2902. Count of Sub-Multisets With Bounded Sum

Description

You are given a **0-indexed** array `nums` of non-negative integers, and two integers `l` and `r`.

Return *the **count of sub-multisets** within* `nums` *where the sum of elements in each subset falls within the inclusive range of* `[l, r]`.

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

A **sub-multiset** is an **unordered** collection of elements of the array in which a given value `x` can occur `0, 1, ..., occ[x]` times, where `occ[x]` is the number of occurrences of `x` in the array.

Note that:

- Two **sub-multisets** are the same if sorting both sub-multisets results in identical multisets.
- The sum of an **empty** multiset is `0`.

Example 1:

```
Input: nums = [1,2,2,3], l = 6, r = 6
Output: 1
Explanation: The only subset of nums that has a sum of 6 is {1, 2, 3}.
```

Example 2:

```
Input: nums = [2,1,4,2,7], l = 1, r = 5
Output: 7
Explanation: The subsets of nums that have a sum within the range [1, 5] are {1}, {2}, {4}, {2, 2}, {1, 2}, {1, 4}, and {1, 2, 2}.
```

Example 3:

```
Input: nums = [1,2,1,3,5,2], l = 3, r = 5
Output: 9
Explanation: The subsets of nums that have a sum within the range [3, 5] are {3}, {5}, {1, 2}, {1, 3}, {2, 2}, {2, 3}, {1, 1, 2}, {1, 1, 3}, and {1, 2, 2}.
```

Constraints:

- `1 <= nums.length <= 2 * 10^4`
- `0 <= nums[i] <= 2 * 10^4`
- Sum of `nums` does not exceed `2 * 10^4`.
- `0 <= l <= r <= 2 * 10^4`