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| **E** | **Strange Game** | **Time Limit:**  **1 sec** |

Shibli is very upset about early elimination of Germany from this world cup. So to cheer him up his friends decided to play a very strange game with him. There are **n** integer numbers are given **(a1, a2 …… an)**. Shibli needs to find an integer **x** so that the sum of the sequence **(a1 – x) 2 + (a2– x)2 +…. + (an – x) 2** is minimized. Can you please help Shibli to find the value of **x** and the minimum sum of the sequence? It is ensured that there is only one such **x** is present in this given sequence.

**Input**

Input starts with an integer **T (≤ 100)**, denoting the number of test cases. Each case contains an integer **n (1 ≤ n ≤ 10000)**, denoting how many numbers will be present for this test case. Next line contains **n** integer numbers say **x (1 <= x <= 10000).**

**Output**

For each test case, print a line **“Case x: y z”** where **x** is replaced by the test case number and **y** is the value of **x** described in the problem statement and **z** is minimum sum of the sequence.

**Sample I/O**

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| Input | Output |
| 2  3  1 2 3  5  1 2 9 2 6 | Case 1: 2 2  Case 2: 4 46 |