

Problem 3584: Maximum Product of First and Last Elements of a Subsequence

Problem Information

Difficulty: Medium

Acceptance Rate: 30.70%

Paid Only: No

Tags: Array, Two Pointers

Problem Description

You are given an integer array `nums` and an integer `m`.

Return the **maximum** product of the first and last elements of any **subsequence** of `nums` of size `m`.

Example 1:

Input: nums = [-1,-9,2,3,-2,-3,1], m = 1

Output: 81

Explanation:

The subsequence `[-9]` has the largest product of the first and last elements: `-9 * -9 = 81`. Therefore, the answer is 81.

Example 2:

Input: nums = [1,3,-5,5,6,-4], m = 3

Output: 20

Explanation:

The subsequence `[-5, 6, -4]` has the largest product of the first and last elements.

****Example 3:****

****Input:**** nums = [2,-1,2,-6,5,2,-5,7], m = 2

****Output:**** 35

****Explanation:****

The subsequence `[5, 7]` has the largest product of the first and last elements.

****Constraints:****

* `1 <= nums.length <= 105` * `-105 <= nums[i] <= 105` * `1 <= m <= nums.length`

Code Snippets

C++:

```
class Solution {
public:
    long long maximumProduct(vector<int>& nums, int m) {
        }
    };
}
```

Java:

```
class Solution {
public long maximumProduct(int[] nums, int m) {
        }
    };
}
```

Python3:

```
class Solution:
    def maximumProduct(self, nums: List[int], m: int) -> int:
```