

1220. Count Vowels Permutation

Description

Given an integer `n`, your task is to count how many strings of length `n` can be formed under the following rules:

- Each character is a lower case vowel (`'a'`, `'e'`, `'i'`, `'o'`, `'u'`)
- Each vowel `'a'` may only be followed by an `'e'`.
- Each vowel `'e'` may only be followed by an `'a'` or an `'i'`.
- Each vowel `'i'` **may not** be followed by another `'i'`.
- Each vowel `'o'` may only be followed by an `'i'` or a `'u'`.
- Each vowel `'u'` may only be followed by an `'a'`.

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

Example 1:

Input: `n = 1`

Output: `5`

Explanation: All possible strings are: "a", "e", "i", "o" and "u".

Example 2:

Input: `n = 2`

Output: `10`

Explanation: All possible strings are: "ae", "ea", "ei", "ia", "ie", "io", "iu", "oi", "ou" and "ua".

Example 3:

Input: `n = 5`

Output: `68`

Constraints:

- `$1 \leq n \leq 2 * 10^4$`

