

1) Vowel Repetition Problem

Given a string s print the most frequent vowel that is present in the string as a output.

Input Format:

A single line containing the string s .

The input will be read from the STDIN by the candidate

Output Format:

Print a single character which represents the most frequent vowel in the given string.

Example:

Input:

helloworld

Output: o

2) Number of combinations leading to a product

Problem Statement:

You are given an array arr and a product m . Your task is to find the number of possible unique triplets whose product of elements is m .

Input Format:

- The first line contains the integer, n
- The second line contains space separated integers of the array, arr
- The third line contains the product m .

The input will be read from the STDIN by the candidate

Output Format:

The output consists of a single integer, i.e. the count of unique triplets having product m .

The output will be matched to the candidate's output printed on the STDOUT

Example:

Input:

7

5 3 20 10 1 4 2

60

Output:

3

Explanation:

Product m :60

Possible triplets for product m : (5,4,3),(20,3,1), (10,3,2)

The count of unique triplets is 3.

3) Equilibrium

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 3 2 7

Sample Output

3

4) sub array with max sum

You are given a list of integers, and your task is to find the subarray with the maximum sum. Write a function or method to solve this problem efficiently and return the maximum sum.

Input:

n: the no of elements in the array nums (List of integers): A list of integers ($1 \leq \text{len}(\text{nums})$

$\leq 10^5$)

Sample input:

8

-1 2 3 10 -4 7 2 -5

Sample output:

20

Explanation:

The max subarray sum is 20. The subarray is [2,3,10,-4,7,2]

5) Pizza Party

Angela has decided to throw a pizza party. she has ordered N number of pizzas to be served to her N number of friends. In this way, she will be serving only one pizza to each friend. She now wants to invite fewer people to her party in order to provide more pizzas per person. But at the same time, she wants to ensure that there are at least Y friends at her party.

Your task is to help Angela find and return an integer value, representing the sum of digits of the minimum number of friends that she can invite to the party, ensuring that each person gets an equal number of pizzas

Sample Input:

100 17

Sample Output:

2

Explanation:

N=100, Y=17

For Y=20 each friend gets 5 pizzas. So sum of digits of 20 is 2.