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Approach:-

Algorithm :-

- i) Input number of elements and the elements in a array num.
- ii) Run a loop from i to 32 to cover all 32 bits of an integer.
- iii) Run another loop inside that will check how many numbers in the array has the current bit set or 1.
- iv) Count the number elements that has current bit set or 1.
- v) Subtract the number of elements with one from total no of elements.
- vi) Multiply the two and store in a variable.
- vii) Repeat step iii) to vi) for upto 32 bits.
- viii) Reform answer $\times 2^{(10^9 + 7)}$.

Code :-

```
#include <bits/stdc++.h>
```

```
using namespace std;
```

```
int main() {
    int n;
    cin >> n;
    int arr[n];
```

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```
for (int i=0; i<n; i++)  
    if (n>> 00000000);
```

```
long long ans{3};  
for (int i=0; i<32; i++) {  
    long long count{3};  
    for (int j=0; j<n; j++) {  
        if ((ans[j]) & (1<<i))  
            ++count;  
    }
```

```
long long zero = n - count;  
ans = 2* 2 * count * zero;
```

```
}  
cout << ans / (109+7) << endl;
```

input :- [1, 3, 8]
output :- [8]