

# 3082. Find the Sum of the Power of All Subsequences

## Description

You are given an integer array `nums` of length `n` and a **positive** integer `k`.

The **power** of an array of integers is defined as the number of subsequences with their sum **equal** to `k`.

Return *the sum of power of all subsequences of* `nums`.

Since the answer may be very large, return it **modulo** `109 + 7`.

### Example 1:

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

**Output:** `6`

**Explanation:**

There are `5` subsequences of `nums` with non-zero power:

- The subsequence `[ 1 , 2 , 3 ]` has `2` subsequences with `sum == 3` : `[1,2, 3]` and `[ 1 , 2 ,3]`.
- The subsequence `[ 1 ,2, 3 ]` has `1` subsequence with `sum == 3` : `[1,2, 3]`.
- The subsequence `[1, 2 , 3 ]` has `1` subsequence with `sum == 3` : `[1,2, 3]`.
- The subsequence `[ 1 , 2 ,3]` has `1` subsequence with `sum == 3` : `[ 1 , 2 ,3]`.
- The subsequence `[1,2, 3 ]` has `1` subsequence with `sum == 3` : `[1,2, 3]`.

Hence the answer is `2 + 1 + 1 + 1 + 1 = 6`.

### Example 2:

**Input:** `nums = [2,3,3]`, `k = 5`

**Output:** `4`

**Explanation:**

There are `3` subsequences of `nums` with non-zero power:

- The subsequence `[ 2 , 3 , 3 ]` has 2 subsequences with `sum == 5` : `[ 2 ,3, 3]` and `[ 2 , 3 ,3]`.
- The subsequence `[ 2 ,3, 3 ]` has 1 subsequence with `sum == 5` : `[ 2 ,3, 3]`.
- The subsequence `[ 2 , 3 ,3]` has 1 subsequence with `sum == 5` : `[ 2 , 3 ,3]`.

Hence the answer is `2 + 1 + 1 = 4`.

### Example 3:

**Input:** `nums = [1,2,3]`, `k = 7`

**Output:** `0`

**Explanation:** There exists no subsequence with sum `7`. Hence all subsequences of `nums` have `power = 0`.

### Constraints:

- `1 <= n <= 100`
- `1 <= nums[i] <= 104`
- `1 <= k <= 100`

