1822. Sign of the Product of an Array

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There is a function `signFunc(x)` that returns:

- `1` if `x` is positive.
- `-1` if `x` is negative.
- `0` if `x` is equal to `0`.

You are given an integer array `nums`. Let `product` be the product of all values in the array `nums`.

Return `signFunc(product)`.

Example 1:

```
Input: nums = [-1,-2,-3,-4,3,2,1]
Output: 1
Explanation: The product of all values in the array is 144, and signFunc(144) = 1
```

// Brute force:

```
class Solution {
public:
    int arraySign(vector<int>& nums) {
        int prod = 1;

        for(auto i: nums){
            prod *= i;
        }

        if(prod > 0) return 1;
        else if(prod == 0) return 0;
        else return -1;
    }
};
```

Runtime Error

```cpp
// Better Approach
/*
is it neccessary to calculate the product? NO
    we can keep track of the postive  and negative

if we count nos of negative if the count come even then +ve
else -ve
*/

class Solution {
public:
    int arraySign(vector<int>& nums) {

        int cnt = 0;

        for(auto i: nums){
            if(i == 0) return 0;
            if(i < 0) cnt++;
        }
        return cnt % 2 == 0 ? 1 : -1;
    }
};
```