

## Problem KPart

Input file        `stdin`  
Output file      `stdout`

Virgil has just set out to study the properties of arrays. Thus, he defines a  $K$ -array as any array  $A$  of *positive* integers such that all length  $K$  continuous subsequences of  $A$  can be partitioned into two disjoint, potentially *not* continuous subsequences having equal sum. For example 1, 2, 1, 3 is a 3-array, since 1, 2, 1 can be partitioned into 1, 1 and 2 which both have sum 2, and 2, 1, 3 can be partitioned into 2, 1 and 3 which both have sum 3. It is not a 2-array, since 1, 2 cannot be partitioned into two potentially not continuous subsequences with equal sum. Likewise it is not a 4-array.

You are given  $T$  arrays of *positive* integers. For each array  $A$  Virgil wants to know all the values of  $K$  for which  $A$  is a  $K$ -array.

### Input data

The first line contains the integer  $T$ . The  $T$  arrays follow. Each array is represented by two lines. The first line contains  $N$ , the length of the array. The second contains the elements of the array, separated by a single space.

### Output data

Output the answers for each array  $A$  in order. For each array output only one line containing first the number of values of  $K$  for which the given array is a  $K$ -array, and then those values of  $K$  for which the array is a  $K$ -array, in increasing order.

### Restrictions

- $1 \leq T \leq 20$ .
- Let  $\sum A$  represent the sum of the values in any one array (*not* the sum of the values in all of the arrays). Then  $1 \leq \sum A \leq 100\,000$ .

#	Points	Restrictions
1	10	$1 \leq N \leq 30$
2	20	$31 \leq N \leq 120$
3	70	$121 \leq N \leq 1\,000$

### Examples

Input file	Output file
2	2 4 6
7	2 3 6
7 3 5 1 3 3 5	
6	
1 2 3 5 8 3	

### Explanations

The first array, the one of length 7, is a 4-array and 6-array, since each continuous subsequence of length 4 and 6, respectively, can be partitioned into two potentially not continuous subsequences with equal sum.

The second array, the one of length 6, is 3-array and 6-array, since each continuous subsequence of length 3 and the of length 6 can be partitioned into two potentially not continuous subsequences with equal sum.