Trisect Array

Assignment 2
Computer Programming
Due date: 10th October, 2019

Description: Given an array A of n integers, count the number of ways to split the elements of the array into exactly 3 contiguous parts such that the sum of each part is the same. More formally, find the number of indices i, j($2 <= i <= j <= n-1$) such that, $\sum_{k=1}^{i-1} A_k = \sum_{k=i}^{j-1} A_k = \sum_{k=j}^{n} A_k$

Input

The first line contains an integer n - the size of array.
The next line contains n space separated integers - the elements of the array.

Output

Print a single integer - the number of ways to split the array.

Constraints

$1 <= n <= 10^6$
$|A[i]| <= 10^9$

Sample Test Case

Input	Output
5 1 2 3 0 3	2

Explanation

2 possible ways of trisecting [1 2 3 0 3] - [1 2], [3], [0 3] and [1 2], [3 0], [3]