2010 SPY KIDS (PART 1)

Alpha Complex, being a modern forward-thinking employer, has comprehensive day-care facilities for the children of its spies.

The morning roll-call is a little unusual. The kids stand in a circle and the teacher proceeds around the circle, spelling a name and pointing at the next person (clockwise) on each letter. When spelling is completed whoever is being pointed at leaves the circle. This is then repeated, pointing where they left off and spelling the next name on the roll-call. This is completed until everyone has had their name spelt.

As a security measure and to avoid the children of spies from *Beta Complex* (who are an antiquated backwards-looking employer, with poor facilities) the kids have set places in the circle, so that as the names on the roll-call are spelt out the person who leaves the circle each time always corresponds with the name that has just been spelt.

All the kids have different names, although some may be the same length, and each name appears exactly once on the roll-call.

For example, suppose the roll-call reads TOM, DICK and HARRY. The correct order to stand around in the circle is HARRY, DICK then TOM. The first name on the roll-call is TOM: HARRY is pointed to on T, DICK on O and TOM on M when he drops out. The next name is spelt starting where they left off, which will be with HARRY: HARRY is pointed to on D, then DICK on I, HARRY again on C and DICK on K. HARRY is the last name spelt and removed from the circle.

Write a program to determine the order in which the kids of alpha complex should stand. The first line of the input will be a single integer k ($1 \leq k \leq 10000$) indicating the number of kids. The next k lines will each contain a single integer, between 1 and 1000 inclusive, the i^{th} of which indicates the number of letters in the i^{th} kid's name (in roll-call order).

You should output k lines each containing a single integer, giving the order in which the kids should stand.

SAMPLE INPUT

```
3
3
4
5
```

SAMPLE OUTPUT

```
3
2
1
```