Problem C. The Story of Emperor Bie

Time limit: 1 second
Memory limit: 1024 megabytes

Emperor Bie wants to create an array A of length n. He first chooses an initial position p ($1 \le p \le n$), and assigns a positive integer he likes to A_p. He also initializes two variables l and r as $l = r = p$. Then he does $n - 1$ operations, each operation can be any one of the followings:

- Left Expand: This operation can be done if and only if $l > 1$. Emperor Bie chooses an integer k satisfying $0 \le k < A_r$ and assign $A_r - k$ to A_{l-1}. After that, he decreases l by 1.
- Right Expand: This operation can be done if and only if $r < n$. Emperor Bie chooses an integer k satisfying $0 \le k < A_l$ and assign $A_l - k$ to A_{r+1}. After that, he increases r by 1.

Many years later, the Emperor Bie still remembers the array he created, but he has forgotten the initial position p. Please help Emperor Bie to determine which positions could be the initial position p?

Input

The first line contains an integer T ($1 \le T \le 10^5$), the number of test cases.

For each test case, the first line contains one integer n ($1 \le n \le 5 \cdot 10^5$), representing the length of the array.

The following line contains n integers $A_1, A_2 \ldots A_n$ ($1 \le A_i \le 10^9$), representing the array.

It is guaranteed that the sum of n does not exceed $5 \cdot 10^5$, and there exists at least one valid p.

Output

For each test case, output all possible initial positions in increasing order in a single line.

Example

standard input	standard output
3 1 5 2 1 3 3 3 3 3	1 2 1 2 3