重要公告

一、109 年 3 月 31 日起，修習進階程式課程同學，可以在任何地方撰寫老師所出的程式作業，為了防疫及個人健康，不一定要擠到通風不怎麼理想之電腦教室(一)寫程式。由於教育部全面禁用 ZOOM 視訊教學軟體，因而改用 Webex 視訊軟體，請同學練習並熟稔一下該軟體使用環境，109/04/22 起 ZOOM 停用改成 Webex 視訊會議軟體

二、為了老師能完全掌握修課同學於上課時段是否確實認真的在寫程式，請無法到電腦教室(一)上課的同學，務必登入老師的 WebEX 個人會議室（網址 ：https://moe-tw.webex.com/meet/hsiaojy)，以方便同學可以問問題或老師可以隨時瞭解同學的學習狀況

三、在電腦教室(一)寫程式的同學，依然可以舉手驗收完成的程式，遠距學習的同學則可用 WebEX 或雲端學院課程討論版的功能通知助教驗收你完成的程式

四、無故不到電腦教室(一)上課且又不登入老師的 WebEX 個人會議室與老師保持聯繫，視為翹課，視情節嚴重程度扣減平常成績，若累計 4 次無法聯絡到人，直接當掉

進階程式設計課程作業#13

（請使用 C 或 C++語言撰寫解決下列問題之程式）

Reduction

Problem Description

Given a sequence, we define a reduction operation on the sequence (longer than two) as finding a consecutive triplet, and multiplying the triplets together (this value is the product of the operation), and removing the element in the middle from the sequence. For the sequence, 1,2,3,4, we can do this reduction in two ways, either resulting in 1,3,4 and the product 6, or 1,2,4 with the product 24. Since the reduction operation can be applied to a sequence multiple times, giving us multiple products, we define the efficiency of a sequence of reduction operations on a sequence as the summation of the products.

Input
Each test file will start with an integer $2 < N < 101$, which tells you to expect N test cases. For each test case, there will be two lines, the first line contains an integer $2 < M < 50$, which is how many integers you should expect in the next line. The second line will contain the sequence, space separated.

Output
For each test case, output a line consisting of the most efficiency value (biggest product) and the most inefficient value (smallest product).

Sample Input:

2
5
1 2 3 4 5
4
8 3 11 2

Sample Output:

100 38
440 114