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 ▼   ⟨⟩ ⟳ ⚙

```javascript
1   const stin = (a) => a.sort((x, y) => x - y);
2 ▾ const maxProductDifference = (a) => {
3       stin(a);
4       let n = a.length;
5       return a[n - 1] * a[n - 2] - a[0] * a[1];
6   };
```

☐ **Custom Testcase** (Use Example Testcases)

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Submission Result: Accepted (/submissions/detail/513710199/) ❓   (More Details ❯ (/submissions/detail/513710199/))

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