Prime time, I am telling you!

Develop a Python code to list all prime factors of a given integer

Input

In the first line, n indicates the total number of integers. The subsequent n lines are the test cases

Output

A list of prime factors for each given test case will be displayed

Example

Input:
5
2
30
235
100
15
Output:
2
2 3 5
5 47
2 2 5 5
3 5