

Average

Given a stream of numbers, print average or mean of the stream at every point.

Input:

The first line of input contains an integer T denoting the number of test cases.
The first line of each test case is N,N is the size of array.
The second line of each test case contains N input C[i].

Output:

Print the average of the stream at every point (in integer).

Constraints:

$$1 \leq T \leq 20$$

$$1 \leq N \leq 50$$

$$1 \leq C[i] \leq 100$$

Example:

Input

2

5

10 20 30 40 50

2

12 2

Output

10 15 20 25 30

12 7