Problem I
In Search of the Lost Array

Time limit: 2 seconds
Memory limit: 2048 megabytes

Problem Description

In a forgotten realm, a group of adventurers stumbles upon a set of mysterious scrolls hidden deep within an ancient library. These scrolls hold the secrets of a powerful numerical array that controls the magic of the realm. However, the scrolls have been damaged over time, and only fragments remain. Specifically, the adventurers discover a sequence of numbers representing the products of adjacent elements of an unknown array A.

The original array A consists of n integers $a_1, a_2, \ldots, a_n$ where $1 \leq a_i \leq 100$ for $1 \leq i \leq n$. The only information remaining on the scrolls is a sequence of $n-1$ integers $b_1, b_2, \ldots, b_{n-1}$, which are unordered products of adjacent elements from A. In other words:

$$\{b_1, b_2, \ldots, b_{n-1}\} = \{a_1 \times a_2, a_2 \times a_3, \ldots, a_{n-1} \times a_n\}$$

Your task is to help the adventurers reconstruct one possible original array A. If there are multiple valid arrays A that could result in the same sequence b, you may output any of them.

Input Format

The first line contains a single integer n, representing the length of the array A. The second line contains $n-1$ space-separated integers $b_1, b_2, \ldots, b_{n-1}$, representing the products of adjacent elements in the array A.

Output Format

If there is no such array A, then print `No` on a line. Otherwise, print `Yes` on the first line. Then, output n space-separated integers $a_1, a_2, \ldots, a_n$ on the second line, where $\{b_1, b_2, \ldots, b_{n-1}\} = \{a_1 \times a_2, a_2 \times a_3, \ldots, a_{n-1} \times a_n\}$.

Technical Specification

- $1 < n \leq 18$.
- $1 \leq a_i \leq 100$ for $i \in \{1, 2, \ldots, n\}$
- $1 \leq b_i \leq 10000$ for $i \in \{1, 2, \ldots, n-1\}$

Sample Input 1

```
8
42 32 84 54 48 40 16
```

Sample Output 1

```
Yes
5 8 4 21 2 8 6 9
```

Sample Input 2

```
6
45 4 5 4 3
```

Sample Output 2

```
Yes
3 1 4 1 5 9
```

Sample Input 3

```
2
3246
```

Sample Output 3

```
No
```