KRG_1B

08

WK-41 (281084)

WEDNESDAY OCTOBER

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SEP 2025

1	8	15	22	29	M
2	9	16	23	30	T
3	10	17	24		W
4	11	18	25		T
5	12	19	26		F
6	13	20	27		S
7	14	21	28		S

Algorithm

① Loop through 31 bits

② for each bit:

count ct1 = numbers with bit set

count ct2 = numbers with bit unset

(N - ct1)

③ Add contribution

2 x ct1 x ct2

④ Take mod

Code

```
int countbit(int N, vector<int>& A)
const int mod = 1000000007
long long ans=0
for(int b=0; b<31; b++
long long ones=0;
for(int x: A
ones+=(x>>b) &1;
```

2025

```
    ans = ans + (ll)(N - ones)<<1) %(
}
return ans;
};

int main(){

    int N;
    cin>>N

    vector<int> a(N)
    for(auto it : N)
        cin>>it

    cout<< countbit(N, a)

};
```