10164 Number Game

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
```

Sample Output