# Chopsticks

## Description

HH is the king of chopsticks. He likes chopsticks and his private collection contains $n$ chopsticks, where the length of $i$-th chopstick is $a_i$. Note that some chopsticks are stolen by his cats, so there maybe some *lonesome* chopsticks lost its partner. But HH is reluctant to throw away lonesome chopsticks, and he is willing to use any pair of chopsticks with same length even if they are not a original pair.

Since there are too many chopsticks, find a specific chopstick is too hard for HH. If HH needs $m$ pairs of chopsticks with same length, he will pick chopstick one by one randomly until he has enough pairs. For example, if he needs two pairs of chopsticks, he may pick chopsticks with length $5, 4, 6, 6, 5$. He is curious about how many chopsticks he needs to pick in worst case for $m = 1, 2, \ldots, k$, where $k$ is the largest possible $m$.

## Input

The first line contains an integer $T$ indicating the total number of test cases. Each test case starts with an integer $n$ in one line, then one line with $n$ integers $a_1, a_2, \ldots, a_n$.

- $1 \leq T \leq 1000$
- $1 \leq n \leq 10^5$
- $1 \leq a_i \leq 10^8$
- There are at most 10 test cases with $n > 1000$.

## Output

For each test case, please output exactly two lines. The first line contains an integer $k$, and the second line contains $k$ integer $c_1, c_2, \ldots, c_k$, where $c_i$ denotes the number of chopsticks HH needs to pick in worst case for $m = i$.

## Sample Input

```
2
3
2 2 2
5
4 5 5 6 6
```

## Sample Output

```
1
2
2
4 5
```