**Problem Name:** Two sum

**Topics:**

**Companies:**

**Level:** Easy

**Language:** C++

**Problem Statement**:

**Input Format:**

First line of the input contain integer n (size of list)

Second line contain n space separated integer list values.

Last line contain integer value pos representing value of node to delete.

Ex:

5

1 2 3 4 5

1

**Output Format:** Print linked list after removing node having value pos

**Constraints:**

**Examples:**

**Brute force Solution:**

**Explanation:**

**Code:**

**Time Complexity**: O(N^3)

**Space Complexity:** O(1)

**Optimized Solution:**

**Explanation:**

**Code:**

We count the **product of every 2 distinct numbers** rather than count each individual number, then it's easy to solve.

**Example:**  
From test case 1 [2,3,4,6] we have count map which is {6:1, 8:1, 12:2, 18:1 , 24:1}, and from test case 3 [2,3,4,6,8,12] we know that when we loop to 8, we have additional products 8\*2, 8\*3, 8\*4, 8\*6 = 16, 24, 32, 48 to add to count map, then our count map becomes {6:1, 8:1, 12:2, 16:1, 18:1 , 24:2, 32:1, 48:1}, 24:2 makes res += 8, then keep doing this for last element 12, you will see res == 40.

**Time Complexity**: O(n^2)

**Space Complexity:** O(n)