

# 2601. Number of Great Partitions

## Difficulty : Hard

<https://leetcode.com/problems/number-of-great-partitions>

You are given an array `nums` consisting of **positive** integers and an integer `k`.

**Partition** the array into two ordered **groups** such that each element is in exactly **one** group. A partition is called great if the **sum** of elements of each group is greater than or equal to `k`.

Return *the number of **distinct** great partitions*. Since the answer may be too large, return it **modulo**  $10^9 + 7$ .

Two partitions are considered distinct if some element `nums[i]` is in different groups in the two partitions.

### Example 1:

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

**Output:** 6

**Explanation:** The great partitions are: (`[1,2,3]`, `[4]`), (`[1,3]`, `[2,4]`), (`[1,4]`, `[2,3]`), (`[2,3]`, `[1,4]`), (`[2,4]`, `[1,3]`) and (`[4]`, `[1,2,3]`).

### Example 2:

**Input:** `nums = [3,3,3]`, `k = 4`

**Output:** 0

**Explanation:** There are no great partitions for this array.

### Example 3:

**Input:** `nums = [6,6]`, `k = 2`

**Output:** 2

**Explanation:** We can either put `nums[0]` in the first partition or in the second partition. The great partitions will be (`[6]`, `[6]`) and (`[6]`, `[6]`).

### Constraints:

- $1 \leq \text{nums.length}, k \leq 1000$
- $1 \leq \text{nums}[i] \leq 10^9$