

## 5450. Number of Subsequences That Satisfy the Given Sum Condition

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Given an array of integers `nums` and an integer `target`.

Return the number of **non-empty** subsequences of `nums` such that the sum of the minimum and maximum element on it is less or equal than `target`.

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

### Example 1:

**Input:** `nums = [3,5,6,7]`, `target = 9`

**Output:** 4

**Explanation:** There are 4 subsequences that satisfy the condition.

[3] -> Min value + max value <= target (3 + 3 <= 9)

[3,5] -> (3 + 5 <= 9)

[3,5,6] -> (3 + 6 <= 9)

[3,6] -> (3 + 6 <= 9)

### Example 2:

**Input:** `nums = [3,3,6,8]`, `target = 10`

**Output:** 6

**Explanation:** There are 6 subsequences that satisfy the condition. (`nums` can have repeated values)

[3] , [3] , [3,3] , [3,6] , [3,6] , [3,3,6]

### Example 3:

**Input:** `nums = [2,3,3,4,6,7]`, `target = 12`

**Output:** 61

**Explanation:** There are 63 non-empty subsequences, two of them don't satisfy the condition. Number of valid subsequences (63 - 2 = 61).

### Example 4:

**Input:** `nums = [5,2,4,1,7,6,8]`, `target = 16`

**Output:** 127

**Explanation:** All non-empty subset satisfy the condition ( $2^7 - 1 = 127$ )

User Accepted: 5

User Tried: 11

Total Accepted: 5

Total Submissions: 12

Difficulty: **Medium**

**Constraints:**

- $1 \leq \text{nums.length} \leq 10^5$
- $1 \leq \text{nums}[i] \leq 10^6$
- $1 \leq \text{target} \leq 10^6$

TypeScript ▼



```
1 ▼ function numSubseq(nums: number[], target: number): number {  
2  
3   };
```

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