

823. Binary Trees With Factors

Description

Given an array of unique integers, `arr`, where each integer `arr[i]` is strictly greater than `1`.

We make a binary tree using these integers, and each number may be used for any number of times. Each non-leaf node's value should be equal to the product of the values of its children.

Return *the number of binary trees we can make*. The answer may be too large so return the answer **modulo** `$10^9 + 7$` .

Example 1:

Input: `arr = [2,4]`

Output: `3`

Explanation: We can make these trees: `[2]`, `[4]`, `[4, 2, 2]`

Example 2:

Input: `arr = [2,4,5,10]`

Output: `7`

Explanation: We can make these trees: `[2]`, `[4]`, `[5]`, `[10]`, `[4, 2, 2]`, `[10, 2, 5]`, `[10, 5, 2]`.

Constraints:

- `1 <= arr.length <= 1000`
- `2 <= arr[i] <= 10^9`
- All the values of `arr` are **unique**.

