D: Ordered Problem Set

Time Limit: 1 second, Memory limit: 2G

You are running a programming contest that features n problems of distinct difficulties. You wish to announce ahead of time that the problems are ordered in such a way that, if the problems are divided into k sections numbered 1 through k, each with exactly $\frac{n}{k}$ problems, and problem p is assigned to section $\lceil \frac{kp}{n} \rceil$, then for every pair of sections i and j with $i < j$, every problem in section i is easier than every problem in section j. Note that k must be greater than 1 and be a factor of n.

However, you have just sent your problems to the printer so the order cannot be changed. For what values of k would this claim be true?

Input

The first line of input contains a single integer n ($2 \leq n \leq 50$), which is the number of problems.

Each of the next n lines contains a single integer d ($1 \leq d \leq n$). These are the difficulties for the problems in the order that they appear in the problem set. The difficulties are distinct. The problem with difficulty 1 is the easiest problem and the problem with difficulty n is the hardest problem.

Output

Output a list of integers, one per line. The integers are all valid values of k in increasing order. If no such values exist, output -1.

Sample Input 1	Sample Output 1
6 1 3 2 4 5 6	2

Sample Input 2

```
6
1
2
3
4
5
6
```

Sample Output 2

```
2
3
6
```

Sample Input 3

```
6
6
5
4
3
2
1
```

Sample Output 3

```
-1
```