1215 – Finding LCM

LCM is an abbreviation used for **L**east **C**ommon **M**ultiple in Mathematics. We say **LCM (a, b, c) = L** if and only if **L** is the least integer which is divisible by **a, b** and **c**.

You will be given **a, b** and **L**. You have to find **c** such that **LCM (a, b, c) = L**. If there are several solutions, print the one where **c** is as small as possible. If there is no solution, report so.

Input

Input starts with an integer **T (≤ 325)**, denoting the number of test cases.

Each case starts with a line containing three integers **a b L (1 ≤ a, b ≤ 10^6, 1 ≤ L ≤ 10^{12})**.

Output

For each case, print the case number and the minimum possible value of **c**. If no solution is found, print **'impossible'**.

Sample Input	Output for Sample Input
3 3 5 30 209475 6992 77086800 2 6 10	Case 1: 2 Case 2: 1 Case 3: impossible