

Easy Factorization

The task in this problem is to write a number in a multiplication of prime numbers separated by “x”. You need to put the

number 1 in this multiplication.

Input

The input consists of several lines.

Each line consists of one integer N ($1 \leq N \leq 10^5$).

Output

For each line you need to output the factorization separated by “x” and including 1.

Sample Input

1

2

4

8

Sample Output

1

1 x 2

1 x 2 x 2

1 x 2 x 2 x 2