The 2021 Freshman Programming Contest

Hunan University

Problem I

Rainw Likes Smiling

Time Limit: 1 second   Memory Limit: 256 MB

Description

Rainw is always smiling. So, some people who are very good had token n photos of him smiling.

Each of these photos has a classical value, and i-th photo has w_i classical value.

As time goes on, each photo will become more and more classical, the classical value of the i-th photo will become $t \times w_i$

Playf is a photo lover. He wants to know for each t, how many photos can be selected at most so that the sum of the classical value of the selected photos is a multiple of n.

Input

The first line contains a single integer $n(2 \leq n \leq 5000)$.
The second line contains n integers $w_1, w_2, w_3, \ldots, w_n$ ($1 \leq w_i \leq n-1$), w_i represents the classical value of the i-th photo.

Output

For each t $(1 \leq t \leq n)$, print a single integer, represents the maximum number of photos Playf can select.

Sample Input

Sample Input	Output for Sample input
6 1 1 1 2 2 2	4 6 5 6 4 6