重要公告

一、即日起，為了防疫及個人健康，也讓大家有一個相對比較舒適的 coding 環境，修習進階程式設計課程的同學，可以在任何地方撰寫老師所出的程式作業，不一定要擠到通風不怎麼理想之電腦教室(一)寫程式，但還是必須於上課時段上線寫程式，不得到處遊蕩；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)，請以完整姓名登入會議室，以方便老師可以隨時瞭解同學的學習狀況或同學可以問問題。

二、不在電腦教室寫程式的同學，驗收方式是將評測平台通過的畫面截圖，截圖須包含學號、題號、評測紀錄等資訊，上傳到雲端學院課程的該題討論版內，讓助教可以隨時去驗收，未完成留言驗收或延遲完成該動作，將依延遲時間長短酌減該程式分數 10~50 分不等。(若在課堂上，請直接舉手檢查即可，無須上傳及留言)

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