

Find number of pairs in an array such that their XOR is 0

Given an array $A[]$ of size N . Find the number of pairs (i, j) such that $A_i \text{ XOR } A_j = 0$, and $1 \leq i < j \leq N$.

```
def calculate(a) :  
  
    # Finding the maximum of the array  
    maximum = max(a)  
  
    # Creating frequency array  
    # With initial value 0  
    frequency = [0 for x in range(maximum + 1)]  
  
    # Traversing through the array  
    for i in a :  
  
        # Counting frequency  
        frequency[i] += 1  
  
    answer = 0  
  
    # Traversing through the frequency array  
    for i in frequency :  
  
        # Calculating answer  
        answer = answer + i * (i - 1) // 2  
  
    return answer  
  
# Driver Code  
a = [1, 2, 1, 2, 4]  
print(calculate(a))
```