algoleague

# Selin's Christmas Tree



Problem

Submissions

Discussion Coming Soon

Selin bought a tree for Christmas. She wants to decorate her tree with light balls. Selin has various balls of different sizes. The tree could be considered as a pyramid shape. She wants to decorate the tree with this rule: The sum of the sizes of every consecutive ball is equal to the size of the ball which is located above them. You are given the size of balls at the bottom level of the tree. You need to find the size of every ball in the tree after she decorates it.

### Input Format

The first line contains an integer $N$. The second line contains $N$ integers, $A_i$.

### Output Format

Print $N$ lines. The $i-th$ line represents the $i-th$ level of the tree. Print the size of balls for each level.

### Constraints

- $N \leq 15$
- $A_i \leq 10^3$

Sample Input 1

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

Sample Output 1

```
48
20 28
8 12 16
3 5 7 9
1 2 3 4 5
```

C | Bright | Memory Limit (kB) : 512000 | Time Limit (s) : 5

```c
    for(int i = 0; i < n; i++)
        scanf("%d", &arr[i]);

    int len = (n*(n+1))/2;

    int res[n][len];

    for(int i = 0; i < n; i++){
        res[n - 1][i] = arr[i];
    }

    for(int i = n - 2; i >= 0; i--){
        for(int j = 0; j < i + 1; j++){
            res[i][j] = res[i + 1][j] + res[i + 1][j + 1];
        }
    }

    for(int i = 0; i < n; i++){

        for(int j = 0; j < i + 1; j++){

            printf("%d", res[i][j]);

            if(j != i)
                printf(" ");

            else
```

```
36              printf("\n");
37          }
38      }
39      return 0;
40  }
```

Upload File

Test against custom test case

Run Code

Submit

Sample Test Case 0

## Accepted

### Input(stdin)

```
5
1 2 3 4 5

```

### Output(stdin)

```
48
20 28
8 12 16
3 5 7 9
1 2 3 4 5

```

### Expected Output

```
48
20 28
8 12 16
3 5 7 9
1 2 3 4 5

```