

Let's play a number game. I will give you $2N - 1$ ($N = 2^k$, $k = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10$) numbers, each number is a positive integer not bigger than 1000. Can you choose N of them, and add them all to a integer S , to make that S/N is a integer? If there are many solutions, you can only find one of them.

Input

The input file contains several scenarios. Each of them consists of 2 lines.

For each scenario, the first line is a number N , the second line consist of $2N - 1$ numbers. There is a space between two numbers.

Output

For each scenario, print a single line 'No' if you can't find an answer. Otherwise print a line 'Yes', and then the other line containing N numbers (in any order), there should be a space between two numbers.

Sample Input

```
2
1 2 3
4
1 2 3 4 5 6 7
0
```

Sample Output

```
Yes
1 3
Yes
1 3 5 7
```