Funny Prime Factorization

Problem Description: You will given an integer number N. Find out the prime factors of this number.

Input

The input consists of several lines.

Each line consists of one integer N (2<=N<=10^7)

Output

In each line you need to print the factors of N seperated by "x".

Example

Input:
2
8
6

Output:
2 = 2
8 = 2 x 2 x 2
6 = 2 x 3