

Count Subarrays with Xor as K

Problem Description

Given an array of integers **A** and an integer **B**.

Find the total number of subarrays having bitwise XOR of all elements equals to B.

Problem Constraints

$1 \leq \text{length of the array} \leq 10^5$

$1 \leq A[i], B \leq 10^9$

Input Format

The first argument given is the integer array A.

The second argument given is integer B.

Output Format

Return the total number of subarrays having bitwise XOR equals to B.

Example Input

Input 1:

A = [4, 2, 2, 6, 4]
B = 6

Input 2:

A = [5, 6, 7, 8, 9]
B = 5

Example Output

Output 1:

4

Output 2:

2

Example Explanation

Explanation 1:

The subarrays having XOR of their elements as 6 are:
[4, 2], [4, 2, 2, 6, 4], [2, 2, 6], [6]

Explanation 2:

The subarrays having XOR of their elements as 5 are [5] and [5, 6, 7, 8, 9]