

# 2527. Find Xor-Beauty of Array

## Description

You are given a **0-indexed** integer array `nums` .

The **effective value** of three indices `i` , `j` , and `k` is defined as `((nums[i] | nums[j]) & nums[k])` .

The **xor-beauty** of the array is the XORing of **the effective values of all the possible triplets** of indices `(i, j, k)` where `0 <= i, j, k < n` .

Return *the xor-beauty of* `nums` .

**Note** that:

- `val1 | val2` is bitwise OR of `val1` and `val2` .
- `val1 & val2` is bitwise AND of `val1` and `val2` .

### Example 1:

```
Input: nums = [1,4]
Output: 5
Explanation:
The triplets and their corresponding effective values are listed below:
- (0,0,0) with effective value ((1 | 1) & 1) = 1
- (0,0,1) with effective value ((1 | 1) & 4) = 0
- (0,1,0) with effective value ((1 | 4) & 1) = 1
- (0,1,1) with effective value ((1 | 4) & 4) = 4
- (1,0,0) with effective value ((4 | 1) & 1) = 1
- (1,0,1) with effective value ((4 | 1) & 4) = 4
- (1,1,0) with effective value ((4 | 4) & 1) = 0
- (1,1,1) with effective value ((4 | 4) & 4) = 4
Xor-beauty of array will be bitwise XOR of all beauties = 1 ^ 0 ^ 1 ^ 4 ^ 1 ^ 4 ^ 0 ^ 4 = 5.
```

### Example 2:

```
Input: nums = [15,45,20,2,34,35,5,44,32,30]
Output: 34
Explanation: The xor-beauty of the given array is 34.
```

### Constraints:

- `1 <= nums.length <= 105`
- `1 <= nums[i] <= 109`

