



STUDENT REPORT

DETAILS

Name

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Roll Number

KUB23CSE090

EXPERIMENT

Title

EQUILIBRIUM

Description

You are given an array **A** of **N** integers. An equilibrium position is a position where the sum of all integers on its left is equal to the sum of all integers on its right in the array **A**. Print the index of the equilibrium position.

Note: For any given array there is only a single equilibrium position, if no equilibrium position is found then print "NOT FOUND" without quotes.

The array is 1 indexed.

Input Format:

The input consists of two lines:

The first line contains an integer denoting **N**.

The second line contains **N** space-separated integers denoting the elements of the array **A**.

Input will be read from the **STDIN** by the candidate

Output Format:

Print the index of the equilibrium position. If no index is found, print "NOT FOUND"

Sample Input

5

2 4 7 3 3

Sample Output

3

Source Code:

```
def find_equilibrium_position(N, A):
    total_sum = sum(A)
    left_sum = 0

    for i in range(N):
        right_sum = total_sum - left_sum - A[i]

        if left_sum == right_sum:
            return i + 1

        left_sum += A[i]

    return "NOT FOUND"

# Input reading
N = int(input())
A = list(map(int, input().split()))
result = find_equilibrium_position(N, A)
print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %