

# 3098. Find the Sum of Subsequence Powers

## Description

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

The **power** of a subsequence is defined as the **minimum** absolute difference between **any** two elements in the subsequence.

Return *the sum of powers of all subsequences of `nums` which have length equal to `k`*.

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

### Example 1:

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

**Output:** `4`

**Explanation:**

There are 4 subsequences in `nums` which have length 3: `[1,2,3]`, `[1,3,4]`, `[1,2,4]`, and `[2,3,4]`. The sum of powers is  $\sqrt{2 - 3} + \sqrt{3 - 4} + \sqrt{2 - 1} + \sqrt{3 - 4} = 4$ .

### Example 2:

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

**Output:** `0`

**Explanation:**

The only subsequence in `nums` which has length 2 is `[2,2]`. The sum of powers is  $\sqrt{2 - 2} = 0$ .

### Example 3:

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

**Output:** `10`

**Explanation:**

There are 3 subsequences in `nums` which have length 2: `[4,3]`, `[4,-1]`, and `[3,-1]`. The sum of powers is  $\sqrt{4 - 3} + \sqrt{4 - (-1)} + \sqrt{3 - (-1)} = 10$ .

### Constraints:

- `2 <= n == nums.length <= 50`
- `$-10^8 <= nums[i] <= 10^8$`
- `2 <= k <= n`

