# 1217 – Neighbor House (II)

A soap company wants to advertise their product in a local area. In this area, there are **n** houses and the houses are placed in circular fashion, such that house **1** has two neighbors: house **2** and **n**. House **5** has two neighbors: house **4** and **6**. House **n** has two neighbors, house **n-1** and **1**.

Now the soap company has an estimation of the number of soaps they can sell on each house. But for their advertising policy, if they sell soaps to a house, they can't sell soaps to its two neighboring houses. No your task is to find the maximum number of estimated soaps they can sell in that area.

## Input

Input starts with an integer **T (≤ 100)**, denoting the number of test cases.

Each case starts with a line containing an integer **n (2 ≤ n ≤ 1000)**. The next line contains **n** space separated integers, where the **i**$^{th}$ integer denotes the estimated number of soaps that can be sold to the **i**$^{th}$ house. Each of these integers will lie in the range **[1, 1000]**.

## Output

For each case, print the case number and the maximum number of estimated soaps that can be sold in that area.

| Sample Input | Output for Sample Input |
|---|---|
| 3<br>2<br>10 100<br>3<br>10 2 11<br>4<br>8 9 2 8 | Case 1: 100<br>Case 2: 11<br>Case 3: 17 |