5797. Maximum Product Difference Between Two Pairs

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The **product difference** between two pairs `(a, b)` and `(c, d)` is defined as `(a * b) - (c * d)`.

- For example, the product difference between `(5, 6)` and `(2, 7)` is `(5 * 6) - (2 * 7) =` 16 .

Given an integer array `nums`, choose four **distinct** indices `w`, `x`, `y`, and `z` such that the **product difference** between pairs `(nums[w], nums[x])` and `(nums[y], nums[z])` is **maximized**.

Return *the **maximum** such product difference*.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Easy

Example 1:

```
Input: nums = [5,6,2,7,4]
Output: 34
Explanation: We can choose indices 1 and 3 for the first pair (6, 7) and indices 2 and 4 for the second pair (2
The product difference is (6 * 7) - (2 * 4) = 34.
```

Example 2:

```
Input: nums = [4,2,5,9,7,4,8]
Output: 64
Explanation: We can choose indices 3 and 6 for the first pair (9, 8) and indices 1 and 5 for the second pair (2
The product difference is (9 * 8) - (2 * 4) = 64.
```

Constraints:

- $4 <= $ `nums.length` $<= 10^4$
- $1 <= $ `nums[i]` $<= 10^4$

JavaScript ▾

```
1 ▾ /**
2     * @param {number[]} nums
3     * @return {number}
4     */
5 ▾ var maxProductDifference = function(nums) {
6
7   };
```