# PrimeFactorofLCM

Everyone loves Swampy. Swampy the Alligator lives under the city and yearns for a more human like existence. One day Swampy took part in a maths contest to show his supremacy over other his other alligator friends. The task required him to output the prime divisors of the lcm of n numbers a1, a2 ... an. Tired of trying the problem, he turned to you for help. He believes that you can help him solve the problem.

## Input

First line of the input contains an integer T, the number of test cases. Then T test cases follow. Each test case consists of a single integer n. Next line contains n integers (space separated), a1, a2 ... an.

## Output

For each test case, print Case #X: M where M is the number of prime divisors of lcm(a1, a2 ... an) and then M lines with the prime divisors in non-decreasing order.

## Example

**Input:**
1
8
1 2 3 4 5 6 7 8

**Output:**
Case #1: 4
2
3
5
7

Constraints: T <= 100 1 <= N <= 100 1 <= ai <= 10^12