There are 4 ways to choose hats given the constraints.  
(3,5), (5,3), (1,3) and (1,5)

### Example 3:

**Input:** `hats = [[1,2,3,4],[1,2,3,4],[1,2,3,4],[1,2,3,4]]`

**Output:** 24

**Explanation:** Each person can choose hats labeled from 1 to 4.  
Number of Permutations of (1,2,3,4) = 24.

### Example 4:

**Input:** `hats = [[1,2,3],[2,3,5,6],[1,3,7,9],[1,8,9],[2,5,7]]`

**Output:** 111

### Constraints:

- $n == \text{hats.length}$
- $1 \leq n \leq 10$
- $1 \leq \text{hats}[i].\text{length} \leq 40$
- $1 \leq \text{hats}[i][j] \leq 40$
- `hats[i]` contains a list of **unique** integers.

User Accepted:	293
User Tried:	1336
Total Accepted:	311
Total Submissions:	2591
Difficulty:	Hard

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JavaScript ▼



```
1 ▾ /**
2   * @param {number[]} hats
3   * @return {number}
4   */
5 ▾ var numberWays = function(hats) {
6
7   };
```

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